



MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Aerosol Grenade, OC/CS	
PRODUCT NUMBER(S): 1050	DATE: September 12, 2013
TRADE NAME: Aerosol Grenade, OC/CS GENERAL USE: Crowd control CHEMICAL FAMILY: Capsaicins + CS Tearing Agent PRODUCT DESCRIPTION: Pungent, Irritating Liquid	 DEFENSE TECHNOLOGY®
MANUFACTURED FOR: Safariland, LLC	DATE PREPARED: September 12, 2013 SUPERSEDES: November 22, 2010
ADDRESS (NUMBER, STREET, P.O. BOX) 13386 International Parkway	TELEPHONE NUMBER FOR INFORMATION / Customer Care 800-347-1200
(CITY, STATE AND ZIP CODE) COUNTRY Jacksonville, FL 32218 USA	CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER  1-800-255-3924 01-813-248-0585 North America Toll Free International

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
 Product in container poses no exposure risk. Product Contents cause TEMPORARY acute eye, skin, digestive and respiratory system irritation under direct exposures; Indirect exposure may cause temporary, slight irritation to eyes. Containers may rupture and release irritating contents under fire conditions.

POTENTIAL HEALTH EFFECTS

ACUTE EXPOSURE EFFECTS

INHALATION:
 Temporary burning sensation and irritation upon direct exposure, with cough and wheezing; some chest tightness may occur. Effects will be slight or non-existent from indirect exposure.

SKIN:
 Temporarily irritating to skin through direct exposure; inflammation of mucosal surfaces seen with prolonged contact. Repeated contact may cause dermatitis. Effects will be slight or non-existent from indirect exposure.

EYES:
 Temporary burning sensation and irritation, with pain, redness, and tearing from direct exposure. Indirect exposure produces slight symptoms. Repeated or prolonged direct exposure may product chemical conjunctivitis.

INGESTION:
 Ingestion of large quantities may cause temporary inflammation of mouth and throat, nausea, vomiting, and/or diarrhea. Small amounts will produce an unpleasant taste only; this effect is also temporary.

CHRONIC EXPOSURE EFFECTS
 Chronic dermal exposure may result in rash. Chronic eye exposure could result in conjunctival or corneal damage.

CARCINOGENICITY:

NTP? No	IARC MONOGRAPHS? No	OSHA REGULATED? No
CALIFORNIA, Prop.65? No	ESIS? No	

SECTION 3 - HAZARDOUS INGREDIENTS

Hazardous Components	% (by Weight)	CAS #	EINECS #	Hazard Symbol	RISK PHRASES (Full Text Section 15)
CS Tearing Agent (a)	NR	2698-41-1	220278-9	T, Xi	R20, R25, R36/37/38
Oleoresin Capsicum (b)	NR	8023-77-6	206-969-8 (c)	None	None
Diethylene Glycol Monobutyl Ether	NR	112-34-5	203-961-6	Xi	R36
Sec-Butyl Alcohol	NR	78-92-2	201-158-5	Xi	R10, R36/37, R67
1,1,1,2-tetrafluoroethane	NR	811-97-2	212-377-0	None	None
M201A1 Fuze	NR	None	None	E	R5, R44

- (a) - CS - [(2-chlorophenyl)methylene]malononitrile
- (b) - Equivalent to 1.3% major capsaicinoid (MC) content.
- (c) - EINECS Number references Capsaicin

Notes: Hazard symbols and risk phrases based on maximum listed concentration of each hazardous ingredient.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME:	Aerosol Grenade, OC/CS	DATE:	September 12, 2013
PRODUCT NUMBER(S):	1050		

SECTION 4 - FIRST AID MEASURES

INHALATION:
Remove patient to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration.

EYES:
First check the victim for contact lenses and remove if present. Flush victim's eyes with water for at least 15 minutes. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. Seek medical attention for severe or continued irritation.

SKIN:
Remove contaminated clothing, rinse with cool water, then wash with cool water & soap.

INGESTION:
DO NOT INDUCE VOMITING!! Rinse mouth with plenty of water. If conscious, give water, then seek medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS:
Aerosol is not considered flammable - Flash Point estimated at >200°F (>94°C). Auto-Ignition temperature is 204°C (399°F) for diethylene glycol monobutyl ether. Explosive limits are 0.9-6.2% for diethylene glycol monobutyl ether as a pure substance; unknown for this product. Product is not sensitive to mechanical impact or static discharge.

EXTINGUISHING MEDIA:
Use dry chemical, CO2, or water spray. Wear self-contained breathing apparatus. All media forms are suitable.

