

## SAFETY DATA SHEET

### SDS0096US-EN

ACCORDING TO US CFR 1910.1200

#### SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 **Product identifier** 

> **Product Name** Solo 370

Trade Name Solo 370-XXX (XXX denotes customer variant)

CAS No. Mixture. EINECS No. Mixture. REACH Registration No. None assigned.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s) Battery product. Uses Advised Against None known.

Details of the supplier of the safety data sheet 1.3

Company Identification SDi, LLC, 3535 State Highway 66, Parkway 100 Building 6, Neptune, NJ 07753,

USA

Telephone (732) 751 9266 (732) 751 9241 Fax E-mail sales@sdifire.com

1.4 **Emergency telephone number** 

Info Trac

1-800-535-5053 **Details of the Manufacturer** 

Detectortesters (No Climb Products Ltd), Edison House, 163 Dixons Hill Road, Company Identification

Welham Green, Hertfordshire AL9 7JE, United Kingdom.

Telephone +44 (0) 1707 282760 +44 (0) 1707 282777 Fax E-mail SDS@detectortesters.com

#### **SECTION 2: HAZARDS IDENTIFICATION**

Classification of the substance or mixture

US CFR 1910.1200 Not classified as dangerous for supply/use. The battery is a sealed unit and therefore

the ingredients present have no hazard potential except in a situation where the battery

has been violated or dismantled.

2.2 Label elements

1.5

Hazard Pictogram(s) None. Signal Word(s) None. Hazard Statement(s) None. Precautionary Statement(s) None. Other hazards None.

**Additional Information** There is no hazard when the measures for handling and storage are followed. In case 2.4

of cell damage, possible release of dangerous substances and a spontaneous flammable gas mixture may be released. Battery content must not get in contact with

water. Contact with water liberates extremely flammable gases.

### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1 Mixtures

2.3

Hazardous Ingredient(s)	%W/W	CAS No.
Cobalt oxide	<15	1307-96-6
Maganese dioxide	<15	1313-13-9
Nickel Oxide	<15	1313-99-1
Electrolyte(*)	<15	None

<sup>(\*)</sup> Main Ingredients: Lithium hexafluorophosphate, organic carbonates

#### 3.2 Additional Information

During the charge process a lithium carbon intercalation phase is formed, which is highly flammable and corrosive, but not released under normal

usage.

Mercury content: Hg<0.1mg/kg Cadmium content: Cd<1mg/kg Lead content: Pb<10mg/kg

For full text of H/P statements see section 16.

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#### **SECTION 4: FIRST AID MEASURES**



4.3

Description of first aid measures 4.1

> Inhalation Unlikely route of exposure.

Electrolyte leakage: Remove to fresh air immediately. Seek medical treatment. Skin Contact

Unlikely route of exposure.

Electrolyte leakage: After contact with skin, take off immediately all contaminated

clothing, and wash immediately with plenty of water.

Eye Contact Unlikely route of exposure.

Electrolyte leakage: Flush eyes with water for at least 15 minutes. Seek medical

treatment.

Ingestion Unlikely route of exposure.

Electrolyte leakage: Make victim drink plenty of water. Do not induce vomiting. Seek

medical treatment.

4.2 Most important symptoms and effects, both

acute and delayed

Indication of any immediate medical attention

and special treatment needed

None anticipated. Electrolyte leakage Can cause damage to the eyes and skin. Unlikely to be required but if necessary treat symptomatically.

#### **SECTION 5: FIREFIGHTING MEASURES**

5.1 **Extinguishing media** 

Suitable Extinguishing media Unsuitable extinguishing media

Special hazards arising from the substance or 5.2 mixture

Advice for fire-fighters 5.3

Extinguish preferably with dry chemical or sand.

Water, Water spray.

Hazardous decomposition product(s) include: Hydroflouric acid (upon contact with water), Hydrogen fluoride (HF) gas, Carbon monoxide and Carbon dioxide.

In case of major fire and large quantities: A self contained breathing apparatus should be worn. If possible, remove cell(s) from fire fighting area. If heated above 125°C, cell(s) can explode/vent. Cell is not flammable but internal organic material will burn if

the cell is incinerated.

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

6.1 Personal precautions, protective equipment and emergency procedures

6.2 **Environmental precautions** 

Methods and material for containment and 6.3

cleaning up

6.4 Reference to other sections Use PPE. Avoid contact with skin, eyes or clothing. Avoid breathing fumes.

Prevent entry into drains.

Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a

container for disposal. See Also Section: 8, 13

#### **SECTION 7: HANDLING AND STORAGE**

7.1 Precautions for safe handling Avoid mechanical damage to the cell. Do not open or disassemble.

> Do not throw batteries in water. Keep away from: Children

Avoid overheating. Keep away from open flames, heat and sources of ignition.

Conditions for safe storage, including any

incompatibilities

Storage temperature

Incompatible materials

Storage life Stable under normal conditions.

Specific end use(s) Battery product

#### **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 Control parameters Under normal conditions of battery use, internal components will not present a health or

None anticipated.

environmental hazard.

#### 8.1.1 **Occupational Exposure Limits**

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Cobalt oxide	1307-96-6	-	5*	-	-	OSHA,Sen,
Manganese dioxide	1313-13-9	-	5*	=	-	OSHA
Nickel oxide	1313-99-1	-	5*	-	-	OSHA,Carc
Carbon	7440-44-0	-	5*	-	-	OSHA

Source:

7.2

7.3

OSHA = Occupational Safety and Health Administration \*Respirable Dust.

8.2 Exposure controls

Appropriate engineering controls 8.2.1

8.2.2 Personal protection equipment Provide adequate ventilation.

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Eye/ face protection

Not normally required.

Electrolyte leakage: Wear eye/face protection.

Skin protection (Hand protection/ Other)

Not normally required.

Electrolyte leakage: Wear impervious gloves.

Respiratory protection

No personal respiratory protective equipment normally required. Electrolyte leakage: Wear suitable respiratory protective equipment.



Thermal hazards

Not applicable.

**Environmental Exposure Controls** 

Avoid release to the environment.

### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

#### 9.1 Information on basic physical and chemical properties

Appearance

Colour Not applicable. Odourless. Odour Not applicable. Odour threshold Not determined. рΗ . Melting point/freezing point Not applicable. Initial boiling point and boiling range Not applicable. Flash Point Not applicable. Evaporation rate Not applicable. Non-flammable. Flammability (solid, gas) Upper/lower flammability or explosive limits Not applicable.

Vapour pressure Not applicable. Vapour density Not applicable. Relative density Not applicable. Solubility(ies) Insoluble Partition coefficient: n-octanol/water Not applicable. Auto-ignition temperature Not applicable. Not applicable. Decomposition Temperature Kinematic Viscosity Not applicable.

Not explosive when used as intended. Explosive properties Oxidising properties Not oxidising when used as intended.

## **SECTION 10: STABILITY AND REACTIVITY**

10.1 Reactivity Stable under normal conditions. 10.2 **Chemical stability** Stable under normal conditions.

Possibility of hazardous reactions 10.3 No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid Do not heat the product. Incompatible materials 10.5 Stable under normal conditions.

Hazardous decomposition product(s) 10.6 No hazardous decomposition products known when used as intended. See Section: 5

Firefighting measures

### **SECTION 11: TOXICOLOGICAL INFORMATION**

Unlikely to cause harmful effects under normal conditions of handling and use.

11.1 Information on toxicological effects

**Acute toxicity** Low acute toxicity. Skin corrosion/irritation Non-irritant. Serious eye damage/irritation Not classified. Respiratory or skin sensitization It is not a skin sensitiser.

Germ cell mutagenicity There is no evidence of mutagenic potential.

Carcinogenicity No evidence of carcinogenicity.

Reproductive toxicity None anticipated. STOT - single exposure Not classified. STOT - repeated exposure Not classified. Aspiration hazard None anticipated.

11.2 Other information None.

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#### **SECTION 12: ECOLOGICAL INFORMATION**

12.1 **Toxicity** Under normal conditions of battery use, internal components will not present a health

or environmental hazard.

12.2 Persistence and degradability Not applicable. 12.3 Bioaccumulative potential Not applicable. 12.4 Mobility in soil Not applicable

12.5 Other adverse effects Do not flush spilt material into any public water system.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods Consult an accredited waste disposal contractor or the local authority for advice. **Additional Information** 13.2 Disposal should be in accordance with local, state or national legislation.

#### **SECTION 14: TRANSPORT INFORMATION**

14.1 UN number UN 3480, UN3481 14.2 **UN proper shipping name** Batteries, Lithium Ion

14.3 Transport hazard class(es) ADR

Under special provision 188. Under special provision 188. **IMDG** UN 3480. UN 3481 IATA

Not applicable. DOT **Packing group** Not applicable. 14.4 **Environmental hazards** Not applicable. 14.5 Not applicable. 14.6 Special precautions for user

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. 14.7

#### **SECTION 15: REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910; All chemicals are not listed

Subpart Z)

National emission standards for hazardous air All chemicals are not listed pollutants (40 CFR 61.01)

15.1.2 Title III Consolidated List of Lists Cobalt oxide (Cobalt compounds), Manganese dioxide (Manganese compounds), Sec 313 Nickel oxide (Nickel compounds)

15.1.3 OSPAR List of Chemicals for Priority Action All chemicals are not listed

15.1.4 State Right to Know Lists Cobalt oxide (cobalt compounds) - New Jersey

Nickel oxide (nickel compounds) - New Jersey, Pennsylvania

Cobalt oxide (Cas 1307-96-6), Manganese dioxide (Cas 1313-13-9), Nickel oxide (Cas 15.1.5 TSCA (Toxic Substance Control Act)

1313-99-1), Carbon (Cas 7440-44-0).

15.1.6 Proposition 65 (California) Cobalt oxide (Cas 1307-96-6), Nickel oxide (Cas 1313-99-1)

#### **SECTION 16: OTHER INFORMATION**

#### The following sections contain revisions or new statements:

#### USA

NFPA		HMIS	HMIS	
Health	0	Health	0	
Fire	1	Flammability	1	
Instability	0	Physical hazards	0	

#### **LEGEND**

LTEL Long Term Exposure Limit Short Term Exposure Limit STEL **OSPAR** Oslo and Paris Convention

Occupational Safety and Health Administration **OSHA** 

National Fire Protection Association **NFPA HMIS** Hazardous Material Information System

Derived No Effect Level DNEL

**PNEC** Predicted No Effect Concentration VOC Volatile Organic Compounds

#### Disclaimers

The information is based on the best knowledge of SDi and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for purposes other than it is intended.

#### Annex to the extended Safety Data Sheet (eSDS)

No information available.

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## SAFETY DATA SHEET

SDS0097US-EN

ACCORDING TO US CFR 1910.1200

#### SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 **Product identifier** 

> **Product Name** Solo ES6 Smoke Cartridge.

Trade Name Solo ES6-XXX (XXX denotes customer variant).

CAS No. Mixture. EINECS No. Mixture.

Relevant identified uses of the substance or 1.2

mixture and uses advised against

Identified use(s) Smoke simulation. Uses advised against None known.

Details of the supplier of the Safety Data Sheet 1.3

Company Identification SDi, LLC, 3535 State Highway 66, Parkway 100 Building 6, Neptune, NJ 07753,

USA.

Telephone (732) 751 9266 (732) 751 9241 Fax E-mail sales@sdifire.com

1.4 **Emergency telephone number** 

Info Trac

1-800-535-5053 **Details of the Manufacturer** 

Detectortesters (No Climb Products Ltd), Edison House, 163 Dixons Hill Road, Company Identification

Welham Green, Hertfordshire. AL9 7JE. United Kingdom.

Telephone +44 (0) 1707 282760 +44 (0) 1707 282777 Fax E-mail SDS@detectortesters.com

#### **SECTION 2: HAZARDS IDENTIFICATION**

Classification of the substance or mixture

US CFR 1910.1200 Not classified as dangerous for supply/use.

2.2 Label elements

> **Product Name** Solo ES6 Smoke Cartridge.

Hazard pictogram(s) None. Signal word(s) None. Hazard statement(s) None. Precautionary statement(s) None. Other hazards None. Additional Information None.

#### **SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

Contains no hazardous ingredients.

3.1 Mixtures

Hazardous ingredient(s)	CAS No.	%W/W
Propane-1,2-Diol	57-55-6	40 - 50

#### 3.2 Additional Information

Skin Contact

None.

2.3

2.4

1.5

#### **SECTION 4: FIRST AID MEASURES**



4.1 Description of first aid measures

> Inhalation If breathing is difficult, remove victim to fresh air and keep at rest in a position

comfortable for breathing. Wash skin with soap and water.

Eye Contact Flush eyes with water for at least 15 minutes. Indestion Wash out mouth with water. Seek medical treatment.

Most important symptoms and effects, both 4.2 None anticipated.

acute and delayed

Indication of any immediate medical attention 4.3

and special treatment needed

Unlikely to be required but if necessary treat symptomatically.

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#### **SECTION 5: FIRE-FIGHTING MEASURES**

5.1 Extinguishing Media

Suitable Extinguishing Media Use water spray, foam, dry powder or CO2 to extinguish.

Unsuitable Extinguishing Media None known.

5.2 Special hazards arising from the substance or None anticipated.

mixture

5.3 Advice for fire-fighters In case of major fire and large quantities: A self contained breathing apparatus

should be worn.

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

6.1 Personal precautions, protective equipment Ensure adequate ventilation. Stop leak if safe to do so. Wear protective gloves.

and emergency procedures

**Environmental precautions** Prevent entry into drains.

6.3 Methods and material for containment and

Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a

cleaning up
6.4 Reference to other sections

6.2

7.3

container for disposal. See Also Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling No special measures are required.

7.2 Conditions for safe storage, including any

incompatibilities

Storage Temperature Ambient.
Storage Life Stable under normal conditions.

Incompatible materials

Specific end use(s)

None anticipated.

Smoke simulation.

#### **SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

#### 8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Propane-1.2-Diol	57-55-6	-	-	-	-	NIOSH
Propane-1,2-Dioi	37-33-6	=	-	-	-	OSHA

NIOSH = National Institute of Occupational Safety & Health

OSHA = Occupational Safety and Health Administration

8.1.2 Biological limit value Not established.
8.1.3 PNECs and DNELs Not established.

8.2 Exposure controls8.2.1 Appropriate engineering controls

Provide adequate ventilation.

8.2.2 Personal protection equipment

Eye/face protection Not normally required.



Skin protection (Hand protection/ Other) Wear suitable gloves if prolonged skin contact is likely.



Respiratory protection No personal respiratory protective equipment normally required.



Thermal hazards Not applicable.

**B.2.3 Environmental Exposure Controls** Prevent entry into drains.

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on basic physical and chemical properties

Appearance Liquid. Colour Clear. Characteristic. Odour Odour Threshold Not determined. Not determined. Melting Point/Freezing Point Not determined. Initial boiling point and boiling range 212 °F Flash Point >212 °F Evaporation rate Not applicable.

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Non-flammable.

#### **Specialized Fire Products**

Flammability (solid, gas)

Upper/lower flammability or explosive limits Not applicable. Vapour pressure

0.334 psig @ 68 °F 65.55 lb/ft<sup>3</sup> @ 68 °F Density Vapour density Not determined. Relative density Not determined. Solubility(ies) Miscible with: Water. Not determined.

Partition coefficient: n-octanol/water 518 °F Ignition temperature

Auto-ignition temperature Product is not selfigniting.

Decomposition Temperature Not determined. Kinematic Viscosity Not determined. Explosive properties Not explosive. Oxidising properties Not oxidising.

9.2 Other information

Organic solvents - Content 69.8% Water - Content 20.0%

#### **SECTION 10: STABILITY AND REACTIVITY**

Reactivity 10.1 Stable under normal conditions. Chemical stability 10.2 Stable under normal conditions.

Possibility of hazardous reactions 10.3 No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid None anticipated. Incompatible materials 10.5 None anticipated.

**Hazardous Decomposition Product(s)** No hazardous decomposition products known. 10.6

#### **SECTION 11: TOXICOLOGICAL INFORMATION]**

11.1 Information on toxicological effects

Acute toxicity Low acute toxicity. Irritation Not classified. Corrosivity Not classified.

Sensitization It is not a skin sensitiser. Repeated dose toxicity None anticipated.

No evidence of carcinogenicity. Carcinogenicity

Mutagenicity There is no evidence of mutagenic potential.

**Toxicity for reproduction** None anticipated. Aspiration hazard None anticipated.

Other information None.

#### **SECTION 12: ECOLOGICAL INFORMATION**

12.1 **Toxicity** Low toxicity to aquatic organisms. The product is readily biodegradable. Persistence and degradability 12.2

12.3 Bioaccumulative potential No information available.

12.4 Mobility in soil Soluble in water. The product is predicted to have high mobility in soil.

Other adverse effects None.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

Waste treatment methods Consult an accredited waste disposal contractor or the local authority for advice.

Smaller quantities can be disposed of with household waste.

13.2 **Additional Information** Disposal should be in accordance with local, state or national legislation.

#### **SECTION 14: TRANSPORT INFORMATION**

MARPOL73/78 and the IBC Code

D.O.T. Classification

Not classified as dangerous for transport.

