SOLO 370 LITHIUM-ION BATTERY

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.

1.3 Details of the supplier of the safety data sheet

Company Identification	SDi, LLC, 3535 State Highway 66, Parkway 100 Building 6, Neptune, NJ 07753, USA
Telephone	(732) 751 9266
Fax	(732) 751 9241
E-mail	sales@sdifire.com

1.4 Emergency telephone number

Info Trac	1-800-535-5053

1.5 Details of the Manufacturer

Company Identification	Detectortesters (No Climb Products Ltd), Edison House, 163 Dixons Hill Road, Welham Green, Hertfordshire AL9 7JE, United Kingdom.
Telephone	+44 (0) 1707 282760
Fax	+44 (0) 1707 282777
E-mail	SDS@detectortesters.com

SECTION 2: HAZARDS IDENTIFICATION

2.1 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

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: There is no hazard when the measures for handling and storage are followed. In case 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

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

(*) 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.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

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	None anticipated. Electrolyte leakage Can cause damage to the eyes and skin.
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

5.1 Extinguishing media	
Suitable Extinguishing media	Extinguish preferably with dry chemical or sand.
Unsuitable extinguishing media	Water, Water spray.
5.2 Special hazards arising from the substance or mixture	Hazardous decomposition product(s) include: Hydroflouric acid (upon contact with water), Hydrogen fluoride (HF) gas, Carbon monoxide and Carbon dioxide.
5.3 Advice for fire-fighters	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	Use PPE. Avoid contact with skin, eyes or clothing. Avoid breathing fumes.
6.2 Environmental precautions	Prevent entry into drains.
6.3 Methods and material for containment and cleaning up	Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal.
6.4 Reference to other sections	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.
7.2 Conditions for safe storage, including any incompatibilities	Keep away from open flames, heat and sources of ignition.
Storage temperature	Ambient.
Storage life	Stable under normal conditions.
Incompatible materials	None anticipated.
7.3 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 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**:**
OSHA = Occupational Safety and Health Administration *Respirable Dust.

8.2 Exposure controls

8.2.1 Appropriate engineering controls Provide adequate ventilation.

8.2.2 Personal protection equipment

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.
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	Solid.
Colour	Not applicable.
Odour	Odourless.
Odour threshold	Not applicable.
pH	Not determined.
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.
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.
Decomposition Temperature	Not applicable.
Kinematic Viscosity	Not applicable.
Explosive properties	Not explosive when used as intended.
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.
10.3	**Possibility of hazardous reactions**	No hazardous reactions known if used for its intended purpose.
10.4	**Conditions to avoid**	Do not heat the product.
10.5	**Incompatible materials**	Stable under normal conditions.
10.6	**Hazardous decomposition product(s)**	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.

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.
13.2	**Additional Information**	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.
	IMDG	Under special provision 188.
	IATA	UN 3480, UN 3481
	DOT	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 MARPOL 73/78 and the IBC Code**	Not applicable.

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)	All chemicals are not listed
	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 Sec 313	Cobalt oxide (Cobalt compounds), Manganese dioxide (Manganese compounds), 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
15.1.5	TSCA (Toxic Substance Control Act)	Cobalt oxide (Cas 1307-96-6), Manganese dioxide (Cas 1313-13-9), Nickel oxide (Cas 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**	
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
OSHA	Occupational Safety and Health Administration
NFPA	National Fire Protection Association
HMIS	Hazardous Material Information System
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
VOC	Volatile Organic Compounds

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Annex to the extended Safety Data Sheet (eSDS)

No information available.

Solo ES6 Smoke Cartridge

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.

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

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

1.3 Details of the supplier of the Safety Data Sheet

Company Identification	SDi, LLC, 3535 State Highway 66, Parkway 100 Building 6, Neptune, NJ 07753, USA.
Telephone	(732) 751 9266
Fax	(732) 751 9241
E-mail	sales@sdifire.com

1.4 Emergency telephone number

Info Trac	1-800-535-5053

1.5 Details of the Manufacturer

Company Identification	Detectortesters (No Climb Products Ltd), Edison House, 163 Dixons Hill Road, Welham Green, Hertfordshire. AL9 7JE. United Kingdom.
Telephone	+44 (0) 1707 282760
Fax	+44 (0) 1707 282777
E-mail	SDS@detectortesters.com

SECTION 2: HAZARDS IDENTIFICATION

2.1 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.