FIRE FIGHTING PROCEDURES:
Use NIOSH or European EN149 approved chemical respirator. Use solvent-resistant type clothing with full jacket. Avoid absorption of product on clothing. If absorbed in clothing, remove and wash clothes at once. Use chemical-resistant goggles. Use dry chemical, CO2, or water spray to fight surrounding fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Pungent fumes may be emitted on exposure to elevated temperatures. Package is under pressure, and may rupture, releasing irritating product when exposed to elevated temperatures.

HAZARDOUS COMBUSTION PRODUCTS:
Carbon dioxide, carbon monoxide, water vapor, phosgene and other organic compounds in small quantities.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Soak up material with absorbent towel or material such as cat litter or sawdust and place into properly marked hazardous waste container for disposal at a licensed facility. Container should be kept sealed to prevent accidental exposure to irritating fumes. Small quantities of product may be safely washed into sewers or bodies of water.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Keep product in cool, dry place.. Do not store at temperatures above 120° F / 49°C. Do not puncture, crush, or incinerate containers. Empty containers may contain irritating, combustible residues; use caution in disposal of product and containers. Do not eat, drink, or use tobacco while handling product.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Hazardous Components	CAS #	ACGIH Exposure Limits	OSHA Exposure Limits
CS Tearing Agent	2698-41-1	0.05 ppm (Ceiling value)(skin)	0.05 ppm (0.4 mg/m ³) as TWA
Oleoresin Capsicum	8023-77-6	Not Established	Not Established
Diethylene Glycol Monobutyl Ether	112-34-5	10 ppm / 67.5 mg/m ³ as TWA; 15 ppm / 101.2 mg/m ³ as STEL [European Union Occupational Exposure Limits (OEL)]	
Sec-Butyl Alcohol	78-92-2	100 ppm	150 (450 mg/m ³) as TWA
1,1,1,2-Tetrafluoroethane	811-97-2	Not Established	Not Established

MATERIAL SAFETY DATA SHEET

PRODUCT NAME:	Aerosol Grenade, OC/CS	DATE:	September 12, 2013
PRODUCT NUMBER(S):	1050		

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

PERSONAL PROTECTION

RESPIRATORY PROTECTION:

A vapor respirator may be advisable or required under certain deployment conditions; consult manufacturer for further guidance.

PROTECTIVE GLOVES:

None required for handling unused product; where possible, use protective gloves for handling spent grenades.

EYE PROTECTION:

Safety glasses with side shields or face shield strongly suggested.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Local exhaust ventilation is recommended if product is discharged indoors. Hearing protection is recommended with all products containing an explosive charge.

WORK / HYGIENIC PRACTICES:

Avoid breathing fumes from ignition. **DO NOT EAT/DRINK/SMOKE WHILE HANDLING PRODUCT!!!**

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR Pungent, Irritating Liquid	VAPOR PRESSURE Not Established
pH Not determined	SPECIFIC GRAVITY (WATER = 1) Not Determined
MELTING / FREEZING POINT <32°F Estimated	SOLUBILITY IN WATER Miscible
BOILING POINT >220°F Estimated	SOLUBILITY IN ORGANIC SOLVENTS Variable - solution favors polar protic and polar aprotic solvents
FLASH POINT >200°F / 94°C	VISCOSITY Not Determined
FLAMMABLE LIMITS LEL: None UEL: None	VAPOR DENSITY (AIR = 1) Not Determined
AUTOIGNITION TEMPERATURE Not Determined for Product	EVAPORATION RATE (WATER = 1) Not Determined

VOLATILE ORGANIC COMPOUND (VOC) INFORMATION





Not applicable.

NOTES:

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.	CONDITIONS TO AVOID: Extreme heat, Incompatible materials.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, Mineral Acids (Sulfuric, Nitric, Perchloric, etc.), Strong Bases.	
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon dioxide, carbon monoxide, various hydrocarbons and small amounts of phosgene.	
HAZARDOUS POLYMERIZATION: Will not occur.	CONDITIONS TO AVOID: None related to polymerization.