**UN** number 14.1 Not applicable. **UN Proper Shipping Name** Not applicable. 14.2 Transport hazard class(es) Not applicable. 14.3 **Packing Group** Not applicable. 14.4 Environmental hazards 14.5 Not applicable. 14.6 Special precautions for user Not applicable. Not applicable. Transport in bulk according to Annex II of 14.7

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#### **SECTION 15: REGULATORY INFORMATION**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910; All chemicals are not listed. Subpart Z)
National emission standards for hazardous air All chemicals are not listed.

pollutants (40 CFR 61.01)

**15.1.2 Title III Consolidated List of Lists**All chemicals are not listed. **15.1.3 OSPAR List of Chemicals for Priority Action**All chemicals are not listed.

15.1.3 OSPAR List of Chemicals for Priority Action
All che
Propar

Propane-1,2-Diol (CAS No.: 57-55-6): Pennsylvania, Minnesota

15.1.5 TSCA (Toxic Substance Control Act) All chemicals listed

15.1.6 Proposition 65 (California)
All chemicals are not listed.
15.1.7 CAA 602 - Ozone Depleting Substances (ODS)
All chemicals are not listed.

#### **SECTION 16: OTHER INFORMATION**

#### The following sections contain revisions or new statements:.

NFPA		HMIS		
Health	0	Health	0	
Fire	0	Fire	0	
Instability	0	Instability	0	

LEGEND

LTEL Long Term Exposure Limit STEL Short Term Exposure Limit

NIOSH National Institute of Occupational Safety & Health OSHA Occupational Safety and Health Administration

#### **Disclaimers**

The information is based on the best knowledge of SDi and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for purposes other than it is intended.

#### Annex to the extended Safety Data Sheet (eSDS)

No information available.

Revision: 2 Page: 4/4 Date: 14/11/17



## SAFETY DATA SHEET

SDS0066US

**ACCORDING TO US CFR 1910.1200** 

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Solo Smoke Detector Tester.

Trade Name Solo A4 - XXX (XXX denotes customer variant).

CAS No. Mixture. EINECS No. Mixture.

1.2 Recommended use of the chemical and

restrictions on use

Identified Use(s)Smoke simulation.Uses Advised AgainstNone known.

1.3 Details of the supplier of the safety data sheet

1.3.1 Distributor

Company Identification SDi

1345 Campus Parkway, Suite A18 Wall Township, NJ 07753 6815

 Telephone
 (732) 751 9266

 Fax
 (732) 751 9241

 E-mail
 sales@sdiffre.com

1.4 Emergency telephone number

Info Trac 1-800-535-5053

### 2. SECTION 2: HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture

2.1.1 US CFR 1910.1200 Gases under pressure: Liquefied gas; Contains gas under

pressure; may explode if heated. Causes serious eye irritation.

2.2 Label elements

Signal Word(s)

Product Name Solo Smoke Detector Tester.

Hazard Pictogram(s)



Warning.

Hazard Statement(s) H280: Contains gas under pressure; may explode if heated.

H319: Causes serious eye irritation.

Precautionary Statement(s)

P264: Wash hands thoroughly after handling.

P337+P313: If eye irritation persists: Get medical

advice/attention.

 $P410 + P403: Protect \ from \ sunlight. \ Store \ in \ a \ well-ventilated$ 

place.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

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Additional Information 14.5 % by mass of the contents are flammable.

Do not pierce or burn, even after use.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 122°F (50°C). Keep out of the reach of children. Keep away from combustible material. Keep away from sources of ignition -

No smoking.

2.3 Other hazards High concentrations: May cause drowsiness and dizziness.

2.4 Additional Information None.

## 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product as supplied: Aerosol.

#### 3.1 Mixtures

Hazardous Ingredient(s)	CAS No.	%W/W
1,1,1,2-tetrafluoroethane	811-97-2	50 - 100
Propan-2-ol	67-63-0	10 - 25

#### 3.2 Additional Information

None.

### 4. SECTION 4: FIRST AID MEASURES



4.2

4.1 Description of first aid measures

Inhalation 
If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing. If symptoms

persist, obtain medical attention.

Skin Contact Wash with plenty of soap and water.

Eye Contact IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue

rinsing. If eye irritation persists: Get medical

advice/attention.

Ingestion Unlikely route of exposure.

Most important symptoms and effects, both

acute and delayed

None anticipated.

4.3 Indication of any immediate medical attention

and special treatment needed

Unlikely to be required but if necessary treat

symptomatically.

## 5. SECTION 5: FIRE-FIGHTING MEASURES

Pressurized container: May burst if heated.

5.1 Extinguishing Media

Suitable Extinguishing Media Extinguish with carbon dioxide, dry chemical, foam or water

spray.

Unsuitable Extinguishing Media None known.

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5.2 Special hazards arising from the substance or

Heating may cause pressure rise with risk of bursting.

5.3 Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions.

### 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

The product is an aerosol. It is unlikely to present spillage or leakage hazard. In case of rupture, released content should be contained as any other solvent spill.

**6.1 Personal precautions, protective equipment and** Ensure adequate ventilation. Avoid inhalation of high

concentrations of vapors. Wear suitable gloves and eye/face

emergency procedures

protection.

6.2 Environmental precautions

Do not release large quantities into the surface water or into

drains.

6.3 Methods and material for containment and

cleaning up

Collect mechanically and dispose of according to Section 13. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a lidded container for disposal or recovery. Containers must not be punctured or

destroyed by burning, even when empty.

6.4 Reference to other sections

See Also Section: 8, 13.

## 7. SECTION 7: HANDLING AND STORAGE

**7.1 Precautions for safe handling** Keep away from heat, hot surfaces, sparks, open flames

and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Provide adequate ventilation. Avoid inhalation of high concentrations of vapors. Avoid contact with eyes. Avoid prolonged skin contact. Wear suitable gloves if prolonged skin contact is likely. See Section: 8. Do not eat, drink or smoke during work. Wash

hands thoroughly after handling.

7.2 Conditions for safe storage, including any

incompatibilities

Protect from sunlight. Store in a well-ventilated place.

Storage temperature

Ambient.

Protect from sunlight and do not expose to temperatures

exceeding 122 °F (50 °C).

Storage life Stable under normal conditions.

Incompatible materials None anticipated.

### 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

## 8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note:
1,1,1,2- tetrafluoroethane	811-97-2	-	-	-	-	Not established
Propan-2-ol	67-63-0	400	980	500	1225	NIOSH
		400	980	-	-	PEL (OSHA)

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Source:

NIOSH = National Institute of Occupational Safety & Health OSHA = Occupational Safety and Health Administration

8.2 Appropriate engineering controls

Provide adequate ventilation.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

If eye contact is likely: Wear protective eyewear (goggles,

face shield, or safety glasses).

Skin protection (Hand protection/ Other)

Wear suitable gloves if prolonged skin contact is likely.

Gloves: Nitrile rubber, NBR.

Not applicable.

Respiratory protection



No personal respiratory protective equipment normally required. Handling of larger amounts: In case of insufficient

ventilation, wear suitable respiratory equipment.

Thermal hazards

#### 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

# 9.1 Information on basic physical and chemical properties

Appearance Aerosol.

Color Colorless.

Odor Characteristic.

Odor Threshold Not determined.

pH Not determined.

Melting Point/Freezing Point Not determined.

Initial boiling point and boiling range -14.8°F (-26°C)

Flash Point 55.4°F (13 °C) Evaporation Rate Not applicable.

Flammability (solid, gas)

Non-flammable. Tested to CFR 1910.1200 Appendix B –

B.3

 Vapor pressure
 60.7 psig (5.2 bar) @ 68°F

 Density
 70.67 lb/ft³ (1.132 g/cm³) @ 68°F

 Vapor density
 Not determined.

Relative density

Solubility(ies)

Partition coefficient: n-octanol/water

Ignition temperature

Not determined.

Not determined.

797°F (425 °C)

Auto-ignition temperature Product is not selfigniting.

Decomposition Temperature Not determined. Kinematic Viscosity Not determined.

Explosive properties Contains gas under pressure; may explode if heated.

Oxidizing properties Not oxidizing.

9.2 Other information

Organic solvents - Content 14.8%



### 10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions. **Chemical stability** 10.2 Stable under normal conditions. Possibility of hazardous reactions 10.3 Stable under normal conditions. Conditions to avoid 10.4 Heat and direct sunlight. 10.5 Incompatible materials None anticipated. 10.6 Hazardous decomposition product(s) None known.

## 11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Mixtures

Acute toxicity Low acute toxicity.

**Irritation** Causes serious eye irritation.

Corrosivity Not classified.

**Sensitization** It is not a skin sensitizer. **Repeated dose toxicity** None anticipated.

Carcinogenicity No evidence of carcinogenicity.

**Mutagenicity** There is no evidence of mutagenic potential.

**Toxicity for reproduction Aspiration hazard**None anticipated.

None anticipated.

11.2 Other information None.

### 12. SECTION 12: ECOLOGICAL INFORMATION

**12.1 Toxicity** Low toxicity to aquatic organisms.

12.2 Persistence and degradability
 12.3 Bioaccumulative potential
 The product is readily biodegradable. Unlikely to persist.
 The product has no potential for bioaccumulation.

12.4 Mobility in soil Immiscible with water. The product is predicted to have low

mobility in soil.

12.5 Other adverse effects None.

## 13. SECTION 13: DISPOSAL CONSIDERATIONS

**13.1** Waste treatment methods Recycle only completely emptied packaging. Containers

must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.

13.2 Additional Information Disposal should be in accordance with local, state or

national legislation.

#### 14. SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR, IMDG, IATA, TDG UN 1950

14.2 UN Proper Shipping Name

ADR 1950 AEROSOLS IMDG, TDG AEROSOLS

IATA AEROSOLS, Non-flammable

14.3 Transport hazard class(es)

ADR

Class / Classification 2 5A Gases.

Label 2.2



IMDG, IATA, TDG

Class / Division

Label

**Packing Group** 

ADR, IMDG, IATA

14.5 **Environmental hazards** 

Marine Pollutant

Special precautions for user 14.6

> Kemler Code IMDG EMS

Transport in bulk according to Annex II of 14.7 MARPOL73/78 and the IBC Code

**Additional Information** 

ADR

Limited Quantity (LQ)

**ADR Transport Category Tunnel Restriction Code** 

IMDG, TDG

Limited Quantity (LQ)

IATA, TDG

Limited Quantity (LQ)

**UN Model Regulation** 

None.

2.2

2.2

No.

1L

Warning: Gases.

F-D, S-U

Not applicable.

1 L

Not applicable in Limited Quantities.



1L



UN 1950, AEROSOLS, 2.2

ORM-D when transported in limited quantities (< 30kg or

66lb gross weight).

## 15. SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 **OSHA** 

Toxic and hazardous substances (29 CFR 1910;

Subpart Z)

National emission standards for hazardous air

pollutants (40 CFR 61.01)

All chemicals are not listed.

All chemicals are not listed.

15.1.2 Title III Consolidated List of Lists

Sec 313

Listed: Propan-2-ol (CAS No.: 67-63-0)

313



15.1.3 OSPAR List of Chemicals for Priority Action All chemicals are not listed.

**15.1.4 State Right to Know Lists** 1,1,1,2-tetrafluoroethane (CAS No.: 811-97-2):

New Jersey, Pennsylvania, Massachusetts, Rhode Island.

Propan-2-ol (CAS No.: 67-63-0):

New Jersey, Pennsylvania, Massachusetts, California,

Minnesota.

15.1.5 TSCA (Toxic Substance Control Act) All chemicals listed.

**15.1.6 Proposition 65 (California)**All chemicals are not listed.

15.1.7 CAA 602 - Ozone Depleting Substances (ODS) All chemicals are not listed.

### **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1 - 16.

NFPA		HMIS	
Health	1	Health	1
Fire	0	Flammability	0
Instability	1	Physical hazards	1

#### **LEGEND**

LTEL Long Term Exposure Limit STEL Short Term Exposure Limit

NIOSH National Institute of Occupational Safety & Health

PEL Permissible Exposure Limits

CAA Clean Air Act

OSHA Occupational Safety and Health Administration

OSPAR Oslo and Paris Convention

ADR Accord européen elative au transport international des marchandises dangereuses par route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG International Maritime Code for Dangerous Goods

IATA International Air Transport Association TDG Transportation of Dangerous Goods

#### Disclaimers

The information is based on the best knowledge of SDi and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for purposes other than it is intended.

Revision: 8 Page: 7/7 Date: 12/05/2015



## SAFETY DATA SHEET

## SDS0096US-EN

ACCORDING TO US CFR 1910.1200

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 **Product identifier** 

> **Product Name** Solo Smoke Detector Tester.

Trade Name Solo A10 -XXX (XXX denotes customer variant).

CAS No. Mixture. EINECS No. Mixture REACH Registration No. None assigned.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s) Smoke simulation. Uses Advised Against None known.

Details of the supplier of the safety data sheet 1.3

Company Identification

LLC 3535 State Highway 66, Parkway 100 Building 6 Neptune, NJ 07753 USA

Telephone (732) 751 9266 Fax (732) 751 9241 E-Mail (competent person) sales@sdifire.com

**Emergency telephone number** 1.4

Emergency Phone No. 1-800-535-5053

1.5 **Address of Manufacturer** Detectortesters (No Climb Products Ltd), Edison House, 163 Dixons Hill Road,

Welham Green, Hertfordshire. AL9 7JE. United Kingdom

Telephone +44 (0) 1707 282760 +44 (0) 1707 282777 Fax E-mail SDS@detectortesters.com

#### **SECTION 2: HAZARDS IDENTIFICATION**

2.1 Classification of the substance or mixture

US CFR 1910.1200

Gases under pressure: Liquefied gas; Contains gas under pressure; may explode if

heated.

2.2 Label elements

Hazard Pictogram(s)



Signal Word(s) Warning.

Hazard Statement(s) H229: Pressurised container: May burst if heated.

Precautionary Statement(s) P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking..

P251: Pressurised container - Do not pierce or burn, even after use.

P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50°C.

9.1% by mass of the contents are flammable:

Keep out of reach of children.

High concentrations: May cause drowsiness and dizziness.

#### **SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

Product as supplied: Aerosol.

Other hazards

Additional Information

3.1 Mixtures

2.3

2.4

Hazardous Ingredient(s)	%W/W	CAS No.
(1E)-1,3,3,3-Tetrafluoro-1-propene	85-95	29118-24-9
Ethanol	1-10	64-17-5
Propane-1,2-diol	<0.5	57-55-6
Polyethylene glycol 200	<0.5	25322-68-3
Glycerol	<0.1	56-81-5

3.2 Additional Information

None.

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#### **SECTION 4: FIRST AID MEASURES**



4.1 Description of first aid measures

> If breathing is difficult, remove victim to fresh air and keep at rest in a position Inhalation

> > comfortable for breathing. If symptoms persist, obtain medical attention.

Skin Contact Wash skin with soap and water.

Flush eyes with water for at least 15 minutes while holding eyelids open. If eye Eye Contact

irritation persists, get medical advice/attention.

Ingestion Unlikely route of exposure.

Most important symptoms and effects, both acute None anticipated.

and delayed

4.3 Indication of any immediate medical attention and special treatment needed

Unlikely to be required but if necessary treat symptomatically.

#### **SECTION 5: FIREFIGHTING MEASURES**

Pressurised container: May burst if heated.

**Extinguishing media** 5.1

Suitable Extinguishing media Unsuitable extinguishing media

5.2 Special hazards arising from the substance or

mixture

4.2

5.3 Advice for fire-fighters Extinguish with carbon dioxide, dry chemical, foam or waterspray.

None known.

Heating may cause pressure rise with risk of bursting. May decompose in a fire

giving off toxic fumes. Hydrogen fluoride.

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire

area because they are likely to rupture under fire conditions.

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

The product is an aerosol. It is unlikely to present spillage or leakage hazard. In case of rupture, released content should be contained as any other solvent spill.

6.1 Personal precautions, protective equipment and emergency procedures

**Environmental precautions** 

6.2 Methods and material for containment and 6.3 cleaning up

6.4 Reference to other sections Ensure adequate ventilation. Avoid inhalation of high concentrations of vapours.

Do not release large quantities into the surface water or into drains.

Collect mechanically and dispose of according to Section 13. Adsorb spillages onto sand, earth or any suitable adsorbent material. Containers must not be punctured or

destroyed by burning, even when empty.

See Also Section: 8, 13.

#### **SECTION 7: HANDLING AND STORAGE**

7.1 Precautions for safe handling Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use.

7.2 Conditions for safe storage, including any

incompatibilities Storage temperature

Storage life

Incompatible materials None known. Specific end use(s)

Ambient. Protect from sunlight. Do not expose to temperatures exceeding 50°C.

Stable under normal conditions.

Smoke simulation.

#### **SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

#### 8.1 Control parameters

8.1.1 **Occupational Exposure Limits** 

SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Ethanol	64-17-5	1000	1900	-	-	NIOSH REL
Ethanoi	04-17-5	1000	1900	-	-	OSHA PEL
Glycerol	56-81-5		5	-	-	NIOSH REL
(1E)-1,3,3,3-	20119 24 0	800	-	-	-	WEEL. US
Tetrafluoro-1-propene	29118-24-9	800	-	-	-	

7.3

NIOSH = National Institute of Occupational Safety & Health

OSHA = Occupational Safety and Health Administration

8.1.2 Biological limit value 8.1.3 **PNECs and DNELs Exposure controls** 

8.2 8.2.1 Appropriate engineering controls 8.2.2 Personal protection equipment

Not established. Not established.

Provide adequate ventilation.

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glasses).