2.3 Other hazards — None.

2.4 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

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 skin with soap and water.
Eye Contact	Flush eyes with water for at least 15 minutes.
Ingestion	Wash out mouth with water. Seek medical treatment.

4.2 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.

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 mixture — None anticipated.

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 and emergency procedures — Ensure adequate ventilation. Stop leak if safe to do so. Wear protective gloves.

6.2 Environmental precautions — Prevent entry into drains.

6.3 Methods and material for containment and cleaning up — Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal.

6.4 Reference to other sections — 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	None anticipated.

7.3 Specific end use(s) — 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
		-	-	-	-	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 controls

8.2.1 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.

8.2.3 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.
Odour	Characteristic.
Odour Threshold	Not determined.
pH	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.
Vapour pressure	0.334 psig @ 68 °F
Density	65.55 lb/ft^3 @ 68 °F
Vapour density	Not determined.
Relative density	Not determined.
Solubility(ies)	Miscible with: Water.
Partition coefficient: n-octanol/water	Not determined.
Ignition temperature	518 °F
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

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**	None anticipated.
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

Acute toxicity	Low acute toxicity.
Irritation	Not classified.
Corrosivity	Not 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.
Aspiration hazard	None anticipated.

11.2 Other information None.

SECTION 12: ECOLOGICAL INFORMATION

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

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.

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 MARPOL73/78 and the IBC Code**	Not applicable.

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)	All chemicals are not listed.
	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**	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.

Solo Smoke Detector Tester

SAFETY DATA SHEET

SDS0066US

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	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 Against	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: Solo 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.

	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 (50ºC). 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

4.1	**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.
4.2	**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.

5.2	**Special hazards arising from the substance or mixture**	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 emergency procedures**	Ensure adequate ventilation. Avoid inhalation of high concentrations of vapors. Wear suitable gloves and eye/face 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 ºF (50 ºC).
	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)**	
	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.
	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 CHICAL 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
	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/ft^3 (1.132 g/cm^3) @ 68°F
	Vapor density	Not determined.
	Relative density	Not determined.
	Solubility(ies)	Immiscible with water.
	Partition coefficient: n-octanol/water	Not determined.
	Ignition temperature	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.
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**	
	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	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**	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.

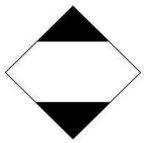
13. SECTION 13: DISPOSAL CONSIDERATIONS

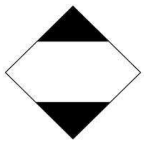
13.1	**Waste treatment methods**	Recycle only completely emptied packaging. Containers must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.
13.2	**Additional Information**	Disposal should be in 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	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**	Not applicable.
14.8	**Additional Information**	
	ADR	
	Limited Quantity (LQ)	1 L
	ADR Transport Category	3
	Tunnel Restriction Code	Not applicable in Limited Quantities.
	IMDG, TDG	
	Limited Quantity (LQ)	1L
	IATA, TDG	
	Limited Quantity (LQ)	1L
	UN Model Regulation	UN 1950, AEROSOLS, 2.2
	US	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)	All chemicals are not listed.
	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**	Listed: Propan-2-ol (CAS No.: 67-63-0)
	Sec 313	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.

Solo Smoke Detector Tester

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.

1.3 Details of the supplier of the safety data sheet

Company Identification	SDi 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

1.4 Emergency telephone number

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
Fax	+44 (0) 1707 282777
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)

GHS04 GHS07

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.

2.3 Additional Information — 9.1% by mass of the contents are flammable:
Keep out of reach of children.

2.4 Other hazards — High concentrations**:** May cause drowsiness and dizziness.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Product as supplied: Aerosol**.**

3.1 Mixtures

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.

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.
Skin Contact	Wash skin with soap and water.
Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open. If eye irritation persists, get medical advice/attention.
Ingestion	Unlikely route of exposure.

4.2 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.

SECTION 5: FIREFIGHTING MEASURES

Pressurised container: May burst if heated.

5.1 Extinguishing media

Suitable Extinguishing media	Extinguish with carbon dioxide, dry chemical, foam or waterspray.
Unsuitable extinguishing media	None known.