MATERIAL SAFETY DATA SHEET

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SECTION 11 - TOXICOLOGICAL INFORMATION			
Complete Product			
Oral LD₅₀	Not known - temporarily irritating to mouth and esophageal passages from direct exposure.		
Dermal LD₅₀	Temporarily irritating to skin form direct exposure.		
Inhalation LC₅₀	Vapors generated from use are temporarily irritating, mainly under direct exposure.		
Irritation	Direct exposure to product causes temporary irritation to respiratory tract, skin and eyes.		
Product Components			
Hazardous Components	CAS #	LD50 of Ingredient (Oral, Rat - unless otherwise specified)	LC50 of Ingredient (Inhalation, Rat - unless otherwise specified)
CS Tearing Agent	2698-41-1	178 mg/kg	Not Established
Oleoresin Capsicum	8023-77-6	47.2 mg/kg (as capsaicin)	Not Established
Diethylene Glycol Monobutyl Ether	112-34-5	4500 mg/kg	Not Established
Sec-Butyl Alcohol	78-92-2	2193 mg/kg	48,500 mg/m ³ / 4 Hours
1,1,1,2-Tetrafluoroethane	811-97-2	Not Established	Not Established
SECTION 12 - ECOLOGICAL INFORMATION			
No ecological information is presently available for this blended product.			
SECTION 13 - DISPOSAL CONSIDERATIONS			
WASTE DISPOSAL METHOD: Dispose in accordance with all applicable Local, State and Federal regulations. Waste product may be discarded in to sewers after dilution with water, or may be sent to licensed facility for incineration.			
SECTION 14 - TRANSPORT INFORMATION			
PROPER SHIPPING NAME: Ammunition, tear-producing, Explosive Class 1.4G, UN 0301			
DOT HAZARD CLASS / Pack Group: Explosives, 1.4G, (6.1), (8) / II	REFERENCE: 49CFR	IATA HAZARD CLASS / Pack Group: 1.4G, (6.1), (8), II, 75Kg Cargo.	
UN / NA IDENTIFICATION NUMBER: UN0301		IMDG HAZARD CLASS: Explosives 1.4G, (6.1), (8), II	
LABEL: Explosives 1.4G, Poison 6.1, Corrosive 8		RID/ADR Dangerous Goods Code: Explosives 1.4G (Sub 6.1, 8.1)	
		UN TDG Class / Pack Group: 1.4G, (6.1), (8), II	
HAZARD SYMBOLS:			Hazard Identification Number (HIN):
   			NA
Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.			
SECTION 15 - REGULATORY INFORMATION			
TSCA (USA - Toxic Substance Control Act):		All ingredients listed.	
SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):			
Acute Health:	Yes	Chronic Health:	No
Fire:	No	Sudden Release of Pressure:	Yes
Reactive:	No		

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SECTION 15 - REGULATORY INFORMATION (Continued)

313 REPORTABLE INGREDIENTS: Diethylene Glycol Monobutyl Ether (112-34-5)

CERCLA (USA - Comprehensive Response Compensation and Liability Act): **No RQ listed for product.**

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: **No reportable components.**

CPR (Canadian Controlled Products Regulations): **This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.**

WHMIS Classifications: D2A - Material Causing other Toxic Effects.

CIDL (Canadian Ingredient Disclosure List): **Components are listed in Section 3 to meet the CIDL requirements.**

CDSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List): **Listed on DSL and/or NDSL.**

EINECS (European Inventory of Existing Commercial Chemical Substances): **Referenced.**


WGK Water Quality Index: **NE**

RISK PHRASES:	SYMBOL(S) REQUIRED FOR EU LABEL	SAFETY PHRASES:
<p>R2: Risk of explosion by shock, friction, fire or other sources of ignition.</p> <p>R20: Harmful by inhalation.</p> <p>R62: Possible risk of impaired fertility.</p>	 	<p>S2: Keep out of the reach of children.</p> <p>S7: Keep container tightly closed.</p> <p>S23.3: Do not breathe spray.</p> <p>S24/25: Avoid contact with skin and eyes.</p> <p>S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</p> <p>S27/28: After contact with skin, immediately take off all contaminated clothing and wash immediately with plenty of water and soap.</p>

SECTION 16 - OTHER INFORMATION

Legend			
N/A=Not Applicable	N/D=Not Determined	N/E = Not Established	N/R = Not Reported
<p>HMIS HAZARD RATINGS</p> <p>0 = INSIGNIFICANT, 1 = SLIGHT</p> <p>2 = MODERATE, 3 = HIGH</p> <p>4 = EXTREME</p>	<p>HEALTH:</p> <p>FLAMMABILITY:</p> <p>PHYSICAL HAZARD:</p> <p>PERSONAL PROTECTIVE EQUIPMENT:</p>	<p>2</p> <p>1</p> <p>1</p> <p>H</p>	

REVISION SUMMARY: Revised transportation 12 Sept 2013.

<p>MSDS Prepared by: ChemTel Inc. 1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtelinc.com</p>	
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The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.