Eye/ face protection If eye contact is likely: Wear protective eyewear (goggles, face shield, or safety

Skin protection (Hand protection/ Other)

Wear suitable gloves if prolonged skin contact is likely. Gloves: Nitrile rubber,
NBR.

Respiratory protection

No personal respiratory protective equipment normally required. Handling of larger

amounts: In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Not applicable.

**8.2.3** Environmental Exposure Controls Avoid release to the environment.

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on basic physical and chemical properties

**Appearance** Aerosol. Colour. Colourless. Odour Characteristic. Odour Threshold (ppm) Not determined. pH (Value) Not determined. Melting Point (°C) / Freezing Point (°C) Not determined. Initial boiling point and boiling range -2.2°F (-19°C) >131°F (55°C) Flash Point (°C) Evaporation rate Not applicable.

Flammability (solid, gas)

Non-flammable; Tested to CFR 1910.1200 Appendix B – B.3

Upper/lower flammability or explosive limits
Vapour pressure
Vapour density
Not determined.
Not determined.
Not determined.
Not determined.
Not determined.

Density 67.42lb/ft<sup>3</sup>
Solubility(ies) Immiscible or partly miscible with water.

Partition Coefficient (n-Octanol/water)

Not determined.

Auto Ignition Point (°C) Product is not selfigniting.

Ignition temperature 694.4°F (368°C)
Decomposition Temperature (°C) Not determined.
Dynamic viscosity Not determined.
Kinematic Viscosity Not determined.
Explosive properties Not explosive.

Oxidising properties Not oxidising.

9.2 Other information
Organic solvents - Content 9.9%

#### **SECTION 10: STABILITY AND REACTIVITY**

10.1 Reactivity Stable under normal conditions.
 10.2 Chemical stability Stable under normal conditions.

**10.3 Possibility of hazardous reactions**No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid Heat and direct sunlight.
 10.5 Incompatible materials None anticipated.

10.6 Hazardous decomposition product(s) No hazardous decomposition products known.

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

11.1 Information on toxicological effects

11.1.1 Mixtures

Acute toxicityLow acute toxicity.IrritationNon-irritant.CorrosivityNot classified.

**Sensitisation** It is not a skin sensitiser. **Repeated dose toxicity** None anticipated.

Carcinogenicity No evidence of carcinogenicity.

Mutagenicity There is no evidence of mutagenic potential.

Reproductive toxicity

None anticipated.

11.2 Other information None.

Revision: 3 Page: 3/5 Date: 20 March 2018



#### **SECTION 12: ECOLOGICAL INFORMATION**

12.1 **Toxicity** Low toxicity to aquatic organisms. Persistence and degradability 12.2 No information available.

**Bioaccumulative potential** 12.3 No information available 12.4 Mobility in soil No information available.

Results of PBT and vPvB assessment 12.5 Not classified as PBT or vPvB.

12.6 Other adverse effects None.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods Recycle only completely emptied packaging. Containers must not be punctured or

UN 1950.

**AEROSOLS** 

2 5A Gases.

2.2

2.2

2.2

None.

None.

F-D, S-U

Warning: Gases

Not applicable.

1950 AEROSOLS

destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.

Disposal should be in accordance with local, state or national legislation. **Additional Information** 

AEROSOLS, Non-flammable.

## **SECTION 14: TRANSPORT INFORMATION**

**UN** number

ADR, IMDG, IATA

14.2 **UN proper shipping name** 

ADR **IMDG** IATA

13.2

14.3

Transport hazard class(es)

ADR

Class / Classification

Label

IMDG, IATA Class / Division

Label Packing group

14.4 ADR, IMDG, IATA

**Environmental hazards** 14.5

Marine Pollutant

Special precautions for user

Kemler Code **IMDG EMS** 

Transport in bulk according to Annex II of MARPOL 14.7

73/78 and the IBC Code

14.8 **Additional Information** 

**ADR** 

Limited Quantity (LQ)

**ADR Transport Category Tunnel Restriction Code** 

**IMDG** 

Limited Quantity (LQ)

IATA

Limited Quantity (LQ)

1L

Not applicable in Limited Quantities.

UN 1950, AEROSOLS

ORM-D when transported in limited quantities (< 30kg or 66lb gross weight).

**UN Model Regulation** 

US

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#### **SECTION 15: REGULATORY INFORMATION**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 OSHA

> Toxic and hazardous substances (29 CFR 1910; 64-17-5, 57-55-6, 25322-68-3, 56-81-5.

Subpart Z)

National emission standards for hazardous air All chemicals are not listed

pollutants (40 CFR 61.01)

**Title III Consolidated List of Lists** 15.1.2 All chemicals are not listed

**Technical Instructions (air)** 

**OSPAR List of Chemicals for Priority Action** 15.1.3 All chemicals are not listed

15.1.4 State Right to Know Lists Ethanol (CAS 64-17-5):

Minnesotta, New Jersey, Pennsylvania, Rhode Island

Propane-1,2-diol (CAS 57-55-6):

Minnesotta, New Jersey, Pennsylvania, Rhode Island

Glycerol (CAS 56-81-5):

Minnesotta, New Jersey, Pennsylvania, Rhode Island

Poly(ethylene) glycol (CAS 25322-68-3):

Minnesota

15.1.5 TSCA (Toxic Substance Control Act) All chemicals listed

Proposition 65 (California) 15.1.6 All chemicals are not listed

CAA 602 - Ozone Depleting Substances (ODS) All chemicals are not listed

#### **SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 3.

#### **LEGEND**

Long Term Exposure Limit LTEL **STEL** Short Term Exposure Limit Derived No Effect Level DNEL

Predicted No Effect Concentration **PNEC** PBT Persistent, Bioaccumulative and Toxic vPvB very Persistent and very Bioaccumulative

VOC Volatile Organic Compounds

MAL Code Regulation for the labeling concerning inhalation hazards, Denmark

**ADR** European Agreement concerning the International Carriage of Dangerous Goods by Road

**IMDG** International Maritime Code for Dangerous Goods

IATA International Air Transport Association

Aerosol 3 Aerosol Category 3

Flam. Liq. 2 Flammable Liquid Category 2

### Hazard Statement(s)

H225 Highly flammable liquid and vapour. H229 Pressurised container: May burst if heated.

H280 Contains gas under pressure; may explode if heated.

H335 May cause respiratory irritation.

#### **Disclaimers**

The information is based on the best knowledge of No Climb Products Ltd. and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for purposes other than it is intended.

#### Annex to the extended Safety Data Sheet (eSDS)

No information available.

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# **SAFETY DATA SHEET**

SDS0077US **ACCORDING TO US CFR 1910.1200** 

## 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE **COMPANY/UNDERTAKING**

**Product identifier** 

SOLO Detector Duster. Product Name

SOLO A7-XXX (XXX denotes customer variant). Trade Name

CAS No. 811-97-2 EINECS No. 212-377-0

Relevant identified uses of the substance or 1.2

mixture and uses advised against

Identified use(s) Clearing of dust or other solid contaminants. Uses advised against None known.

1.3

Details of the supplier of the Safety Data Sheet

Company Identification SDi

1345 Campus Parkway, Suite A18 Wall Township, NJ 07753 6815

Telephone (732) 751 9266 (732) 751 9241 Fax sales@sdifire.com E-mail

Emergency telephone number 1.4

Info Trac 1-800-535-5053

#### 2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

> US CFR 1910.1200 Gases under pressure: Liquefied gas; Contains gas under

> > pressure; may explode if heated.

Label elements 2.2

Hazard pictogram(s)

**Product Name** SOLO Detector Duster.



Signal word(s) Warning.

Hazard statement(s) H280: Contains gas under pressure; may explode if heated. Precautionary statement(s) P410+P403: Protect from sunlight. Store in a well-ventilated

place.

Additional Information Do not pierce or burn, even after use.

2.3 Other hazards None.

2.4 **Additional Information** None.



## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Product as supplied: Aerosol.

#### 3.1 Substances

Hazardous ingredient(s)	CAS No.	%W/W
1,1,1,2-tetrafluoroethane	811-97-2	80 - 100

#### 3.2 Additional Information

None.

## **SECTION 4: FIRST AID MEASURES**



4.3

Description of first aid measures

Inhalation If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing.

Skin Contact Wash with plenty of soap and water.

Flush eyes with water for at least 15 minutes while holding Eye Contact

eyelids open.

Ingestion Unlikely route of exposure.

4.2 Most important symptoms and effects, both None anticipated.

acute and delayed

Indication of any immediate medical attention Unlikely to be required but if necessary treat and special treatment needed

symptomatically.

## 5. SECTION 5: FIRE-FIGHTING MEASURES

Contains gas under pressure; may explode if heated.

**Extinguishing Media** 5.1

Suitable Extinguishing Media Extinguish with carbon dioxide, dry chemical, foam or

waterspray.

Unsuitable Extinguishing Media Do not use water jet.

Special hazards arising from the substance or 5.2 Heating may cause pressure rise with risk of bursting.

mixture

Advice for fire-fighters 5.3 Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because

they are likely to rupture under fire conditions.

Date: 12/05/2015 Revision: 5 Page: 2/7



### 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

The product is an aerosol. It is unlikely to present spillage or leakage hazard. In case of rupture, released content should be contained as any other solvent spill.

6.1 Personal precautions, protective equipment

and emergency procedures

6.2 **Environmental precautions** 

Methods and material for containment and 6.3 cleaning up

Reference to other sections

6.4

Ensure adequate ventilation. Wear protective gloves.

Do not release large quantities into the surface water or into

drains

Collect mechanically and dispose of according to Section 13. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a lidded container for disposal or

recovery. Containers must not be punctured or destroyed by burning, even when empty.

See Also Section: 8, 13.

#### 7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

7.2 Conditions for safe storage, including any incompatibilities

Storage Temperature Storage Life

Incompatible materials

Protect from sunlight. Store in a well-ventilated place. Do not

pierce or burn, even after use.

Observe official regulations on storing packagings with

pressurized containers.

Ambient.

Stable under normal conditions.

None anticipated.

## 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## **Control parameters**

#### **Occupational Exposure Limits** 8.1.1

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
1,1,1,2-	811-97-2	-	-	-	-	NIOSH
tetrafluoroethane		-	-	-	-	OSHA

NIOSH = National Institute of Occupational Safety & Health OSHA = Occupational Safety and Health Administration

8.2 Appropriate engineering controls

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Provide adequate ventilation.

Not normally required.



Skin protection (Hand protection/ Other)



Respiratory protection



Thermal hazards

Wear suitable gloves if prolonged skin contact is likely.

Gloves: Nitrile rubber, NBR.

No personal respiratory protective equipment normally required. Handling of larger amounts: In case of insufficient ventilation, wear suitable respiratory equipment.

Not applicable.



### 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical

properties

Appearance Aerosol.

Color Colorless.

Odor Characteristic.

Odor Threshold Not determined.

pH Not determined.

Melting Point/Freezing Point Not determined.

Initial boiling point and boiling range -14.8°F (-26 °C)

Flash Point Not applicable (Aerosol)
Evaporation rate Not applicable.

Flammability (solid, gas)

Upper/lower flammability or explosive limits

Not determined.

 Vapor pressure
 82.67 psi (5.7 bar) @ 68°F

 Density
 76.16 lb/ft³ (1.22 g/cm³) @ 68°F

Vapor density Not determined. Relative density Not determined. 0.122 lb/ft3 @ 68°F Solubility(ies) Partition coefficient: n-octanol/water Not determined. Ignition temperature Not determined. Auto-ignition temperature Not determined. **Decomposition Temperature** Not determined. Dynamic viscosity Not determined. Kinematic Viscosity Not determined. Explosive properties Not explosive.

Contains gas under pressure; may explode if heated.

Oxidizing properties Not oxidizing.

9.2 Other information

Organic solvents - Content 0.0%

### 10. SECTION 10: STABILITY AND REACTIVITY

Reactivity Stable under normal conditions. 10.2 **Chemical stability** Stable under normal conditions. Possibility of hazardous reactions 10.3 Stable under normal conditions. Heat and direct sunlight. 10.4 Conditions to avoid 10.5 Incompatible materials None anticipated. **Hazardous Decomposition Product(s)** 10.6 None known.

## 11. SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

11.1.1 Substances

 Acute toxicity
 Low acute toxicity.

 Skin corrosion/irritation
 Non-irritant.

 Serious eye damage/irritation
 Not classified.

**Respiratory or skin sensitization** It is not a skin sensitizer.

**Germ cell mutagenicity** There is no evidence of mutagenic potential.

**Carcinogenicity** No evidence of carcinogenicity.

Reproductive toxicity
STOT-single exposure
STOT-repeated exposure
Aspiration hazard
Not classified.

11.2 Other information None.



### 12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity Low toxicity to aquatic organisms.

Fish: LC50 (Rainbow trout) (96 hour) = 450mg/l

Aquatic invertebrates:

EC50 (Daphnia magna) (48 hour) = 980mg/l

Algae: EC50 (96 hour) = 142mg/l

12.2 Persistence and degradability Biodegradable.

12.3 **Bioaccumulative potential** The substance has no potential for bioaccumulation. Mobility in soil 12.4 Slightly soluble in: Water. The substance is predicted to

have low mobility in soil.

12.5 Other adverse effects None.

## 13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods Recycle only completely emptied packaging. Containers

> must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.

13.2 **Additional Information** Disposal should be in accordance with local, state or

national legislation. Do not allow to enter drains, sewers or

watercourses.

### 14. SECTION 14: TRANSPORT INFORMATION

**D.O.T. Classification** 

14.1 **UN number** 

> ADR, IMDG, IATA UN 1950

14.2 **UN Proper Shipping Name** 

ADR 1950 AEROSOLS IMDG, IATA **AEROSOLS** 

14.3 Transport hazard class(es)

ADR

Class/Classification 2 2A Gases

Label 2

IMDG/IATA

Class/Division 2 Gases Label 2.2

14.4 **Packing Group** 

ADR, IMDG, IATA None.

14.5 **Environmental hazards** 

> Marine Pollutant No.

Warning: Gases. Special precautions for user 14.6

Kemler Code 20 F-D, S-U IMDG EMS Not applicable.

Transport in bulk according to Annex II of 147

MARPOL73/78 and the IBC Code

Date: 12/05/2015 Revision: 5 Page: 5/7



# 14.8 Additional Information ADR

Limited Quantity (LQ)

1 L



ADR Transport Category

Tunnel Restriction Code

3

Not applicable in Limited Quantities.

**IMDG** 

Limited Quantity (LQ)

1 L



IATA

Limited Quantity (LQ)

1 L





UN "Model Regulation"

UN 1950, AEROSOLS, 2

ORM-D when transported in limited quantities (< 30kg or 66lb gross weight).

## 15. SECTION 15: REGULATORY INFORMATION

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1	OSHA Toxic and hazardous substances (29 CFR 1910; Subpart Z)	Not listed.
	National emission standards for hazardous air pollutants (40 CFR 61.01)	Not listed.
15.1.2	Title III Consolidated List of Lists	Not listed.
15.1.3	OSPAR List of Chemicals for Priority Action	Not listed.
15.1.4	State Right to Know Lists	1,1,1,2-tetrafluoroethane (CAS No.: 811-97-2) New Jersey, Pennsylvania, Massachusetts, Rhode Island
15.1.5	TSCA (Toxic Substance Control Act)	Listed: 1,1,1,2-tetrafluoroethane (CAS No.: 811-97-2)
15.1.6	Proposition 65 (California)	Not listed.
15.1.7	CAA 602 - Ozone Depleting Substances (ODS)	Not listed.



## **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16.

NFPA		HMIS	
Health	0	Health	0
Fire	0	Flammability	0
Instability	1	Physical hazards	1

#### LEGEND

LTEL Long Term Exposure Limit STEL Short Term Exposure Limit

ADR Accord européen relatif au transport international des marchandises dangereuses par route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG International Maritime Code for Dangerous Goods

IATA International Air Transport Association

OSPAR Oslo and Paris Convention

CAA Clean Air Act

NFPA National Fire Protection Association
HMIS Hazardous Material Identification System

#### **Disclaimers**

The information is based on the best knowledge of SDi and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for purposes other than it is intended.

Revision: 5 Page: 7/7 Date: 12/05/2015



## SAFETY DATA SHEET

SDS0081US ACCORDING TO US CFR 1910.1200

## 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE **COMPANY/UNDERTAKING**

**Product identifier** 1.1

> **Product Name** SOLO CO Fire Detector Tester.

Trade Name SOLO C6-XXX (XXX denotes customer variant).

CAS No. Mixture. EINECS No. Mixture.

1.2 Recommended use of the chemical and

restrictions on use

Identified Use(s) Trace carbon monoxide (CO) source.

Uses Advised Against None known.

1.3 Details of the supplier of the safety data sheet

1.3.1 Distributor

Company Identification

1345 Campus Parkway, Suite A18 Wall Township, NJ 07753 6815

(732) 751 9266

Telephone Fax (732) 751 9241 E-mail sales@sdifire.com

**Emergency telephone number** 

Info Trac 1-800-535-5053

#### 2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

> US CFR 1910.1200 Gases under pressure: Compressed gas; Contains gas

under pressure; may explode if heated. Repr. 1A: May damage the unborn child.

2.2 Label elements

> Product Name SOLO CO Fire Detector Tester.

Hazard Pictogram(s)

GHS04

GHS08

Signal Word(s) Danger.

Hazard Statement(s) H280: Contains gas under pressure; may explode if heated.

H360D: May damage the unborn child.