5.2 Special hazards arising from the substance or mixture — Heating may cause pressure rise with risk of bursting. May decompose in a fire giving off toxic fumes. Hydrogen fluoride.

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.

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 — Ensure adequate ventilation. Avoid inhalation of high concentrations of vapours.

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

6.4 Reference to other sections — 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	Ambient. Protect from sunlight. Do not expose to temperatures exceeding 50°C.
Storage life	Stable under normal conditions.
Incompatible materials	None known.

7.3 Specific end use(s) — 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
		1000	1900	-	-	OSHA PEL
Glycerol	56-81-5		5	-	-	NIOSH REL
(1E)-1,3,3,3-Tetrafluoro-1-propene	29118-24-9	800	-	-	-	WEEL. US
		800	-	-	-	

Source:
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 controls

8.2.1 Appropriate engineering controls — Provide adequate ventilation.

8.2.2 Personal protection equipment

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.

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)
Flash Point (°C)	>131°F (55°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	Not determined.
Vapour pressure	4192hPa @ 68°F
Vapour density	Not determined.
Relative density	Not determined.
Density	67.42lb/ft^3
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 toxicity	Low acute toxicity.
Irritation	Non-irritant.
Corrosivity	Not 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.

SECTION 12: ECOLOGICAL INFORMATION

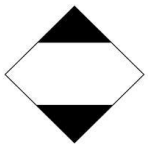
12.1	**Toxicity**	Low toxicity to aquatic organisms.
12.2	**Persistence and degradability**	No information available.
12.3	**Bioaccumulative potential**	No information available
12.4	**Mobility in soil**	No information available.
12.5	**Results of PBT and vPvB assessment**	Not classified as PBT or vPvB.
12.6	**Other adverse effects**	None.

SECTION 13: DISPOSAL CONSIDERATIONS

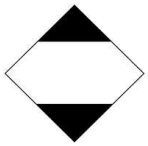
13.1	**Waste treatment methods**	Recycle only completely emptied packaging. Containers must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.
13.2	**Additional Information**	Disposal should be in accordance with local, state or national legislation.

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	None.
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 MARPOL 73/78 and the IBC Code**	Not applicable.
14.8	**Additional Information**	
	ADR	
	Limited Quantity (LQ)	1L



ADR Transport Category	3
Tunnel Restriction Code	Not applicable in Limited Quantities.
IMDG	
Limited Quantity (LQ)	1



IATA	
Limited Quantity (LQ)	1

UN Model Regulation	UN 1950, AEROSOLS
US	ORM-D when transported in limited quantities (< 30kg or 66lb gross weight).

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)	64-17-5, 57-55-6, 25322-68-3, 56-81-5.
	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 Technical Instructions (air)**	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**	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
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: 3.

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
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.

SOLO Detector Duster

SAFETY DATA SHEET

SDS0077US
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	SOLO Detector Duster.
Trade Name	SOLO A7-XXX (XXX denotes customer variant).
CAS No.	811-97-2
EINECS No.	212-377-0

1.2 Relevant identified uses of the substance or 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
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 — Gases under pressure: Liquefied gas; Contains gas under pressure; may explode if heated.

2.2 Label elements

Product Name: SOLO Detector Duster.

Hazard pictogram(s):

GHS04

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.

3. 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.

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.
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.

4.2 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

Contains gas under pressure; may explode if heated.

5.1 Extinguishing Media

Suitable Extinguishing Media	Extinguish with carbon dioxide, dry chemical, foam or waterspray.
Unsuitable Extinguishing Media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture — 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 emergency procedures**	Ensure adequate ventilation. Wear protective gloves.
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**	Protect from sunlight. Store in a well-ventilated place. Do not pierce or burn, even after use.
7.2	**Conditions for safe storage, including any incompatibilities**	Observe official regulations on storing packagings with pressurized containers.
	Storage Temperature	Ambient.
	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	-	-	-	-	NIOSH
		-	-	-	-	OSHA

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. 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)
Flash Point	Not applicable (Aerosol)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Non-flammable.
Upper/lower flammability or explosive limits	Not determined.
Vapor pressure	82.67 psi (5.7 bar) @ 68°F
Density	76.16 lb/ft^3 (1.22 g/cm^3) @ 68°F
Vapor density	Not determined.
Relative density	Not determined.
Solubility(ies)	0.122 lb/ft^3 @ 68°F
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

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 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	None anticipated.
STOT-single exposure	None anticipated.
STOT-repeated exposure	None anticipated.
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.
12.4	**Mobility in soil**	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

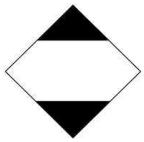
D.O.T. Classification

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.
14.6	**Special precautions for user**	Warning: Gases.
	Kemler Code	20
	IMDG EMS	F-D, S-U
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

14.8 Additional Information

ADR

Limited Quantity (LQ) 1 L

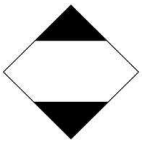


ADR Transport Category 3

Tunnel Restriction Code Not applicable in Limited Quantities.

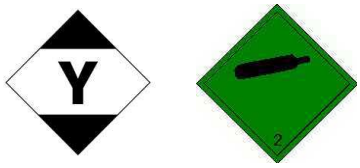
IMDG

Limited Quantity (LQ) 1 L



IATA

Limited Quantity (LQ) 1 L



UN "Model Regulation" UN 1950, AEROSOLS, 2

US 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

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SOLO CO Fire Detector Tester

SAFETY DATA SHEET

SDS0081US

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	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	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

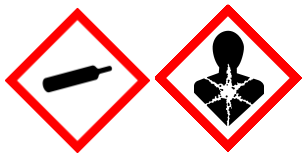
US CFR 1910.1200

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 place.
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.

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
Carbon monoxide	630-08-0	< 1

3.2 Additional Information
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.
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.

4.2 Most important symptoms and effects, both acute and delayed None anticipated.

4.3 Indication of any immediate medical attention 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	Extinguish with waterspray.
	Unsuitable Extinguishing Media	None known.
5.2	**Special hazards arising from the substance or mixture**	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.

6.1	**Personal precautions, protective equipment and emergency procedures**	Ensure adequate ventilation. Use personal protective equipment as required.
6.2	**Environmental precautions**	No special measures are required.
6.3	**Methods and material for containment and cleaning up**	Collect mechanically and dispose of according to Section 13. 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**	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 after use.
7.2	**Conditions for safe storage, including any incompatibilities**	Store locked up. Protect from sunlight. Store in a well-ventilated 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.

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) — Use personal protective equipment as required.

Eye/face protection — Not normally required.

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.
Flash Point	Not available.
Evaporation Rate	Not applicable.
Flammability (solid, gas)	Non-flammable. Tested to CFR 1910.1200 Appendix B – B.3
Upper/lower flammability or explosive limits	Not determined.
Vapor pressure	Not determined.
Vapor density	Not determined.
Relative density	Heavier than air.
Solubility(ies)	Not determined.
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.
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**	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**	
	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

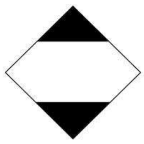
12.1	**Toxicity**	Low toxicity to aquatic organisms.
12.2	**Persistence and degradability**	No information available.
12.3	**Bioaccumulative potential**	No information available.
12.4	**Mobility in soil**	The product is predicted to have low mobility in soil.
12.5	**Other adverse effects**	None.

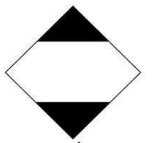
13. SECTION 13: DISPOSAL CONSIDERATIONS

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, 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	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**	Not applicable.
14.8	**Additional Information**	
	ADR	
	Limited Quantity (LQ)	1 L
	ADR Transport Category	3
	Tunnel Restriction Code	Not applicable in Limited Quantities.
	IMDG, TDG	
	Limited Quantity (LQ)	1L
	IATA, TDG	
	Limited Quantity (LQ)	1L
	UN Model Regulation	UN1950, AEROSOLS, 2.2
	US	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)	Listed: Carbon monoxide (CAS No.: 630-08-0)
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

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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 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
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)	None.
Signal Word(s)	None.
Hazard Statement(s)	None.
Precautionary Statement(s)	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.

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.

5. SECTION 5: FIRE-FIGHTING MEASURES

Non-flammable.