Precautionary Statement(s) P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been

read and understood.

P281: Use personal protective equipment as required.

P405: Store locked up.

P308+P313: IF exposed or concerned: Get medical

advice/attention.

P410+P403: Protect from sunlight. Store in a well-ventilated

Additional Information 0.19 % by mass of the contents are flammable.

Do not pierce or burn, even after use.

Pressurized container: protect from sunlight and do not

expose to temperatures exceeding 122°F.

Please refer to SDS for further details of safety precautions

or instructions.

2.3 Other hazards None.

Additional Information 2.4 None.

## 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product as supplied: Aerosol.

#### 3.1 Mixtures

Hazardous Ingredient(s)	CAS No.	%W/W
Carbon monoxide	630-08-0	< 1

#### 3.2 Additional Information

None.

## **SECTION 4: FIRST AID MEASURES**



4.2

#### Description of first aid measures 4.1

Inhalation If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing.

Skin Contact Wash with plenty of soap and water. Eye Contact

Flush eyes with water for at least 15 minutes while holding

eyelids open.

Ingestion Unlikely route of exposure. Most important symptoms and effects, both

None anticipated. acute and delayed

Indication of any immediate medical attention 4.3

and special treatment needed

IF exposed or concerned: Get medical advice/attention.



### 5. SECTION 5: FIRE-FIGHTING MEASURES

Pressurized container: May burst if heated.

5.1 **Extinguishing Media** 

Suitable Extinguishing Media

Unsuitable Extinguishing Media

5.2 Special hazards arising from the substance or mixture

5.3 Advice for fire-fighters Extinguish with waterspray.

None known.

Heating may cause pressure rise with risk of bursting.

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions.

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

The product is an aerosol. It is unlikely to present spillage or leakage hazard.

6.1 emergency procedures

**Environmental precautions** 

Reference to other sections

Methods and material for containment and 6.3

cleaning up

6.2

6.4

equipment as required.

No special measures are required.

Collect mechanically and dispose of according to Section 13. Containers must not be punctured or destroyed by

burning, even when empty. See Also Section: 8, 13.

### 7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Intended for use as a tester spray for carbon monoxide detectors involving spraying short bursts of gas at the detector via a tube at close range. Under these conditions of use personal protective equipment is not necessary. Wear respiratory protective equipment if accidental exposure to large amounts of gas is anticipated. See Section: 8. Provide adequate ventilation. Do not pierce or burn, even

7.2 Conditions for safe storage, including any

incompatibilities

Store locked up. Protect from sunlight. Store in a wellventilated place. Observe official regulations on storing

packagings with pressurized containers.

Storage temperature Pressurized container: protect from sunlight and do not

expose to temperatures exceeding 122°F.

Storage life Stable under normal conditions.

Incompatible materials None anticipated.

Date: 23/06/2015 Revision: 6.1 Page: 3/7



## 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### 8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Carbon monoxide	630-08-0	35	40	200	229	NIOSH
		50	55	-	-	PEL (OSHA)

Source:

NIOSH = National Institute of Occupational Safety & Health OSHA = Occupational Safety and Health Administration

**8.2** Appropriate engineering controls Provide adequate ventilation.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Not normally required.

Eye/face protection

Skin protection (Hand protection/ Other)

Not normally required.

Respiratory protection Not normally required.

If exposure to large amounts is anticipated provide adequate ventilation and/or wear suitable respiratory protective equipment.

Thermal hazards Not applicable.

## 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

# 9.1 Information on basic physical and chemical properties

Appearance Aerosol.

Color Colorless.

Odor None.

Odor Threshold Not applicable.

pH Not determined.

Melting Point/Freezing Point Not determined.

Initial boiling point and boiling range Not available.

Initial boiling point and boiling range

Flash Point

Evaporation Rate

Flammability (solid, gas)

Not available.

Not available.

Not applicable.

Non-flammable.

Tested to CFR 1910.1200 Appendix B - B.3

Use personal protective equipment as required.

Upper/lower flammability or explosive limits
Vapor pressure
Vapor density
Not determined.
Not determined.
Not determined.
Not determined.
Not determined.
Relative density
Heavier than air.
Solubility(ies)
Partition coefficient: n-octanol/water
Not determined.

Auto-ignition temperature Not determined.



**Decomposition Temperature** Not determined. Kinematic Viscosity Not determined.

Explosive properties Contains gas under pressure; may explode if heated.

Oxidizing properties Not oxidizing. Other information None.

### 10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions. 10.2 Chemical stability Stable under normal conditions. 10.3 Possibility of hazardous reactions Stable under normal conditions. 10.4 Conditions to avoid Heat and direct sunlight. 10.5 Incompatible materials None anticipated. 10.6 Hazardous decomposition product(s) None known.

#### 11. SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

**Mixtures Acute toxicity** Low acute toxicity. Irritation Non-irritant. Corrosivity Not classified.

Sensitization It is not a skin sensitizer. Repeated dose toxicity None anticipated.

Carcinogenicity No evidence of carcinogenicity.

Mutagenicity There is no evidence of mutagenic potential.

**Toxicity for reproduction** May damage the unborn child.

**Aspiration hazard** None anticipated.

11.2 Other information None.

#### 12. SECTION 12: ECOLOGICAL INFORMATION

12.1 **Toxicity** Low toxicity to aquatic organisms. 12.2 Persistence and degradability No information available. Bioaccumulative potential 12.3 No information available.

12.4 Mobility in soil The product is predicted to have low mobility in soil.

12.5 Other adverse effects

#### 13. SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods Recycle only completely emptied packaging. Containers 13.1

must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill. Disposal should be in accordance with local, state or

13.2 **Additional Information** 

national legislation. Do not allow to enter drains, sewers or

watercourses.



## 14. SECTION 14: TRANSPORT INFORMATION

14.1 UN number

14.2

14.3

14.5

ADR, IMDG, IATA, TDG

**UN Proper Shipping Name** 

ADR IMDG, TDG

IATA

Transport hazard class(es)

**ADR** 

Class / Classification

Label

IMDG, IATA, TDG

Class / Division

Label

14.4 Packing Group

ADR, IMDG, IATA Environmental hazards

Marine Pollutant

14.6 Special precautions for user

Kemler Code

IMDG EMS

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

14.8 Additional Information

ADR

Limited Quantity (LQ)

ADR Transport Category Tunnel Restriction Code

IMDG, TDG

Limited Quantity (LQ)

IATA, TDG

Limited Quantity (LQ)

UN 1950

1950 AEROSOLS AEROSOLS

AEROSOLS, Non-flammable

2 5A Gases.

2.2

2.2

2.2 2.2

None.

No.

Warning: Gases.

-

F-D, S-U

Not applicable.



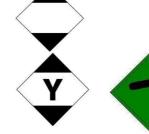
3

1L

1L

1 L

Not applicable in Limited Quantities.



UN Model Regulation US

UN1950, AEROSOLS, 2.2

ORM-D when transported in limited quantities (< 30kg or

66lb gross weight).



### 15. SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental

regulations/legislation specific for the

substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910;

Listed: Carbon monoxide (CAS No.: 630-08-0)

Subpart Z)

National emission standards for hazardous air

pollutants (40 CFR 61.01)

All chemicals are not listed.

15.1.2 Title III Consolidated List of Lists

All chemicals are not listed.

15.1.3 OSPAR List of Chemicals for Priority Action

All chemicals are not listed.

15.1.4 State Right to Know Lists

Carbon monoxide (CAS No.: 630-08-0): New Jersey, Pennsylvania, Massachusetts.

15.1.5 TSCA (Toxic Substance Control Act)

Listed: Carbon monoxide (CAS No.: 630-08-0)

15.1.6 Proposition 65 (California)

Listed: Carbon monoxide (CAS No.: 630-08-0)

15.1.7 CAA 602 - Ozone Depleting Substances (ODS)

All chemicals are not listed.

## **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16.

NFPA		HMIS	
Health	0	Health	2
Fire	0	Flammability	0
Instability	0	Physical hazards	0

## LEGEND

LTEL Long Term Exposure Limit
STEL Short Term Exposure Limit

NIOSH National Institute of Occupational Safety & Health

PEL Permissible Exposure Limits

CAA Clean Air Act

OSHA Occupational Safety and Health Administration

OSPAR Oslo and Paris Convention

ADR Accord européen elative au transport international des marchandises dangereuses par route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG International Maritime Code for Dangerous Goods

IATA International Air Transport Association
TDG Transportation of Dangerous Goods
NFPA National Fire Protection Association
HMIS Hazardous Material Identification System

#### Disclaimers

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Revision: 6.1 Page: 7/7 Date: 23/06/2015



## Ni-MH Battery Pack

## SAFETY DATA SHEET

SDS0090US/CA

# 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Ni-MH Battery Pack.

Trade Name SCORP50-XXX, SOLO760-XXX, TRUTEST

(XXX denotes customer variant).

CAS No. Article. EINECS No. Article.

1.2 Recommended use of the chemical and

restrictions on use

Identified Use(s)Battery product.Uses Advised AgainstNone known.

1.3 Details of the supplier of the safety data sheet

Company Identification SDi

1345 Campus Parkway, Suite A18

Wall Township, NJ 07753 6815

 Telephone
 (732) 751 9266

 Fax
 (732) 751 9241

 E-mail
 sales@sdifire.com

1.4 Emergency telephone number

Info Trac 1-800-535-5053

## 2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 US CFR 1910.1200 Not classified as dangerous for supply/use.
 2.1.2 Hazardous Products Regulations Not classified as dangerous for supply/use.

2.2 Label elements

Hazard Pictogram(s)

Signal Word(s)

Hazard Statement(s)

Precautionary Statement(s)

None.

None.

None.

2.3 Other hazards None.

2.4 Additional Information Under normal conditions of battery use, internal components

will not present a health or environmental hazard. In the extreme or adverse conditions (high over-charge, reverse charge, external short circuit), some electrolyte

leakage can occur via the safety vent.



## Ni-MH Battery Pack

## 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Mixtures

#### 3.1.1 SOLO760, SCORP50

Hazardous Ingredient(s)	CAS No.	%W/W
Nickel dihydroxide	12054-48-7	<30
Potassium hydroxide	1310-58-3	<20
Sodium hydroxide	1310-73-2	<20

#### 3.1.2 TRUTEST

Hazardous Ingredient(s)	CAS No.	%W/W
Metal hydride alloy	None	15 - 40
Nickel dihydroxide	12054-48-7	15 - 30
Potassium hydroxide	1310-58-3	3 - 15
Cobalt dihydroxide	21041-93-0	2.5 - 7

#### 3.2 Additional Information

None.

### 4. SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Inhalation Unlikely route of exposure.

Electrolyte leakage: Remove person to fresh air and keep

comfortable for breathing.

Skin Contact No measures required.

Electrolyte leakage:Take off immediately all contaminated

clothing. Rinse skin with water/shower.

Eye Contact Unlikely route of exposure.

Electrolyte leakage: Rinse cautiously with water for several

minutes.

Ingestion Unlikely route of exposure.

Electrolyte leakage: Make victim drink water. Do not induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

4.2 Most important symptoms and effects, both

acute and delayed

None anticipated.
Electrolyte leakage: Causes severe skin burns and eye

damage.

4.3 Indication of any immediate medical attention

and special treatment needed

Unlikely to be required but if necessary treat symptomatically.

Revision: 1.1 Page: 2/7 Date: 04/08/2015



# **SECTION 5: FIRE-FIGHTING MEASURES**

Non-flammable.

5.2

5.1 **Extinguishing Media** 

> Suitable Extinguishing Media Extinguish preferably with dry chemical, sand or carbon

Unsuitable Extinguishing Media

Water, Water spray. Special hazards arising from the substance or

mixture

Heating may cause pressure rise with risk of bursting. Hazardous decomposition product(s): Nickel and cobalt

Advice for fire-fighters 5.3 Fire fighters should wear complete protective clothing

including self-contained breathing apparatus.

#### 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment

and emergency procedures

Ensure adequate ventilation. Stop leak if safe to do so. Avoid inhalation of vapors. Avoid contact with skin and eyes.

Use personal protective equipment as required.

**Environmental precautions** 6.2

6.3 Methods and material for containment and

cleaning up

Avoid release to the environment. Collect mechanically and dispose of according to Section 13. Electrolyte leakage: Neutralize with: weak acid such as vinegar or citric acid before proper disposal. In the event of

accumulated electrolyte contain and neutralize spill.

Reference to other sections 6.4 See Also Section 8.

#### 7. SECTION 7: HANDLING AND STORAGE

Precautions for safe handling 7.1 Do not obstruct safety vent by soldering or welding tabs on the

7.2 Conditions for safe storage, including any

incompatibilities

Storage temperature

Storage life

Incompatible materials

Store in a cool/low-temperature, well-ventilated (dry) place

away from heat and ignition sources.

Stable under normal conditions.

None known.

# 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 **Control parameters** 

8.1.1 **Occupational Exposure Limits** Under normal conditions of battery use, internal components will not present a health or environmental hazard.

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note:
		i wa ppiii)	TWA IIIg/III*)	(ppiii)	(IIIg/III*)	
Nickel dihydroxide	12054-48-7	•	0.05	-	-	A1, Canada
Potassium hydroxide	1310-58-3	-	-	-	2	C, Canada
		ı	-	-	2	USA (NIOSH)
Sodium hydroxide	1310-73-2	ı	-	-	2	C, Canada
		-	-	-	2	USA (NIOSH)
		-	2	-	-	USA (OSHA)
Cobalt dihydroxide	21041-93-0	-	0.02	-	-	2B, Canada

Canada: WorkSafeBC Table of exposure limits for chemical and biological substances

NIOSH: National Institute of Occupational Safety & Health OSHA: Occupational Safety and Health Administration

A1:carcinogen designations; 2B: carcinogen designations; C: ceiling limit

Revision: 1.1 Page: 3/7 Date: 04/08/2015



8.2 Appropriate engineering controls

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Not normally required.

Provide adequate ventilation.

Electrolyte leakage: Wear protective gloves/eye protection.

Skin protection (Hand protection/ Other) Not normally required.

Electrolyte leakage: Wear: Impervious gloves.

Respiratory protection No personal respiratory protective equipment normally

Electrolyte leakage: Wear suitable respiratory protective

equipment.

Thermal hazards Not applicable.

#### 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical

properties

Appearance Solid.

Color Not applicable. Odor Odorless. Odor Threshold Not applicable. рΗ Not available.

Melting Point/Freezing Point 391.73°F (199.85°C) (Nickel dihydroxide).

Not available. Initial boiling point and boiling range Flash Point Not applicable. Not applicable. **Evaporation Rate** Flammability (solid, gas) Non-flammable. Not applicable. Upper/lower flammability or explosive limits Vapor pressure Not applicable. Not applicable. Vapor density

0.237 lb/ft3 @ 69.8°F (Nickel dihydroxide). Relative density Slightly soluble in: Water (Nickel dihydroxide). Solubility(ies)

Partition coefficient: n-octanol/water Not applicable. Not applicable. Auto-ignition temperature Not applicable. **Decomposition Temperature** Dynamic viscosity Not applicable. Not applicable. Kinematic Viscosity Not explosive. Explosive properties Oxidizing properties Not oxidizing.

9.2 Other information None.



### 10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions.
 10.2 Chemical stability Stable under normal conditions.

10.3 Possibility of hazardous reactions No hazardous reactions known if used for its intended

purpose.

10.4 Conditions to avoid Keep away from heat and sources of ignition. Protect from

moisture.

10.5 Incompatible materials None known.

10.6 Hazardous decomposition product(s) No hazardous decomposition products known.

#### 11. SECTION 11: TOXICOLOGICAL INFORMATION

This material is unlikely to present a significant health hazard under normal conditions of handling and use.

11.1 Information on toxicological effects

11.1.1 Article

 Acute toxicity
 Low acute toxicity.

 Irritation
 Non-irritant.

 Corrosivity
 Not classified.

SensitizationIt is not a skin sensitizer.Repeated dose toxicityNone anticipated.

Carcinogenicity No evidence of carcinogenicity.

**Mutagenicity** There is no evidence of mutagenic potential.

**Toxicity for reproduction**None anticipated.

**11.2** Other information Contains: Nickel dihydroxide. Harmful if swallowed or if

inhaled. Causes severe skin burns and eye damage.

# 12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity Under normal conditions of battery use, internal components

will not present a health or environmental hazard.

Contains: Nickel dihydroxide. Very toxic to aquatic life with

long lasting effects.

12.2Persistence and degradabilityNot applicable.12.3Bioaccumulative potentialNot applicable.12.4Mobility in soilNot applicable.

12.5 Other adverse effects None.

#### 13. SECTION 13: DISPOSAL CONSIDERATIONS

**13.1** Waste treatment methods Recover or recycle if possible. To be disposed of as

hazardous waste.

13.2 Additional Information Disposal should be in accordance with local, state or national

legislation.