5.1	**Extinguishing Media**	
	Suitable Extinguishing Media	Extinguish preferably with dry chemical, sand or carbon dioxide.
	Unsuitable Extinguishing Media	Water, Water spray.
5.2	**Special hazards arising from the substance or mixture**	Heating may cause pressure rise with risk of bursting. Hazardous decomposition product(s): Nickel and cobalt compounds.
5.3	**Advice for fire-fighters**	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.
6.2	**Environmental precautions**	Avoid release to the environment.
6.3	**Methods and material for containment and cleaning up**	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.
6.4	**Reference to other sections**	See Also Section 8.

7. SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	Do not obstruct safety vent by soldering or welding tabs on the positive top.
7.2	**Conditions for safe storage, including any incompatibilities**	Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources.
	Storage temperature	Ambient.
	Storage life	Stable under normal conditions.
	Incompatible materials	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:
Nickel dihydroxide	12054-48-7	-	0.05	-	-	A1, Canada
Potassium hydroxide	1310-58-3	-	-	-	2	C, Canada
		-	-	-	2	USA (NIOSH)
Sodium hydroxide	1310-73-2	-	-	-	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

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. 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 required. 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.
	pH	Not available.
	Melting Point/Freezing Point	391.73°F (199.85°C) (Nickel dihydroxide).
	Initial boiling point and boiling range	Not available.
	Flash Point	Not applicable.
	Evaporation Rate	Not applicable.
	Flammability (solid, gas)	Non-flammable.
	Upper/lower flammability or explosive limits	Not applicable.
	Vapor pressure	Not applicable.
	Vapor density	Not applicable.
	Relative density	0.237 lb/ft^3 @ 69.8°F (Nickel dihydroxide).
	Solubility(ies)	Slightly soluble in: Water (Nickel dihydroxide).
	Partition coefficient: n-octanol/water	Not applicable.
	Auto-ignition temperature	Not applicable.
	Decomposition Temperature	Not applicable.
	Dynamic viscosity	Not applicable.
	Kinematic Viscosity	Not applicable.
	Explosive properties	Not explosive.
	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.
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.

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.
12.2	**Persistence and degradability**	Not applicable.
12.3	**Bioaccumulative potential**	Not applicable.
12.4	**Mobility in soil**	Not 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 MARPOL73/78 and the IBC Code**	Not applicable.
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)	Listed: Sodium hydroxide (CAS No.: 1310-73-2)
National emission standards for hazardous air pollutants (40 CFR 61.01)	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)	All chemicals listed..
Export Control List	All chemicals are not listed.
Priority Substances List (PSL)	All chemicals are not listed.
Toxic Substances List	All chemicals are not listed.
List of all Challenge substances	All chemicals are not listed.
National Pollutant Release Inventory (NPRI) Substance List	All chemicals are not listed.

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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Smoke Sabre

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 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 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
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).
Additional Information	Pressurized container: May burst if heated.

2.3 Other hazards — None.

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.

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.
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 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	Do not use water jet.

5.2 Special hazards arising from the substance or mixture — 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 emergency procedures**	Ensure adequate ventilation. Wear suitable gloves and eye/face 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 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**	Observe official regulations on storing packagings with pressurized containers.
	Storage temperature	Pressurized container: May burst if heated. Protect from sunlight and do not expose to temperatures exceeding 122ºF (50ºC).
	Storage life	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

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
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)

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.
		
	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	-47.4°F (-44°C)
	Flash Point	<32°F (<0°C)
	Evaporation Rate	Not available.
	Flammability (solid, gas)	Extremely flammable.
	Upper/lower flammability or explosive limits	Explosive Limit Ranges: 1.5 – 15.0 Vol-%
	Vapor pressure	62.4 psig (4.3 bar) @ 68°F
	Density	36.2 lb/ft^3 (0.58 g/cm³) @ 68°F
	Vapor density	Not determined.
	Relative density	Not determined.
	Solubility(ies)	Immiscible with water.
	Partition coefficient: n-octanol/water	Not determined.
	Ignition temperature	689°F (365°C)
	Auto-ignition temperature	Product is not selfigniting.
	Decomposition Temperature	Not determined.
	Kinematic Viscosity	Not determined.
	Explosive properties	Not explosive.
	Oxidizing properties	Not oxidizing.
9.2	**Other information**	
	Organic solvents – Content	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**	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.
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.

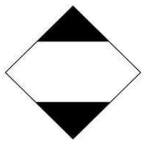
14. SECTION 14: TRANSPORT INFORMATION

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**	Not applicable.

14.8 Additional Information

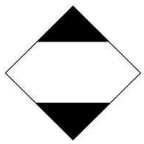
ADR

Limited Quantity (LQ)	1 L
ADR Transport Category	2
Tunnel Restriction Code	Not applicable in Limited Quantities.



IMDG

Limited Quantity (LQ)	1L



IATA

Limited Quantity (LQ)	1L
UN Model Regulation	UN 1950, AEROSOLS, 2.1
US	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)	Listed: Propane (CAS No.: 74-98-6) Listed: Ethanol (CAS No.: 64-17-5)
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

	Listed: Butane (CAS No.: 106-97-8) Listed: Propane (CAS No.: 74-98-6)
Clean Air Act Section 112(r) Threshold Quantity	10000

15.1.3 OSPAR List of Chemicals for Priority Action — 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) — 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	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

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TRUTEST SMOKE DETECTOR SENSITIVITY TESTER

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.
Trade Name	AERO 400-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 (for detector sensitivity tester).
Uses Advised Against	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

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

Product Name: TRUTEST SMOKE DETECTOR SENSITIVITY TESTER.

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.

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	90 - 100
Pentane	109-66-0	1 - 10
Propan-2-ol	67-63-0	1 - 10

3.2 Additional Information
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.

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.

4.2 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 preferably with dry chemical or alcohol foam.

Unsuitable Extinguishing Media — None known.

5.2 Special hazards arising from the substance or mixture — Decomposes in a fire giving off toxic fumes:Hydrofluoric acid, Fluorinated compounds. 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.

6.1	**Personal precautions, protective equipment and emergency procedures**	Ensure adequate ventilation. Avoid inhalation of high concentrations of vapours.
6.2	**Environmental precautions**	Avoid release to the environment.
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. Provide adequate ventilation. Avoid inhalation of high concentrations of vapours.
7.2	**Conditions for safe storage, including any incompatibilities**	Observe official regulations on storing packagings with pressurized containers.
	Storage temperature	Protect from sunlight and do not expose to temperatures exceeding 122 ºF.
	Storage life	Stable under normal conditions.
	Incompatible materials	Alkali metals, alkaline earth metals, magnesium, powdered metals.

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
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.

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

Respiratory protection	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.

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	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)	Non-flammable.
Upper/lower flammability or explosive limits	Not determined.
Vapor pressure	81.22 psig (5.6 bar) @ 77°F
Density	66.8 lb/ft^3 @ 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.

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**	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.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1	**Information on toxicological effects**	
	Mixtures	
	Acute toxicity	Low acute toxicity. High concentrations: May cause drowsiness and dizziness.
	Irritation	Non-irritant.
	Corrosivity	Not 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**	No information available.
12.3	**Bioaccumulative potential**	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.

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**	Not applicable.
14.8	**Additional Information**	
	ADR	
	Limited Quantity (LQ)	1 L
	ADR Transport Category	3
	Tunnel Restriction Code	Not applicable in Limited Quantities.
	IMDG	
	Limited Quantity (LQ)	1L
	IATA	
	Limited Quantity (LQ)	1L
	UN Model Regulation	UN 1950, AEROSOLS, 2.2
	US	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)	All chemicals are not listed.
	National emission standards for hazardous air pollutants (40 CFR 61.01)	All chemicals are not listed.
15.1.2	**Tittle III Consolidated List of Lists**	
	Propan-2-ol (CAS No.: 67-63-0)	Sec 313: 313
	Pentane (CAS No.: 109-66-0)	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,

		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

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.

BLOWout Air Duster

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.
Chemical Formula	$C_2H_4F_2$
CAS No.	75-37-6
EINECS No.	200-866-1

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)	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	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.

3. 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.

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. 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.
Ingestion	Unlikely route of exposure.

4.2 Most important symptoms and effects, both acute and delayed
Skin Contact: Frostbite.
Inhalation: High concentrations: Asphyxiation, Headache, dizziness, nausea and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed
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 waterspray.
Unsuitable Extinguishing Media	None known.