### 14. SECTION 14: TRANSPORT INFORMATION

**14.1 UN number** UN 3496

**14.2 UN proper shipping name** Batteries, Nickel-metal hydride.

14.3 Transport hazard class(es)

TDG Not applicable under Special Provision: 97

ADR

Not applicable under Special Provision: 295-304, 598

IMDG

UN3496 under Special Provision: SP117 & SP963

IATA

Not applicable under Special Provision: A199

**DOT** Not applicable under Special Provision: 130, 49CFR 172.102

 14.4
 Packing group
 Not applicable.

 14.5
 Environmental hazards
 Not applicable.

 14.6
 Special precautions for user
 Not applicable.

 14.7
 Transport in bulk according to Annex II of
 Not applicable.

MARPOL73/78 and the IBC Code

14.8 Additional Information None.

#### 15. SECTION 15: REGULATORY INFORMATION

Under normal conditions of battery use, internal components will not present a health or environmental hazard.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 USA

**OSHA** 

Toxic and hazardous substances (29 CFR 1910;

Subpart Z)

National emission standards for hazardous air

pollutants (40 CFR 61.01)

Listed: Sodium hydroxide (CAS No.: 1310-73-2)

All chemicals are not listed.

Title III Consolidated List of Lists Listed:

Nickel dihydroxide (CAS No.: 12054-48-7), Potassium hydroxide (CAS No.: 1310-58-3), Sodium hydroxide (CAS No.: 1310-73-2)

OSPAR List of Chemicals for Priority Action All chemicals are not listed.

State Right to Know Lists New Jersey, Pennsylvania, Rhode Island, Minnesota

Listed:

Nickel dihydroxide (CAS No.: 12054-48-7), Potassium hydroxide (CAS No.: 1310-58-3), Sodium hydroxide (CAS No.: 1310-73-2)

TSCA (Toxic Substance Control Act)

All chemicals listed...

Proposition 65 (California) Listed: Nickel dihydroxide (CAS No.: 12054-48-7)

CAA 602 - Ozone Depleting Substances (ODS) All chemicals are not listed.



#### 15.1.2 Canada

Domestic Substances List (DSL)

Export Control List

Priority Substances List (PSL)

Toxic Substances List

List of all Challenge substances

National Pollutant Release Inventory (NPRI)

All chemicals are not listed.

Substance List

# **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16,14.3

#### USA

NFPA		HMIS	
Health	0	Health	0
Fire	1	Flammability	1
Instability	0	Physical hazards	0

#### **LEGEND**

LTEL Long Term Exposure Limit
STEL Short Term Exposure Limit
OSPAR Oslo and Paris Convention

CAA Clean Air Act

NFPA National Fire Protection Association
HMIS Hazardous Material Identification System

#### **Disclaimers**

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# SAFETY DATA SHEET

SDS0084US ACCORDING TO US CFR 1910.1200

# 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Smoke Sabre.

Trade Name Smokesabre-01-XXX (XXX denotes customer

CAS No. Mixture. EINECS No. Mixture.

1.2 Recommended use of the chemical and

restrictions on use

Identified Use(s)Smoke simulation.Uses Advised AgainstNone known.

1.3 Details of the supplier of the safety data sheet

Company Identification SDi

1345 Campus Parkway, Suite A18 Wall Township, NJ 07753 6815

 Telephone
 (732) 751 9266

 Fax
 (732) 751 9241

 E-mail
 sales@sdifire.com

1.4 Emergency telephone number

Info Trac 1-800-535-5053

#### 2. SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

US CFR 1910.1200 Flam. Aerosol 1: Extremely flammable aerosol.

2.2 Label elements

Product Name Smoke Sabre. Hazard Pictogram(s)



GHS02 Signal Word(s) Danger.

Hazard Statement(s) H222: Extremely flammable aerosol.

Precautionary Statement(s) P210: Keep away from heat, hot surfaces, sparks, open

flames and other ignition sources. No smoking. P211: Do not spray on an open flame or other ignition

source.

P251: Do not pierce or burn, even after use. P410+P412: Protect from sunlight. Do not expose to

temperatures exceeding 122°F (50°C). Pressurized container: May burst if heated.

2.3 Other hazards None.

Additional Information

Revision: 4 Page: 1/7 Date: 12/05/2015



### 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product as supplied: Aerosol.

#### 3.1 Mixtures

Hazardous Ingredient(s)	CAS No.	%W/W
Butane	106-97-8	50 – 100
Propane	74-98-6	10 – 25
Ethanol	64-17-5	0 – 5

#### 3.2 Additional Information

None.

### **SECTION 4: FIRST AID MEASURES**



Description of first aid measures

Inhalation If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing.

Skin Contact Wash with plenty of water.

Eye Contact Flush eyes with water for at least 15 minutes while holding

eyelids open.

Ingestion Unlikely route of exposure.

4.2 Most important symptoms and effects, both None anticipated.

acute and delayed 4.3

Indication of any immediate medical attention Unlikely to be required but if necessary treat and special treatment needed symptomatically.

# 5. SECTION 5: FIRE-FIGHTING MEASURES

Pressurized container: May burst if heated.

**Extinguishing Media** 5.1

5.2

Suitable Extinguishing Media Extinguish with carbon dioxide, dry chemical, foam or water

spray.

Unsuitable Extinguishing Media

Do not use water jet.

Special hazards arising from the substance or mixture

5.3 Advice for fire-fighters Heating may cause pressure rise with risk of bursting.

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because

they are likely to rupture under fire conditions.

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### 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

The product is an aerosol. It is unlikely to present spillage or leakage hazard. In case of rupture, released content should be contained as any other solvent spill.

6.1 Personal precautions, protective equipment

and emergency procedures

6.2 **Environmental precautions** 

6.3 Methods and material for containment and

cleaning up

Collect mechanically and dispose of according to Section 13. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a lidded container for disposal or recovery. Containers must not be punctured or destroyed by

Do not release large quantities into the surface water or into

Ensure adequate ventilation. Wear suitable gloves and

burning, even when empty. See Also Section: 8, 13.

eye/face protection.

Reference to other sections

7. SECTION 7: HANDLING AND STORAGE

7.1

Precautions for safe handling Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Provide adequate ventilation. Do not eat, drink or smoke during work. Wash hands

thoroughly after handling.

7.2 Conditions for safe storage, including any

incompatibilities

Storage temperature

Observe official regulations on storing packagings with

pressurized containers.

Pressurized container: May burst if heated. Protect from sunlight and do not expose to temperatures exceeding 122°F

(50°C).

Stable under normal conditions.

Incompatible materials None anticipated. 7.3 Specific end use(s) Smoke simulation.

### 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 **Control parameters**

Storage life

#### 8.1.1 **Occupational Exposure Limits**

SUBSTANCE	CAS No.	LTEL (8 hr TWA	LTEL (8 hr TWA	STEL	STEL	Note
		ppm)	mg/m³)	(ppm)	(mg/m³)	
Butane	106-97-8	800	1900	-	-	NIOSH
Propane	74-98-6	1000	1800	-	-	NIOSH
		1000	1800	-	-	PEL (OSHA)
Ethanol	64-17-5	1000	1900	-	-	NIOSH
		1000	1900	-	-	PEL (OSHA)

NIOSH = National Institute of Occupational Safety & Health OSHA = Occupational Safety and Health Administration

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Appropriate engineering controls 8.2

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Skin protection (Hand protection/ Other)

Respiratory protection

Thermal hazards

Provide adequate ventilation.

If eye contact is likely: Wear protective eyewear (goggles,

face shield, or safety glasses).

Wear suitable gloves if prolonged skin contact is likely.

Gloves: Nitrile rubber, NBR.

No personal respiratory protective equipment normally required. Handling of larger amounts: In case of insufficient

ventilation, wear suitable respiratory equipment.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical

properties Appearance

Color

Odor Odor Threshold рΗ

**Evaporation Rate** 

Melting Point/Freezing Point Initial boiling point and boiling range Flash Point

Flammability (solid, gas)

Upper/lower flammability or explosive limits

Vapor pressure Density

Vapor density Relative density Solubility(ies)

Partition coefficient: n-octanol/water Ignition temperature

Auto-ignition temperature

**Decomposition Temperature** 

Kinematic Viscosity Explosive properties Oxidizing properties

9.2 Other information

Organic solvents - Content

Not applicable.

Aerosol. Colorless Characteristic.

Not determined. Not determined.

Not determined. -47.4°F (-44°C) <32°F (<0°C)

Not available. Extremely flammable.

Explosive Limit Ranges: 1.5 - 15.0 Vol-%

62.4 psig (4.3 bar) @ 68°F 36.2 lb/ft3 (0.58 g/cm3) @ 68°F

Not determined. Not determined Immiscible with water. Not determined.

689°F (365°C) Product is not selfigniting.

Not determined. Not determined.

Not explosive. Not oxidizing.

96.4%

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions. 10.2 Chemical stability Stable under normal conditions. 10.3 Possibility of hazardous reactions Stable under normal conditions. 10.4 Conditions to avoid Heat and direct sunlight.

10.5 Incompatible materials None anticipated. 10.6 Hazardous decomposition product(s) None known.



## 11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

11.1.1 Mixtures

 Acute toxicity
 Low acute toxicity.

 Irritation
 Non-irritant.

 Corrosivity
 Not classified.

**Sensitization** It is not a skin sensitizer.

Repeated dose toxicity None anticipated.

**Carcinogenicity** No evidence of carcinogenicity.

Mutagenicity There is no evidence of mutagenic potential.

Toxicity for reproduction None anticipated.
Aspiration hazard None anticipated.

11.2 Other information None.

# 12. SECTION 12: ECOLOGICAL INFORMATION

**12.1 Toxicity** Low toxicity to aquatic organisms.

12.2 Persistence and degradability
 12.3 Bioaccumulative potential
 The product is readily biodegradable. Unlikely to persist.
 The product has no potential for bioaccumulation.

12.4 Mobility in soil Immiscible with water. The product is predicted to have low

mobility in soil.

12.5 Other adverse effects None.

# 13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods Recycle only completely emptied packaging. Containers

must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.

13.2 Additional Information Disposal should be in accordance with local, state or

national legislation.

# 14. SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR, IMDG, IATA UN 1950

14.2 UN proper shipping name

ADR 1950 AEROSOLS IMDG AEROSOLS

IATA AEROSOLS, Flammable

14.3 Transport hazard class(es)

ADR

Class / Classification 2 5F Gases.

Label 2.1

IMDG, IATA

 Class / Division
 2.1

 Label
 2.1

14.4 Packing group

ADR, IMDG, IATA None.

14.5 Environmental hazards

Marine Pollutant No.

14.6 Special precautions for user Warning: Gases.

Kemler Code

IMDG EMS F-D, S-U

14.7 Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code

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Not applicable.



14.8 **Additional Information** 

**ADR** 

Limited Quantity (LQ)

1 L

**ADR Transport Category** 

**Tunnel Restriction Code** 

Not applicable in Limited Quantities.

**IMDG** 

Limited Quantity (LQ)

IATA

Limited Quantity (LQ)

1L

1L





**UN Model Regulation** 

US

UN 1950, AEROSOLS, 2.1

ORM-D when transported in limited quantities (< 30kg or

66lb gross weight).

# 15. SECTION 15: REGULATORY INFORMATION

Safety, health and environmental

regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910;

Subpart Z)

National emission standards for hazardous air

pollutants (40 CFR 61.01)

Listed: Propane (CAS No.: 74-98-6) Listed: Ethanol (CAS No.: 64-17-5)

All chemicals are not listed.

15.1.2 Title III Consolidated List of Lists

Listed: Butane (CAS No.: 106-97-8) Listed: Propane (CAS No.: 74-98-6)

10000 Clean Air Act Section 112(r) Threshold Quantity

All chemicals are not listed. 15.1.3 OSPAR List of Chemicals for Priority Action

15.1.4 State Right to Know Lists

Butane (CAS No.: 106-97-8):

New Jersey, Pennsylvania, Massachusetts, Rhode Island.

Propane (CAS No.: 74-98-6):

New Jersey, Pennsylvania, Massachusetts.

Ethanol (CAS No.: 64-17-5):

New Jersey, Pennsylvania, Massachusetts.

15.1.5 TSCA (Toxic Substance Control Act)

15.1.6 Proposition 65 (California)

15.1.7 CAA 602 - Ozone Depleting Substances (ODS)

All chemicals listed.

All chemicals are not listed. All chemicals are not listed.

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# **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16.

NFPA		HMIS	
Health	1	Health	1
Fire	4	Flammability	4
Instability	0	Physical hazards	0

#### **LEGEND**

LTEL Long Term Exposure Limit STEL Short Term Exposure Limit

NIOSH National Institute of Occupational Safety & Health

PEL Permissible Exposure Limits

CAA Clean Air Act

OSHA Occupational Safety and Health Administration

OSPAR Oslo and Paris Convention

ADR Accord européen elative au transport international des marchandises dangereuses par route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG International Maritime Code for Dangerous Goods

IATA International Air Transport Association

#### **Disclaimers**

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# SAFETY DATA SHEET

SDS0065US

ACCORDING TO US CFR 1910.1200

# 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE **COMPANY/UNDERTAKING**

1.1 Product identifier

> **Product Name** TRUTEST SMOKE DETECTOR SENSITIVITY

> > TESTER.

AERO 400-XXX (XXX denotes customer variant). Trade Name

CAS No. Mixture. EINECS No. Mixture.

1.2 Recommended use of the chemical and

restrictions on use

Identified Use(s) Smoke simulation (for detector sensitivity tester).

None known.

Uses Advised Against 1.3 Details of the supplier of the safety data sheet

1.3.1 Distributor

> SDi Company Identification

1345 Campus Parkway, Suite A18 Wall Township, NJ 07753 6815

Telephone (732) 751 9266 (732) 751 9241 Fax E-mail sales@sdifire.com

1.4 **Emergency telephone number** 

> Info Trac 1-800-535-5053

# 2. SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

US CFR 1910.1200 Gases under pressure: Liquefied gas; Contains gas under

pressure; may explode if heated.

Aquatic Chronic 3; Harmful to aquatic life with long lasting

effects.

2.2 Label elements

> TRUTEST SMOKE DETECTOR SENSITIVITY TESTER. Product Name Hazard Pictogram(s)



GHS04

Signal Word(s) Warning.

Hazard Statement(s) H280: Contains gas under pressure; may explode if heated.

H412: Harmful to aquatic life with long lasting effects.

Precautionary Statement(s) P273: Avoid release to the environment.

P410+P403: Protect from sunlight. Store in a well-ventilated

place.

Additional Information 18.75 % by mass of the contents are flammable.

Do not pierce or burn, even after use.

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Pressurized container: protect from sunlight and do not expose to temperatures exceeding 122°F.

Keep out of the reach of children. Keep away from combustible material. Keep away from sources of ignition - No smoking.

2.3 Other hazards High concentrations: May cause drowsiness and dizziness.

Additional Information None.

### 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product as supplied: Aerosol.

#### 3.1 Mixtures

24

Hazardous Ingredient(s)	CAS No.	%W/W
1,1,1,2-tetrafluoroethane	811-97-2	90 - 100
Pentane	109-66-0	1 - 10
Propan-2-ol	67-63-0	1 - 10

#### 3.2 Additional Information

Skin Contact

None.

### 4. SECTION 4: FIRST AID MEASURES



#### 4.1 Description of first aid measures

Inhalation If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing. If symptoms

persist, obtain medical attention. Wash with plenty of soap and water.

Eye Contact Flush eyes with water for at least 15 minutes while holding

eyelids open.

Ingestion Unlikely route of exposure.

**4.2** Most important symptoms and effects, both None anticipated.

acute and delayed

4.3 Indication of any immediate medical attention Unlikely to be required but if necessary treat

and special treatment needed symptomatically.

### 5. SECTION 5: FIRE-FIGHTING MEASURES

Pressurized container: May burst if heated.

5.1 Extinguishing Media

Suitable Extinguishing Media
Unsuitable Extinguishing Media

5.2 Special hazards arising from the substance or

mixture

5.3 Advice for fire-fighters

Extinguish preferably with dry chemical or alcohol foam. None known.

Decomposes in a fire giving off toxic fumes:Hydrofluoric acid, Fluorinated compounds. Heating may cause pressure rise with risk of bursting.

Fire fighters should wear complete protective clothing

including self-contained breathing apparatus. If it is safe to

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do so, containers should be removed from fire area because they are likely to rupture under fire conditions.

#### 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

The product is an aerosol. It is unlikely to present spillage or leakage hazard.

6.1 

emergency procedures concentrations of vapours.

**Environmental precautions** 6.2 Avoid release to the environment.

Methods and material for containment and 6.3 Collect mechanically and dispose of according to Section cleaning up 13. Adsorb spillages onto sand, earth or any suitable

> adsorbent material. Transfer to a lidded container for disposal or recovery. Containers must not be punctured or

destroyed by burning, even when empty.

Reference to other sections See Also Section: 8, 13.

### 7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling Keep away from heat, hot surfaces, sparks, open flames

> and other ignition sources. No smoking. Do not pierce or burn, even after use. Provide adequate ventilation. Avoid

inhalation of high concentrations of vapours.

7.2 Conditions for safe storage, including any Observe official regulations on storing packagings with

incompatibilities pressurized containers.

Storage temperature Protect from sunlight and do not expose to temperatures

exceeding 122 °F.

Storage life Stable under normal conditions.

Incompatible materials Alkali metals, alkaline earth metals, magnesium, powdered

metals.

# **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1 **Control parameters**

#### 8.1.1 **Occupational Exposure Limits**

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note:
1,1,1,2- tetrafluoroethane	811-97-2	-	-	-	-	Not established
Pentane	109-66-0	120	350	610	1800	NIOSH
		1000	2950	-	-	PEL (OSHA)
Propan-2-ol	67-63-0	400	980	500	1225	NIOSH
		400	980	-	-	PEL (OSHA)

Source:

NIOSH = National Institute of Occupational Safety & Health OSHA = Occupational Safety and Health Administration

8.2 Appropriate engineering controls

Provide adequate ventilation.