5.2 Special hazards arising from the substance or mixture
Heating may cause pressure rise with risk of bursting. Decomposes in a fire giving off toxic fumes: Hydrogen fluoride, Carbon monoxide, Carbon dioxide.

5.3 Advice for fire-fighters
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.

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**	Ensure adequate ventilation. Stop leak if safe to do so. Wear protective gloves.
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 sources of ignition.
7.2	**Conditions for safe storage, including any incompatibilities**	Protect from sunlight. Store in a well-ventilated place.:
	Storage Temperature	Do not expose to temperatures exceeding 122°F.
	Storage Life	Stable under normal conditions.
	Incompatible materials	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	< 58°F
Evaporation rate	Not applicable.
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	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.
Auto-ignition temperature	851°F
Decomposition Temperature	Not determined.
Dynamic Viscosity	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**	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**	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 toxicity	Low acute toxicity.
Inhalation	LC50 (rat) = 383000 ppm Effects and Symptoms: Asphyxiation, Headache, dizziness, nausea and vomiting.
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	None anticipated.

	STOT-single exposure	None anticipated.
	STOT-repeated exposure	None anticipated.
	Aspiration hazard	Not classified.
11.2	**Other information**	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 1030
14.2	**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)**	2.1
14.4	**Packing Group**	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 MARPOL73/78 and the IBC Code**	Not applicable.
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; 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

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

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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)	Smoke simulation.
Uses Advised Against	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.

	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

4.1	**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.
4.2	**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.

5.2	**Special hazards arising from the substance or mixture**	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 emergency procedures**	Ensure adequate ventilation. Avoid inhalation of high concentrations of vapors. Wear suitable gloves and eye/face 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 ºF.
	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)**	
	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.
	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 CHECHMICAL 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
	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/ft^3 (1.132 g/cm³) @ 68°F
	Vapor density	Not determined.
	Relative density	Not determined.
	Solubility(ies)	Immiscible with water.
	Partition coefficient: n-octanol/water	Not determined.
	Ignition temperature	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.
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**	
	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	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**	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.

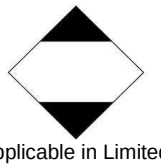
13. SECTION 13: DISPOSAL CONSIDERATIONS

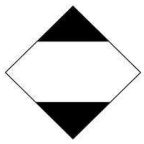
13.1	**Waste treatment methods**	Recycle only completely emptied packaging. Containers must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility. Do NOT landfill.
13.2	**Additional Information**	Disposal should be in 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	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**	Not applicable.
14.8	**Additional Information**	
	ADR	
	Limited Quantity (LQ)	1 L
	ADR Transport Category	3
	Tunnel Restriction Code	Not applicable in Limited Quantities.
	IMDG, TDG	
	Limited Quantity (LQ)	1L
	IATA, TDG	
	Limited Quantity (LQ)	1L
	UN Model Regulation	UN 1950, AEROSOLS, 2.2
	US	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)	All chemicals are not listed.
	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**	Listed: Propan-2-ol (CAS No.: 67-63-0)
	Sec 313	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

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Testifire TC3 Carbon Monoxide Capsule

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	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

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)	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

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.

4. SECTION 4: FIRST AID MEASURES

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.
	Ingestion	Unlikely route of exposure.
4.2	**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

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 emergency procedures**	Wear suitable gloves.
6.2	**Environmental precautions**	Avoid release to the environment.
6.3	**Methods and material for containment and cleaning up**	Collect mechanically and dispose of according to Section 13.
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.

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.
pH	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.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not applicable.
Surface Density	NLT. 100g/m^2
Solubility(ies)	Insoluble.
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	Not applicable.

	Decomposition Temperature	Not applicable.
	Viscosity	Not applicable.
	Explosive properties	Not explosive.
	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**	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	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 not biodegradable.
12.3	**Bioaccumulative potential**	The product has no potential for bioaccumulation.
12.4	**Mobility in soil**	Insoluble.
12.5	**Other adverse effects**	None.

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

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.

Testifire TS3 Smoke Capsule

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

1.4 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 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.

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.
	Skin Contact	Wash with plenty of soap and water.
	Eye Contact	Flush eyes with water for at least 15 minutes.
	Ingestion	Wash out mouth with water. Seek medical treatment.
4.2	**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

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 mixture**	None anticipated.
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 emergency procedures**	Ensure adequate ventilation. Stop leak if safe to do so. Wear protective gloves.
6.2	**Environmental precautions**	Prevent entry into drains.
6.3	**Methods and material for containment and cleaning up**	Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal.
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.
7.2	**Conditions for safe storage, including any incompatibilities**	Protect from sunlight. Store in a well-ventilated place.
	Storage Temperature	Ambient.
	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
Propane-1,2-Diol	57-55-6	-	-	-	-	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	Liquid.
Color	Clear.
Odor	Characteristic.
Odor Threshold	Not determined.
pH	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.
Vapor pressure	0.334 psig @ 68°F
Density	65.55 lb/ft^3 @ 68°F
Vapor density	Not determined.
Relative density	Not determined.
Solubility(ies)	Miscible with: Water.
Partition coefficient: n-octanol/water	Not determined.
Ignition temperature	518 °F

	Auto-ignition temperature	Product is not selfigniting.
	Decomposition Temperature	Not determined.
	Kinematic Viscosity	Not determined.
	Explosive properties	Not explosive.
	Oxidizing properties	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 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)	All chemicals are not listed.
National emission standards for hazardous air pollutants (40 CFR 61.01)	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

Specialized Fire Products

Testifire TS3 Smoke Capsule

Disclaimers

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Smoke Centurion

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 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
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).
Additional Information	Pressurized container: May burst if heated.

2.3 Other hazards — None.

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.

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.
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 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	Do not use water jet.

5.2 Special hazards arising from the substance or mixture — 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 emergency procedures**	Ensure adequate ventilation. Wear suitable gloves and eye/face 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 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**	Observe official regulations on storing packagings with pressurized containers.
	Storage temperature	Pressurized container: May burst if heated. Protect from sunlight and do not expose to temperatures exceeding 122ºF (50 ºC).
	Storage life	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

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
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)

Source**:**
NIOSH = National Institue 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.
		
	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	-47.4°F (-44°C)
	Flash Point	<32°F (<0°C)
	Evaporation Rate	Not available.
	Flammability (solid, gas)	Extremely flammable.
	Upper/lower flammability or explosive limits	Explosive Limit Ranges: 1.5 – 15.0 Vol-%
	Vapor pressure	62.4 psig (4.3 bar) @ 68°F
	Density	36.2 lb/ft^3 (0.58 g/cm³) @ 68°F
	Vapor density	Not determined.
	Relative density	Not determined.
	Solubility(ies)	Immiscible with water.
	Partition coefficient: n-octanol/water	Not determined.
	Ignition temperature	689°F (365°C)
	Auto-ignition temperature	Product is not selfigniting.
	Decomposition Temperature	Not determined.
	Kinematic Viscosity	Not determined.
	Explosive properties	Not explosive.
	Oxidizing properties	Not oxidizing.
9.2	**Other information**	
	Organic solvents – Content	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**	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.
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.

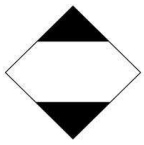
14. SECTION 14: TRANSPORT INFORMATION

14.1	**UN number**	UN 1950
	ADR, IMDG, IATA	
14.2	**UN proper shipping name**	1950 AEROSOLS
	ADR	AEROSOLS
	IMDG	AEROSOLS, Flammable
	IATA	
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**	Not applicable.

14.8 Additional Information

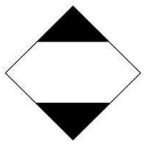
ADR

Limited Quantity (LQ)	1 L
ADR Transport Category	2
Tunnel Restriction Code	Not applicable in Limited Quantities.



IMDG

Limited Quantity (LQ)	1L



IATA

Limited Quantity (LQ)	1L

UN "Model Regulation"	UN 1950, AEROSOLS, 2.1
US	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)	Listed: Propane (CAS No.: 74-98-6) Listed: Ethanol (CAS No.: 64-17-5)
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

	Listed: Butane (CAS No.: 106-97-8) Listed: Propane (CAS No.: 74-98-6)
Clean Air Act Section 112(r) Threshold Quantity	10000

15.1.3 OSPAR List of Chemicals for Priority Action — 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) — 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	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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