8.3 Individual protection measures, such as personal protective equipment (PPE)

> Eye/face protection Not normally required.

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Skin protection (Hand protection/ Other)

Not normally required.



Respiratory protection



9.2

Thermal hazards

No personal respiratory protective equipment normally required. Handling of larger amounts: In case of insufficient ventilation, wear suitable respiratory equipment. A suitable mask with filter type A (EN14387 or EN405) may be

appropriate.
Not applicable.

#### 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Appearance Aerosol.
Color Colorless.

Odor Slight hydrocarbon smell.

Odor Threshold Not determined.

pH Not determined.

Melting Point/Freezing Point Not determined.

Initial boiling point and boiling range -15.7°F (-26.5°C)

Flash Point Not applicable.

Evaporation Rate Not applicable.

Flammability (solid, gas)

Upper/lower flammability or explosive limits

Not determined.

Vapor pressure 81.22 psig (5.6 bar) @ 77°F

Density 66.8 lb/ft<sup>3</sup> @ 77°F

Vapor density 3.5

Relative density Not determined.

Solubility(ies) Slightly soluble in: Water.

Soluble in most organic solvents.

Partition coefficient: n-octanol/water Not determined.

Auto-ignition temperature Not determined.

Decomposition Temperature Not determined.

Kinematic Viscosity Not determined.

Explosive properties Contains gas under pressure; may explode if heated.

Oxidizing properties Not oxidizing. **Other information** None.

# 10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions.
 10.2 Chemical stability Stable under normal conditions.

10.3 Possibility of hazardous reactions None known.

**10.4 Conditions to avoid** Heat and direct sunlight.

**10.5** Incompatible materials Alkali metals, alkaline earth metals, magnesium, powdered

metals.

10.6 Hazardous decomposition product(s) None known.

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### 11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

**Mixtures** 

Acute toxicity Low acute toxicity.

High concentrations: May cause drowsiness and dizziness.

IrritationNon-irritant.CorrosivityNot classified.

**Sensitization** It is not a skin sensitiser. **Repeated dose toxicity** None anticipated.

Carcinogenicity No evidence of carcinogenicity.

**Mutagenicity** There is no evidence of mutagenic potential.

**Toxicity for reproduction**None anticipated.

11.2 Other information None.

# 12. SECTION 12: ECOLOGICAL INFORMATION

**12.1** Toxicity Aquatic Chronic 3; Harmful to aquatic life with long lasting

effects.

12.2 Persistence and degradability
 12.3 Bioaccumulative potential
 No information available.
 No information available.

**12.4 Mobility in soil** Slightly soluble in: Water. The product is predicted to have

low mobility in soil.

12.5 Other adverse effects None.

# 13. SECTION 13: DISPOSAL CONSIDERATIONS

**13.1** Waste treatment methods Recycle only completely emptied packaging. Containers

must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.

13.2 Additional Information Disposal should be in accordance with local, state or

national legislation. Do not allow to enter drains, sewers or

watercourses.

# 14. SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR, IMDG, IATA UN 1950

14.2 UN Proper Shipping Name

ADR 1950 AEROSOLS IMDG AEROSOLS

IATA AEROSOLS, Non-flammable

14.3 Transport hazard class(es)

**ADR** 

Class / Classification 2 5A Gases

Label 2.2

IMDG, IATA

Class / Division 2.2 Label 2.2

14.4 Packing Group

ADR, IMDG, IATA None.

14.5 Environmental hazards

Marine Pollutant No.

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14.6 Special precautions for user

Kemler Code

**IMDG EMS** 

Transport in bulk according to Annex II of 14.7

MARPOL73/78 and the IBC Code

**Additional Information** 14.8

ADR

Limited Quantity (LQ)

**ADR Transport Category Tunnel Restriction Code** 

IMDG

Limited Quantity (LQ)

IATA

Limited Quantity (LQ)

Warning: Gases.

F-D, S-U

Not applicable.

1 L

Not applicable in Limited Quantities.

1L





**UN Model Regulation** UN 1950, AEROSOLS, 2.2

US ORM-D when transported in limited quantities (< 30kg or

1L

66lb gross weight).

### 15. SECTION 15: REGULATORY INFORMATION

Safety, health and environmental 15.1 regulations/legislation specific for the

substance or mixture

15.1.1 **OSHA** 

Toxic and hazardous substances (29 CFR 1910;

Subpart Z)

National emission standards for hazardous air

pollutants (40 CFR 61.01)

All chemicals are not listed.

All chemicals are not listed.

15.1.2 Tittle III Consolidated List of Lists

Propan-2-ol (CAS No.: 67-63-0)

Pentane (CAS No.: 109-66-0)

Sec 313: 313

CAA 112(r) TQ: 10000

15.1.3 OSPAR List of Chemicals for Priority Action

All chemicals are not listed.

15.1.4 State Right to Know Lists

1,1,1,2-tetrafluoroethane (CAS No.: 811-97-2):

New Jersey, Pennsylvania, Massachusetts, Rhode Island.

Propan-2-ol (CAS No.: 67-63-0)

New Jersey, Pennsylvania, Massachusetts, California,

Minnesota.

Pentane (CAS No.: 109-66-0): New Jersey, Pennsylvania,

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Massachusetts, California, Minnesota.

15.1.5 TSCA (Toxic Substance Control Act) All chemicals listed...

**15.1.6 Proposition 65 (California)**All chemicals are not listed.

15.1.7 CAA 602 - Ozone Depleting Substances (ODS) All chemicals are not listed.

#### 16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

NFPA		HMIS	
Health	0	Health	0
Fire	0	Flammability	0
Instability	1	Physical hazards	1

#### **LEGEND**

LTEL Long Term Exposure Limit STEL Short Term Exposure Limit

ADR Accord européen relatif au transport international des marchandises dangereuses par route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG International Maritime Code for Dangerous Goods

IATA International Air Transport Association

OSHA Occupational Safety and Health Administration

OSPAR Oslo and Paris Convention

CAA Clean Air Act

NFPA National Fire Protection Association
HMIS Hazardous Material Identification System

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# **SAFETY DATA SHEET**

SDS0093US ACCORDING TO US CFR 1910.1200

# 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name BLOWout 10 oz.
Trade Name BLOW OUT-024
Synonym(s) 1,1-difluorethane.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use(s)

Aerosol Duster.

Uses advised against

None known.

1.3 Details of the supplier of the Safety Data Sheet

Company Identification SDi

1345 Campus Parkway, Suite A18 Wall Township, NJ 07753 USA.

 Telephone
 (732) 751 9266

 Fax
 (732) 751 924

 E-mail
 sales@sdifire.com

1.4 Emergency telephone number

Info Trac 1-800-535-5053 (24 hour(s))

# 2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

**US CFR 1910.1200** Gases under pressure: Liquefied gas; Contains gas under

pressure; may explode if heated.

2.2 Label elements

Product Name

BLOWout 10 oz.

Hazard pictogram(s)



GHS04

Signal word(s) Warnin

Hazard statement(s)

H280: Contains gas under pressure; may explode if heated.

Precautionary statement(s)

P410+P403: Protect from sunlight. Store in a well-ventilated

nlace

Additional Information Pressurized container: Do not pierce or burn, even after

use. Do not expose to temperatures exceeding 122°F.

2.3 Other hazards Contact with liquid may cause cold burns/frostbite.

High concentrations may cause asphyxiant.

2.4 Additional Information None.

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### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Product as supplied: Aerosol.

#### 3.1 Substances

Hazardous ingredient(s)	CAS No.	%W/W
1,1-difluoroethane	75-37-6	> 99

#### 3.2 Additional Information

None.

## **SECTION 4: FIRST AID MEASURES**



4.2

#### Description of first aid measures

Inhalation If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing. Keep patient warm. Apply artificial respiration if necessary. Obtain

medical attention.

Skin Contact Wash with plenty of soap and water. If frostbite, call a physician. Do not remove clothing if it sticks to the skin. Eye Contact Flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, obtain medical attention.

Unlikely route of exposure.

Ingestion Most important symptoms and effects, both Skin Contact: Frostbite.

acute and delayed Inhalation: High concentrations: Asphyxiation, Headache,

dizziness, nausea and vomiting.

Treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

### 5. SECTION 5: FIRE-FIGHTING MEASURES

Pressurized container: May burst if heated.

#### 5.1 **Extinguishing Media**

Suitable Extinguishing Media

Unsuitable Extinguishing Media

5.2 Special hazards arising from the substance or mixture

5.3 Advice for fire-fighters Extinguish with carbon dioxide, dry chemical, foam or waterspray.

None known.

Heating may cause pressure rise with risk of bursting. Decomposes in a fire giving off toxic fumes: Hydrogen

fluoride, Carbon monoxide, Carbon dioxide.

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep fire exposed containers cool by spraying with water. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions.

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### 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

The product is an aerosol. It is unlikely to present spillage or leakage hazard. In case of rupture, released content should be contained as any other solvent spill.

6.1 Personal precautions, protective equipment

and emergency procedures

6.2 Environmental precautions

6.3 Methods and material for containment and cleaning up

6.4 Reference to other sections

Ensure adequate ventilation. Stop leak if safe to do so. Wear protective gloves.

Do not release large quantities into the surface water or into

drains.

Collect mechanically and dispose of according to Section 13. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a lidded container for disposal or recovery. Containers must not be purefured or destroyed by

recovery. Containers must not be punctured or destroyed by burning, even when empty.

See Also Section: 8, 13.

#### 7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

7.2 Conditions for safe storage, including any incompatibilities

Storage Temperature Storage Life Incompatible materials Keep away from sources of ignition.

Protect from sunlight. Store in a well-ventilated place.:

Do not expose to temperatures exceeding 122°F.

Stable under normal conditions.

Acids, Alkalis and Strong oxidizing agents.

#### 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

# 8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
1,1-difluoroethane	75-37-6					None assigned

8.2 Appropriate engineering controls

Provide adequate ventilation. Local exhaust recommended. Do not use in confined spaces.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection



If eye contact is likely: Wear protective eyewear (goggles,

face shield, or safety glasses).

Skin protection (Hand protection/ Other)



Wear suitable gloves if prolonged skin contact is likely.

Gloves: Neoprene, Leather.

Respiratory protection



No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable

respiratory equipment.

Thermal hazards

Not applicable.



### 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical

properties

Appearance Liquefied gas. Color Colorless.

Odor Mild, Slight Ethereal.
Odor Threshold Not determined.
pH Not determined.
Melting Point/Freezing Point -178.6°F

Initial boiling point and boiling range
-13°F
Flash Point
Evaporation rate
Flammability (solid, gas)
Non-flammable.

Upper/lower flammability or explosive limits 4-19 Vol-%, 0.112-0.518 kg/m³ Vapor pressure 5100 hPa, 11700 hPa @ 122°F

Density 1004 kg/m³ @ -13°F Vapor density 2.3 @ 68°F

Relative density 2.3 @ 66 P 1.0 @ -13°F

Solubility(ies) Poorly water soluble product. (0.54 g/100 ml).

Soluble in most organic solvents.

Partition coefficient: n-octanol/water 0.75 log P (Experimental value). Ignition temperature Not determined.

Ignition temperature Not determined
Auto-ignition temperature 851°F

uto-ignition temperature 851°F

Decomposition Temperature

Dynamic Viscosity

Not determined.

0.37 Pa\*s @ -23.8°F

Kinematic Viscosity

Not determined.

Explosive properties

Not explosive.

Contains gas under pressure; may explode if heated.

Oxidizing properties Not oxidizing.

9.2 Other information

Critical pressure 44960 hPa Molecular weight 66.05 g/mol

#### 10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
 10.2 Chemical stability
 Stable under normal conditions.
 Stable under normal conditions.

10.3 Possibility of hazardous reactions No hazardous reactions known if used for its intended

purpose.

**10.4 Conditions to avoid** Heat and direct sunlight.

10.5 Incompatible materials Acids, Alkalis and Strong oxidizing agents.
 10.6 Hazardous Decomposition Product(s) No hazardous decomposition products known.

# 11. SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

11.1.1 Substances

Acute toxicityLow acute toxicity.InhalationLC50 (rat) = 383000 ppm

Effects and Symptoms: Asphyxiation, Headache, dizziness,

nausea and vomiting.

Skin corrosion/irritationNon-irritant.Serious eye damage/irritationNot classified.

**Respiratory or skin sensitization** It is not a skin sensitizer.

Germ cell mutagenicity There is no evidence of mutagenic potential.

**Carcinogenicity** No evidence of carcinogenicity.

Reproductive toxicity None anticipated.



STOT-single exposure
STOT-repeated exposure
Aspiration hazard
Not classified.
None.

### 12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity Low toxicity to aquatic organisms.
 12.2 Persistence and degradability Readily biodegradable, non-persistent.

12.3 Bioaccumulative potential The product has low potential for bioaccumulation.
 12.4 Mobility in soil Poorly water soluble product. The product is predicted to

have low mobility in soil.

12.5 Other adverse effects None.

# 13. SECTION 13: DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods** Recycle only completely emptied packaging. Containers

must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT dispose of via

domestic waste.

**13.2** Additional Information Disposal should be in accordance with local, state or

national legislation. Refer to manufacturer/supplier for

information on recovery/recycling.

### 14. SECTION 14: TRANSPORT INFORMATION

#### D.O.T. Classification / TDG Regulations

14.1 UN number UN 103014.2 UN Proper Shipping Name

2 UN Proper Shipping Name
US DOT 1,1-Difluoroethane, R152A Flammable.

Canada TDG 1,1-Difluoroethane. IATA 1,1-Difluoroethane.

14.3 Transport hazard class(es)14.4 Packing Group2.1 None.

**14.5** Environmental hazards Not classified as a Marine Pollutant.

14.6 Special precautions for user None.

14.7 Transport in bulk according to Annex II of Not applicable.

MARPOL73/78 and the IBC Code

14.8 Additional Information

DOT Special Provisions (49 CFR 172.102) DOT-SP 11516: In accordance with this special permit, this

product is not subject to labelling requirements unless offered for transportation by air. This product is not subject to placarding requirements. Outside packaging must be marked with proper shipping description and 'DOT-SP

11516'.

DOT Packaging Exceptions 306
DOT Packaging Non Bulk 304
DOT Packaging Bulk 314; 315



#### 15. SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910;

Not listed.

Subpart Z)

National emission standards for hazardous air

pollutants (40 CFR 61.01)

Not listed.

15.1.2 Title III Consolidated List of Lists

CAA 112(r) TQ = 10000

Listed: 1,1-difluoroethane (CAS No.: 75-37-6)

15.1.3 OSPAR List of Chemicals for Priority Action

Not listed.

15.1.4 State Right to Know Lists

Listed: 1,1-difluoroethane (CAS No.: 75-37-6) New Jersey, Pennsylvania, Massachusetts

15.1.5 TSCA (Toxic Substance Control Act)

Listed: 1,1-difluoroethane (CAS No.: 75-37-6)

15.1.6 Proposition 65 (California)

Not listed.

15.1.7 CAA 602 - Ozone Depleting Substances (ODS)

Not listed.

### **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16.

NFPA		HMIS	
Health	1	Health	1
Fire	4	Flammability	4
Instability	1	Physical hazards	1

#### **LEGEND**

LTEL Long Term Exposure Limit
STEL Short Term Exposure Limit
DOT Department of Transportation
TDG Transportation of Dangerous Goods
IATA International Air Transport Association

OSPAR Oslo and Paris Convention

CAA Clean Air Act

NFPA National Fire Protection Association
HMIS Hazardous Material Identification System

#### Disclaimers

The information is based on the best knowledge of SDi and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for purposes other than it is intended.

Revision: 2 Page: 6/6 Date: 13/05/2015



# Chekkit Smoke Detector Tester **SAFETY DATA SHEET**

SDS0078US ACCORDING TO US CFR 1910.1200

# 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Chekkit Smoke Detector Tester.

Trade Name CHEK02 - XXX (XXX denotes customer variant).

CAS No. Mixture. EINECS No. Mixture.

1.2 Recommended use of the chemical and

restrictions on use

Identified Use(s)
Uses Advised Against
Smoke simulation.
None known.

1.3 Details of the supplier of the safety data sheet

1.3.1 Distributor

Company Identification SDi

1345 Campus Parkway, Suite A18 Wall Township, NJ 07753 6815

 Telephone
 (732) 751 9266

 Fax
 (732) 751 9241

 E-mail
 sales@sdifire.com

1.4 Emergency telephone number

Info Trac 1-800-535-5053

# 2. SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

2.1.1 US CFR 1910.1200 Gases under pressure: Liquefied gas; Contains gas under

pressure; may explode if heated. Causes serious eye irritation.

2.2 Label elements

Product Name Chekkit Smoke Detector Tester.
Hazard Pictogram(s)



GHS04



GHS07

Signal Word(s) Warning.

Hazard Statement(s) H280: Contains gas under pressure; may explode if heated.

H319: Causes serious eye irritation.

Precautionary Statement(s) P264: Wash hands thoroughly after handling.
P337+P313: If eye irritation persists: Get medical

advice/attention.

P410+P403: Protect from sunlight. Store in a well-ventilated  $\,$ 

place.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

Revision: 7 Page: 1/7 Date: 12/05/2015



Additional Information 14.5 % by mass of the contents are flammable.

Do not pierce or burn, even after use.

Pressurized container: protect from sunlight and do not

expose to temperatures exceeding 122°F. Keep out of the reach of children. Keep away from

combustible material. Keep away from sources of ignition -

No smoking.

2.3 Other hazards High concentrations: May cause drowsiness and dizziness.

2.4 Additional Information None.

### 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product as supplied: Aerosol.

#### 3.1 Mixtures

Hazardous Ingredient(s)	CAS No.	%W/W
1,1,1,2-tetrafluoroethane	811-97-2	50 - 100
Propan-2-ol	67-63-0	10 - 25

#### 3.2 Additional Information

None.

### 4. SECTION 4: FIRST AID MEASURES



4.2

4.1 Description of first aid measures

Inhalation 
If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing. If symptoms

persist, obtain medical attention.

Skin Contact Wash with plenty of soap and water.

Eye Contact IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue

rinsing. If eye irritation persists: Get medical

advice/attention.

Ingestion Unlikely route of exposure.

Most important symptoms and effects, both

acute and delayed

None anticipated.

4.3 Indication of any immediate medical attention

and special treatment needed

Unlikely to be required but if necessary treat

symptomatically.

# 5. SECTION 5: FIRE-FIGHTING MEASURES

Pressurized container: May burst if heated.

5.1 Extinguishing Media

Suitable Extinguishing Media Extinguish with carbon dioxide, dry chemical, foam or water

spray.

Unsuitable Extinguishing Media None known.

Revision: 7 Page: 2/7 Date: 12/05/2015



5.2 Special hazards arising from the substance or

Heating may cause pressure rise with risk of bursting.

5.3 Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions.

### 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

The product is an aerosol. It is unlikely to present spillage or leakage hazard. In case of rupture, released content should be contained as any other solvent spill.

**6.1** Personal precautions, protective equipment and Ensure adequate ventilation. Avoid inhalation of high

Ensure adequate ventilation. Avoid inhalation of high concentrations of vapors. Wear suitable gloves and eye/face

emergency procedures

protection.

6.2 Environmental precautions

Do not release large quantities into the surface water or into

6.3 Methods and material for containment and

cleaning up

Collect mechanically and dispose of according to Section 13. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a lidded container for disposal or recovery. Containers must not be punctured or destroyed by burning, even when empty.

See Also Section: 8, 13.

6.4 Reference to other sections

# 7. SECTION 7: HANDLING AND STORAGE

**7.1 Precautions for safe handling** Keep away from heat, hot surfaces, sparks, open flames

and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Provide adequate ventilation. Avoid inhalation of high concentrations of vapors. Avoid contact with eyes. Avoid prolonged skin contact. Wear suitable gloves if prolonged skin contact is likely. See Section: 8. Do not eat, drink or smoke during work. Wash

hands thoroughly after handling.

7.2 Conditions for safe storage, including any

incompatibilities

Protect from sunlight. Store in a well-ventilated place.

Storage temperature Ambient.

Protect from sunlight and do not expose to temperatures

exceeding 122 °F.

Storage life Stable under normal conditions.

Incompatible materials None anticipated.

#### 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### 8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note:
1,1,1,2- tetrafluoroethane	811-97-2	-	-	-	-	Not established
Propan-2-ol	67-63-0	400	980	500	1225	NIOSH
		400	980	-	-	PEL (OSHA)



Source:

NIOSH = National Institute of Occupational Safety & Health OSHA = Occupational Safety and Health Administration

**8.2 Appropriate engineering controls** Provide adequate ventilation.

8.3 Individual protection measures, such as personal protective equipment (PPE)

face shield, or safety glasses).

Skin protection (Hand protection/ Other) Wear suitable gloves if prolonged skin contact is likely.

Gloves: Nitrile rubber, NBR.

Respiratory protection

No personal respiratory protective equipment normally required. Handling of larger amounts: In case of insufficient

ventilation, wear suitable respiratory equipment.

Thermal hazards Not applicable.

# 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

# 9.1 Information on basic physical and chemical properties

Appearance Aerosol.

Color Colorless.

Odor Characteristic.

Odor Threshold Not determined.

PH Not determined.

Melting Point/Freezing Point Not determined.

Initial boiling point and boiling range -14.8°F (-26°C)

Initial boiling point and boiling range -14.8°F (-26 °C)
Flash Point 55.4°F (13 °C)
Evaporation Rate Not determined.

Flammability (solid, gas)

Non-flammable. Tested to CFR 1910.1200 Appendix B –

B.3

Upper/lower flammability or explosive limits Explosive Limit Ranges: 2.0 – 12.0 Vol-%

 Vapor pressure
 60.7 psig (5.2 bar) @ 68°F

 Density
 70.67 lb/ft³ (1.132 g/cm³) @ 68°F

Vapor density
Relative density
Solubility(ies)
Partition coefficient: n-octanol/water
Ignition temperature

Not determined.
Inmiscible with water.
Not determined.
797°F (425 °C)

Auto-ignition temperature Product is not selfigniting.

Decomposition Temperature Not determined.
Kinematic Viscosity Not determined.

Explosive properties Contains gas under pressure; may explode if heated.

Oxidizing properties Not oxidizing.

9.2 Other information

Organic solvents - Content 14.8%



### 10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions. **Chemical stability** 10.2 Stable under normal conditions. Possibility of hazardous reactions 10.3 Stable under normal conditions. Conditions to avoid 10.4 Heat and direct sunlight. 10.5 Incompatible materials None anticipated. 10.6 Hazardous decomposition product(s) None known.

# 11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Mixtures

Acute toxicity Low acute toxicity.

**Irritation** Causes serious eye irritation.

Corrosivity Not classified.

**Sensitization** It is not a skin sensitizer. **Repeated dose toxicity** None anticipated.

**Carcinogenicity** No evidence of carcinogenicity.

Mutagenicity There is no evidence of mutagenic potential.

**Toxicity for reproduction Aspiration hazard**None anticipated.

None anticipated.

11.2 Other information None.

### 12. SECTION 12: ECOLOGICAL INFORMATION

**12.1 Toxicity** Low toxicity to aquatic organisms.

12.2 Persistence and degradability
 12.3 Bioaccumulative potential
 The product is readily biodegradable. Unlikely to persist.
 The product has no potential for bioaccumulation.

12.4 Mobility in soil Immiscible with water. The product is predicted to have low

mobility in soil.

12.5 Other adverse effects None.

# 13. SECTION 13: DISPOSAL CONSIDERATIONS

**13.1** Waste treatment methods Recycle only completely emptied packaging. Containers

must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.

13.2 Additional Information Disposal should be in accordance with local, state or

national legislation.

#### 14. SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR, IMDG, IATA, TDG UN 1950

14.2 UN Proper Shipping Name

ADR 1950 AEROSOLS IMDG, TDG AEROSOLS

IATA AEROSOLS, Non-flammable

14.3 Transport hazard class(es)

ADR

Class / Classification 2 5A Gases.

Label 2.2



IMDG, IATA, TDG

Class / Division 2.2 Label 2.2

14.4 Packing Group

ADR, IMDG, IATA

14.5 Environmental hazards

Marine Pollutant

14.6 Special precautions for user

Kemler Code IMDG EMS

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

14.8 Additional Information

ADR

Limited Quantity (LQ)

ADR Transport Category Tunnel Restriction Code

IMDG, TDG

Limited Quantity (LQ)

IATA, TDG

Limited Quantity (LQ)

**UN Model Regulation** 

US

None.

No.

Warning: Gases.

F-D, S-U

Not applicable.

1 L

1L

1L



Not applicable in Limited Quantities.





UN 1950, AEROSOLS, 2.2

ORM-D when transported in limited quantities (< 30kg or

66lb gross weight).

# 15. SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the

substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910;

Subpart Z)

National emission standards for hazardous air

pollutants (40 CFR 61.01)

All chemicals are not listed.

All chemicals are not listed.

15.1.2 Title III Consolidated List of Lists

Sec 313

Listed: Propan-2-ol (CAS No.: 67-63-0)

313



15.1.3 OSPAR List of Chemicals for Priority Action All chemicals are not listed.

**15.1.4 State Right to Know Lists** 1,1,1,2-tetrafluoroethane (CAS No.: 811-97-2):

New Jersey, Pennsylvania, Massachusetts, Rhode Island.

Propan-2-ol (CAS No.: 67-63-0):

New Jersey, Pennsylvania, Massachusetts, California,

Minnesota.

15.1.5 TSCA (Toxic Substance Control Act) All chemicals listed.

**15.1.6 Proposition 65 (California)** All chemicals are not listed.

15.1.7 CAA 602 - Ozone Depleting Substances (ODS) All chemicals are not listed.

### **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1 -16.

NFPA		HMIS		
Health	1	Health	1	
Fire	0	Flammability	0	
Instability	1	Physical hazards	1	

#### **LEGEND**

LTEL Long Term Exposure Limit
STEL Short Term Exposure Limit

NIOSH National Institute of Occupational Safety & Health

PEL Permissible Exposure Limits

CAA Clean Air Act

OSHA Occupational Safety and Health Administration

OSPAR Oslo and Paris Convention

ADR Accord européen elative au transport international des marchandises dangereuses par route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG International Maritime Code for Dangerous Goods

IATA International Air Transport Association TDG Transportation of Dangerous Goods

### Disclaimers

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Revision: 7 Page: 7/7 Date: 12/05/2015



# SAFETY DATA SHEET

#### SDS0082US

ACCORDING TO US CFR 1910.1200

# 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Testifire TC3 Carbon Monoxide Capsule.

Trade Name Testifire TC3-XXX (XXX denotes customer variant).

Substances in articles Carbon.
CAS No. 7440-44-0
EINECS No. 931-328-0

1.2 Recommended use of the chemical and

restrictions on use

Identified use(s) CO generation.
Uses advised against None known.

1.3 Details of the supplier of the Safety Data Sheet

Company Identification SD

1345 Campus Parkway, Suite A18

Wall Township, NJ 07753 6815

 Telephone
 (732) 751 9266

 Fax
 (732) 751 9241

 E-mail
 sales@sdifire.com

Emergency telephone number Info Trac

Distributor 1-800-535-5053

#### 2. SECTION 2: HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture

**2.1.1 US CFR 1910.1200** Not classified as dangerous for supply/use.

2.2 Label elements

Product Name Testifire TC3 Carbon Monoxide Capsule.

Hazard pictogram(s)

Signal word(s)

Hazard statement(s)

Precautionary statement(s)

None.

None.

**2.3 Other hazards** None.

2.4 Additional Information None.

# 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product Description: Activated Carbon Cloth. Contains no hazardous ingredients.

#### 3.1 Substances

Hazardous Ingredient(s)	CAS No.	%W/W		
Carbon	7440-44-0	100		

#### 3.2 Additional Information

None.



### **SECTION 4: FIRST AID MEASURES**



4.2

4.1 Description of first aid measures

> Inhalation Unlikely route of exposure.

Skin Contact Wash with plenty of soap and water.

Eye Contact Flush eyes with water for at least 15 minutes.

Unlikely route of exposure. Ingestion

Most important symptoms and effects, both None anticipated.

acute and delayed

4.3 Indication of any immediate medical attention

and special treatment needed

Unlikely to be required but if necessary treat

symptomatically.

# 5. SECTION 5: FIRE-FIGHTING MEASURES

5.1 **Extinguishing Media** 

> Suitable Extinguishing Media As appropriate for surrounding fire.

Unsuitable Extinguishing Media None known.

5.2 Special hazards arising from the substance or

mixture

Combustion may cause toxic fumes. Hazardous

decomposition product(s): Carbon monoxide, Carbon

dioxide.

5.3 Advice for fire-fighters In case of major fire and large quantities: A self contained

breathing apparatus should be worn.

#### 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and Wear suitable gloves.

emergency procedures

6.2 **Environmental precautions** Avoid release to the environment.

Methods and material for containment and Collect mechanically and dispose of according to Section 6.3 13.

cleaning up

6.4 Reference to other sections See Also Section: 8, 13.

## 7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling No special measures are required. Keep away from sources

of strong odor or vapors to prevent contamination.

7.2 Conditions for safe storage, including any incompatibilities

Storage Temperature Ambient.

Storage Life Stable under normal conditions.

Incompatible materials None anticipated.

Date: 12/09/2014 Revision: 1 Page: 2/5



# 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

#### 8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Carbon	7440-44-0	-	-	-	-	NIOSH
		-	-	-	-	OSHA

Source:

NIOSH = National Institute of Occupational Safety & Health OSHA = Occupational Safety and Health Administration

**8.2** Appropriate engineering controls Provide adequate ventilation.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection Not normally required.

Skin protection (Hand protection/ Other) Wear suitable gloves if prolonged skin contact is likely.

Respiratory protection

No personal respiratory protective equipment normally required.

Thermal hazards Not applicable.

# 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

# 9.1 Information on basic physical and chemical

properties
Appearance Woven or knitted cloth.

Color Colorless. Odor Odorless. Odor Threshold Not applicable. Not applicable. Melting Point/Freezing Point Not applicable. Initial boiling point and boiling range Not applicable. Flash Point Not applicable. Evaporation rate Not applicable. Flammability (solid, gas) Non-flammable. Upper/lower flammability or explosive limits Not applicable. Not applicable. Vapor pressure Vapor density Not applicable. Relative density Not applicable. Surface Density NLT. 100g/m<sup>2</sup> Insoluble. Solubility(ies) Partition coefficient: n-octanol/water Not applicable. Auto-ignition temperature Not applicable.

Revision: 1 Page: 3/5 Date: 12/09/2014



Decomposition Temperature
Viscosity
Not applicable.
Explosive properties
Oxidizing properties
Not oxidizing.

Other information
None.

### 10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions.
 10.2 Chemical stability Stable under normal conditions.
 10.3 Possibility of hazardous reactions Stable under normal conditions.

10.4 Conditions to avoid Keep away from sources of strong odor or vapors to prevent

contamination.

10.5 Incompatible materials None anticipated.

10.6 Hazardous Decomposition Product(s) Carbon monoxide, Carbon dioxide.

### 11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Substances
Acute toxicity
Irritation
Corrosivity
Low acute toxicity.
Not classified.
Not classified.

**Sensitization** It is not a skin sensitizer. **Repeated dose toxicity** None anticipated.

**Carcinogenicity** No evidence of carcinogenicity.

Mutagenicity There is no evidence of mutagenic potential.

**Toxicity for reproduction Aspiration hazard**None anticipated.

None anticipated.

11.2 Other information None.

### 12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity
 12.2 Persistence and degradability
 Low toxicity to aquatic organisms.
 The product is not biodegradable.

**12.3** Bioaccumulative potential The product has no potential for bioaccumulation.

12.4Mobility in soilInsoluble.12.5Other adverse effectsNone.

## 13. SECTION 13: DISPOSAL CONSIDERATIONS

**13.1** Waste treatment methods Dispose at suitable refuse site.

13.2 Additional Information Disposal should be in accordance with local, state or

national legislation.

## 14. SECTION 14: TRANSPORT INFORMATION

#### D.O.T. Classification

Not classified as dangerous for transport.

14.1 **UN number** Not applicable. 14.2 **UN Proper Shipping Name** Not applicable. 14.3 Transport hazard class(es) Not applicable. **Packing Group** Not applicable. 14.4 14.5 **Environmental hazards** Not applicable. Special precautions for user Not applicable.



# Testifire TC3 Carbon Monoxide Capsule

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

#### 15. SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910;

Subpart Z)

National emission standards for hazardous air

pollutants (40 CFR 61.01)

All chemicals are not listed.

All chemicals are not listed.

15.1.2 Tittle III Consolidated List of Lists All chemicals are not listed.

15.1.3 OSPAR List of Chemicals for Priority Action All chemicals are not listed.

**15.1.4 State Right to Know Lists** All chemicals are not listed.

15.1.5 TSCA (Toxic Substance Control Act) All chemicals listed.

**15.1.6 Proposition 65 (California)** All chemicals are not listed.

15.1.7 CAA 602 - Ozone Depleting Substances (ODS) All chemicals are not listed.

## **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16.

NFPA		HMIS	
Health	0	Health	0
Fire	0	Flammability	0
Instability	0	Physical hazards	0

#### **LEGEND**

LTEL Long Term Exposure Limit STEL Short Term Exposure Limit

NIOSH National Institute for Occupational Safety and Health OSHA Occupational Safety and Health Administration

# **Disclaimers**

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Revision: 1 Page: 5/5 Date: 12/09/2014



# SAFETY DATA SHEET

#### SDS0083US

ACCORDING TO US CFR 1910.1200

# 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Testifire TS3 Smoke Capsule.

Trade Name Testifire TS3-XXX (XXX denotes customer variant).

CAS No. Mixture. EINECS No. Mixture.

1.2 Recommended use of the chemical and

restrictions on use

Identified use(s)Smoke simulation.Uses advised againstNone known.

1.3 Details of the supplier of the Safety Data Sheet

Company Identification SDi

1345 Campus Parkway, Suite A18 Wall Township, NJ 07753 6815

 Telephone
 (732) 751 9266

 Fax
 (732) 751 9241

 E-mail
 sales@sdiffire.com

 Emergency telephone number
 lefe Tree

1.4Emergency telephone numberInfo TracDistributor1-800-535-5053

## 2. SECTION 2: HAZARDS IDENTIFICATION

# 2.1 Classification of the substance or mixture

2.1.1 US CFR 1910.1200 Not classified as dangerous for supply/use.

2.2 Label elements

Product Name Testifire TS3 Smoke Capsule.

Hazard pictogram(s)None.Signal word(s)None.Hazard statement(s)None.Precautionary statement(s)None.

**2.3 Other hazards** None.

2.4 Additional Information None.

# 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Contains no hazardous ingredients.

#### 3.1 Mixtures

Hazardous Ingredient(s)	CAS No.	%W/W
Propane-1,2-Diol	57-55-6	40 - 50

#### 3.2 Additional Information

None.



## **SECTION 4: FIRST AID MEASURES**



4.1 Description of first aid measures

> Inhalation If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing.

Skin Contact Wash with plenty of soap and water. Eye Contact Flush eyes with water for at least 15 minutes.

Wash out mouth with water. Seek medical treatment.

4.2 Most important symptoms and effects, both None anticipated.

acute and delayed

Ingestion

Indication of any immediate medical attention 4.3

and special treatment needed

Unlikely to be required but if necessary treat

symptomatically.

#### 5. SECTION 5: FIRE-FIGHTING MEASURES

5.1 **Extinguishing Media** 

> Suitable Extinguishing Media Use water spray, foam, dry powder or CO2 to extinguish.

Unsuitable Extinguishing Media None known. None anticipated.

Special hazards arising from the substance or

mixture

5.2

5.3 Advice for fire-fighters In case of major fire and large quantities: A self contained

breathing apparatus should be worn.

#### 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and Ensure adequate ventilation. Stop leak if safe to do so.

emergency procedures Wear protective gloves.

6.2 **Environmental precautions** Prevent entry into drains.

Methods and material for containment and 6.3 Adsorb spillages onto sand, earth or any suitable adsorbent

cleaning up material. Transfer to a container for disposal.

6.4 Reference to other sections See Also Section: 8, 13.

# 7. SECTION 7: HANDLING AND STORAGE

incompatibilities

7.1 Precautions for safe handling No special measures are required.

7.2 Conditions for safe storage, including any Protect from sunlight. Store in a well-ventilated place.

Storage Temperature Ambient.

Stable under normal conditions. Storage Life

Incompatible materials None anticipated.

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# **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **Control parameters**

#### 8.1.1 **Occupational Exposure Limits**

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Propane-1,2-Diol	57-55-6	-	-	-	-	NIOSH
		-	-	-	-	OSHA

Source:

NIOSH = National Institute of Occupational Safety & Health OSHA = Occupational Safety and Health Administration

Appropriate engineering controls 8.2 Provide adequate ventilation.

8.3 Individual protection measures, such as personal protective equipment (PPE)

> Eye/face protection Not normally required.

Skin protection (Hand protection/ Other) Wear suitable gloves if prolonged skin contact is likely.

No personal respiratory protective equipment normally Respiratory protection required.

Not applicable. Thermal hazards

# 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

# Information on basic physical and chemical

properties

Appearance Liquid. Color Clear. Odor Characteristic.

Odor Threshold Not determined. Not determined. Melting Point/Freezing Point Not determined. Initial boiling point and boiling range 212 °F

Flash Point >212 °F Evaporation rate Not applicable. Flammability (solid, gas) Non-flammable. Upper/lower flammability or explosive limits Not applicable. 0.334 psig @ 68°F Vapor pressure

Density 65.55 lb/ft<sup>3</sup> @ 68°F Vapor density Not determined. Relative density Not determined. Miscible with: Water. Solubility(ies) Partition coefficient: n-octanol/water Not determined.

518 °F

Ignition temperature

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Auto-ignition temperature Product is not selfigniting.

Decomposition Temperature

Kinematic Viscosity

Explosive properties

Oxidizing properties

Not determined.

Not explosive.

Not explosive.

Not oxidizing.

9.2 Other information

Organic solvents - Content 69.8% Water - Content 20.0%

## 10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions.
 10.2 Chemical stability Stable under normal conditions.
 10.3 Possibility of hazardous reactions Stable under normal conditions.

10.4 Conditions to avoid None anticipated.
 10.5 Incompatible materials None anticipated.
 10.6 Hazardous Decomposition Product(s) None known.

## 11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

 Mixtures

 Acute toxicity
 Low acute toxicity.

 Irritation
 Not classified.

 Corrosivity
 Not classified.

Sensitization It is not a skin sensitizer.

Repeated dose toxicity None anticipated.

Carcinogenicity No evidence of carcinogenicity.

Mutagenicity There is no evidence of mutagenic potential.

Toxicity for reproduction None anticipated.

Aspiration hazard None anticipated.

11.2 Other information None.

# 12. SECTION 12: ECOLOGICAL INFORMATION

**12.1 Toxicity** Low toxicity to aquatic organisms.

**12.2** Persistence and degradability The product is readily biodegradable. Unlikely to persist.

**12.3** Bioaccumulative potential No information available.

**12.4 Mobility in soil** Soluble in water. The product is predicted to have high

mobility in soil.

12.5 Other adverse effects None.

# 13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods Consult an accredited waste disposal contractor or the local

authority for advice. Smaller quantities can be disposed of

with household waste.

13.2 Additional Information Disposal should be in accordance with local, state or

national legislation.



## 14. SECTION 14: TRANSPORT INFORMATION

#### D.O.T. Classification

Not classified as dangerous for transport.

14.1	UN number	Not applicable.
14.2	UN Proper Shipping Name	Not applicable.
14.3	Transport hazard class(es)	Not applicable.
14.4	Packing Group	Not applicable.
14.5	Environmental hazards	Not applicable.
14.6	Special precautions for user	Not applicable.
14.7	Transport in bulk according to Annex II of	Not applicable.
	MARPOL73/78 and the IBC Code	

#### 15. SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910;

Subpart Z)

National emission standards for hazardous air

pollutants (40 CFR 61.01)

All chemicals are not listed.

All chemicals are not listed.

15.1.2 Tittle III Consolidated List of Lists All chemicals are not listed.

15.1.3 OSPAR List of Chemicals for Priority Action All chemicals are not listed.

**15.1.4 State Right to Know Lists** Propane-1,2-Diol (CAS No.: 57-55-6):

Pennsylvania, Minnesota.

15.1.5 TSCA (Toxic Substance Control Act) All chemicals listed.

15.1.6 Proposition 65 (California) All chemicals are not listed.

15.1.7 CAA 602 - Ozone Depleting Substances (ODS) All chemicals are not listed.

## **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16.

NFPA		HMIS	
Health	0	Health	0
Fire	0	Flammability	0
Instability	0	Physical hazards	0

# LEGEND

LTEL Long Term Exposure Limit
STEL Short Term Exposure Limit

NIOSH National Institute for Occupational Safety and Health OSHA Occupational Safety and Health Administration

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#### Disclaimers

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# SAFETY DATA SHEET

SDS0089US ACCORDING TO US CFR 1910.1200

# 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Smoke Centurion.

Trade Name M8 Smoke-01-XXX (XXX denotes customer variant).

CAS No. Mixture. EINECS No. Mixture.

1.2 Recommended use of the chemical and

restrictions on use

Identified Use(s)Smoke simulation.Uses Advised AgainstNone known.

1.3 Details of the supplier of the safety data sheet

Company Identification SDi

1345 Campus Parkway, Suite A18 Wall Township, NJ 07753 6815

 Telephone
 (732) 751 9266

 Fax
 (732) 751 9241

 E-mail
 sales@sdifire.com

1.4 Emergency telephone number

Info Trac 1-800-535-5053

#### 2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

US CFR 1910.1200 Flam. Aerosol 1: Extremely flammable aerosol.

2.2 Label elements

Product Name Smoke Centurion. Hazard Pictogram(s)



GHS02 Signal Word(s) Danger.

Hazard Statement(s) H222: Extremely flammable aerosol.

Precautionary Statement(s) P210: Keep away from heat, hot surfaces, sparks, open

flames and other ignition sources. No smoking. P211: Do not spray on an open flame or other ignition

source.

P251: Do not pierce or burn, even after use. P410+P412: Protect from sunlight. Do not expose to

temperatures exceeding 122°F (50°C).
Pressurized container: May burst if heated.

2.3 Other hazards None.

Additional Information

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# 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product as supplied: Aerosol.

#### 3.1 Mixtures

Hazardous Ingredient(s)	CAS No.	%W/W
Butane	106-97-8	50 – 100
Propane	74-98-6	10 – 25
Ethanol	64-17-5	0 – 5

#### 3.2 Additional Information

None.

## **SECTION 4: FIRST AID MEASURES**



4.2

4.3

5.2

Description of first aid measures

Inhalation If breathing is difficult, remove victim to fresh air and keep at

rest in a position comfortable for breathing.

Skin Contact Wash with plenty of water.

Eye Contact Flush eyes with water for at least 15 minutes while holding

eyelids open.

Ingestion Unlikely route of exposure.

Most important symptoms and effects, both None anticipated.

acute and delayed

Indication of any immediate medical attention Unlikely to be required but if necessary treat and special treatment needed symptomatically.

# 5. SECTION 5: FIRE-FIGHTING MEASURES

Pressurized container: May burst if heated.

**Extinguishing Media** 5.1

> Suitable Extinguishing Media Extinguish with carbon dioxide, dry chemical, foam or water

> > spray.

Unsuitable Extinguishing Media

Special hazards arising from the substance or

mixture

5.3 Advice for fire-fighters Do not use water jet. Heating may cause pressure rise with risk of bursting.

Fire fighters should wear complete protective clothing

including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because

they are likely to rupture under fire conditions.

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## 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

The product is an aerosol. It is unlikely to present spillage or leakage hazard. In case of rupture, released content should be contained as any other solvent spill.

6.1 Personal precautions, protective equipment

and emergency procedures

6.2 **Environmental precautions** 

6.3 Methods and material for containment and

cleaning up

Collect mechanically and dispose of according to Section 13. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a lidded container for disposal or recovery. Containers must not be punctured or destroyed by

Do not release large quantities into the surface water or into

Ensure adequate ventilation. Wear suitable gloves and

burning, even when empty.

Reference to other sections

See Also Section: 8, 13.

eye/face protection.

# 7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling Keep away from heat, hot surfaces, sparks, open flames and

> other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Provide adequate ventilation. Do not eat, drink or smoke during work. Wash hands

thoroughly after handling.

Conditions for safe storage, including any 7.2

incompatibilities

Storage temperature

Observe official regulations on storing packagings with

pressurized containers.

Pressurized container: May burst if heated. Protect from sunlight and do not expose to temperatures exceeding 122°F

(50 °C).

Storage life Stable under normal conditions.

Incompatible materials None anticipated. Specific end use(s) 7.3 Smoke simulation.

## 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 **Control parameters**

#### 8.1.1 **Occupational Exposure Limits**

SUBSTANCE	CAS No.	LTEL (8 hr TWA	LTEL (8 hr TWA	STEL	STEL	Note
		ppm)	mg/m³)	(ppm)	(mg/m³)	
Butane	106-97-8	800	1900	-	-	NIOSH
Propane	74-98-6	1000	1800	-	-	NIOSH
		1000	1800	-	-	PEL (OSHA)
Ethanol	64-17-5	1000	1900	-	-	NIOSH
		1000	1900	-	-	PEL (OSHA)

NIOSH = National Institue of Occupational Safety & Health OSHA = Occupational Safety and Health Administration

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8.2 Appropriate engineering controls

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Skin protection (Hand protection/ Other)

Respiratory protection

Thermal hazards

Provide adequate ventilation.

If eye contact is likely: Wear protective eyewear (goggles, face shield, or safety glasses).

Wear suitable gloves if prolonged skin contact is likely.

Gloves: Nitrile rubber, NBR.

No personal respiratory protective equipment normally required. Handling of larger amounts: In case of insufficient

ventilation, wear suitable respiratory equipment.

azards Not applicable.

## 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

## 9.1 Information on basic physical and chemical

properties

Appearance Color Odor Odor Threshold pH

Melting Point/Freezing Point Initial boiling point and boiling range

Flash Point Evaporation Rate Flammability (solid, gas)

Flammability (Solid, gas)

Upper/lower flammability or explosive limits

Vapor pressure Density Vapor density Relative density

Solubility(ies)
Partition coefficient: n-octanol/water

Ignition temperature
Auto-ignition temperature

Auto-ignition temperature

Decomposition Temperature Kinematic Viscosity Explosive properties Oxidizing properties

9.2 Other information

Organic solvents - Content

Aerosol. Colorless.

Characteristic.
Not determined.
Not determined.
Not determined.

-47.4°F (-44°C) <32°F (<0°C) Not available.

Extremely flammable.
Explosive Limit Ranges: 1.5 – 15.0 Vol-%

62.4 psig (4.3 bar) @ 68°F

36.2 lb/ft<sup>3</sup> (0.58 g/cm<sup>3</sup>) @ 68°F Not determined. Not determined. Immiscible with water. Not determined.

Product is not selfigniting.

Not determined. Not determined. Not explosive. Not oxidizing.

689°F (365°C)

96.4%

# 10. SECTION 10: STABILITY AND REACTIVITY

**10.1** Reactivity Stable under normal conditions.

10.2 Chemical stability
 10.3 Possibility of hazardous reactions
 Stable under normal conditions.
 Stable under normal conditions.

10.4 Conditions to avoid Heat and direct sunlight.
 10.5 Incompatible materials None anticipated.

10.5Incompatible materialsNone anticipate10.6Hazardous decomposition product(s)None known.

Revision: 3.1 Page: 4/7 Date: 22/07/2015



## 11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

11.1.1 Mixtures

**Acute toxicity** Low acute toxicity. Irritation Non-irritant. Corrosivity Not classified

Sensitization It is not a skin sensitizer.

Repeated dose toxicity None anticipated.

Carcinogenicity No evidence of carcinogenicity.

Mutagenicity There is no evidence of mutagenic potential.

**Toxicity for reproduction** None anticipated. **Aspiration hazard** None anticipated.

Other information None.

# 12. SECTION 12: ECOLOGICAL INFORMATION

12.1 **Toxicity** Low toxicity to aquatic organisms.

12.2 Persistence and degradability The product is readily biodegradable. Unlikely to persist. 12.3 Bioaccumulative potential The product has no potential for bioaccumulation.

12.4 Mobility in soil Immiscible with water. The product is predicted to have low

mobility in soil.

Other adverse effects None.

# 13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods Recycle only completely emptied packaging. Containers

must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.

13.2 **Additional Information** Disposal should be in accordance with local, state or

national legislation.

#### 14. SECTION 14: TRANSPORT INFORMATION

14.1 **UN** number UN 1950

ADR, IMDG, IATA

14.2 UN proper shipping name 1950 AEROSOLS ADR AFROSOLS

**IMDG** AEROSOLS, Flammable

IATA

14.3 Transport hazard class(es)

2 5F Gases Class / Classification

Label 2.1

IMDG, IATA

Class / Division 21 Label 2.1

14.4 Packing group

ADR, IMDG, IATA None.

**Environmental hazards** 

Marine Pollutant No.

Special precautions for user Warning: Gases.

Kemler Code

IMDG EMS F-D. S-U Not applicable.

Transport in bulk according to Annex II of 14.7

MARPOL73/78 and the IBC Code

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14.8 **Additional Information** 

**ADR** 

Limited Quantity (LQ)

1 L

**ADR Transport Category** 

**Tunnel Restriction Code** 

Not applicable in Limited Quantities.

**IMDG** 

Limited Quantity (LQ)

1L



IATA

Limited Quantity (LQ)

1L





UN "Model Regulation"

US

UN 1950, AEROSOLS, 2.1

ORM-D when transported in limited quantities (< 30kg or

66lb gross weight).

# 15. SECTION 15: REGULATORY INFORMATION

Safety, health and environmental

regulations/legislation specific for the substance or mixture

15.1.1 OSHA

Toxic and hazardous substances (29 CFR 1910;

Subpart Z)

National emission standards for hazardous air

15.1.3 OSPAR List of Chemicals for Priority Action

pollutants (40 CFR 61.01)

Listed: Propane (CAS No.: 74-98-6) Listed: Ethanol (CAS No.: 64-17-5)

All chemicals are not listed.

15.1.2 Title III Consolidated List of Lists

Listed: Butane (CAS No.: 106-97-8) Listed: Propane (CAS No.: 74-98-6)

10000 Clean Air Act Section 112(r) Threshold Quantity

All chemicals are not listed.

15.1.4 State Right to Know Lists

Butane (CAS No.: 106-97-8):

New Jersey, Pennsylvania, Massachusetts, Rhode Island.

Propane (CAS No.: 74-98-6):

New Jersey, Pennsylvania, Massachusetts.

Ethanol (CAS No.: 64-17-5):

New Jersey, Pennsylvania, Massachusetts.

15.1.5 TSCA (Toxic Substance Control Act)

All chemicals listed.

15.1.6 Proposition 65 (California)

15.1.7 CAA 602 - Ozone Depleting Substances (ODS)

All chemicals are not listed. All chemicals are not listed.

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# **16. SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1-16.

NFPA		HMIS	HMIS	
Health	1	Health	1	
Fire	4	Flammability	4	
Instability	0	Physical hazards	0	

#### **LEGEND**

LTEL Long Term Exposure Limit STEL Short Term Exposure Limit

NIOSH National Institute for Occupational Safety and Health

PEL Permissible Exposure Limits

CAA Clean Air Act

OSHA Occupational Safety and Health Administration

OSPAR Oslo and Paris Convention

ADR Accord européen elative au transport international des marchandises dangereuses par route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG International Maritime Code for Dangerous Goods

IATA International Air Transport Association

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