



CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

Product name: Aerosol Leak Detector

Issue date: 03-09-2015
Revision date: 11-02-2017
Version #: 03
SDS No: -

SECTION 1 Chemical product and company identification

Product name	Aerosol Leak Detector
Product Code	No. PR14503 (Item# 1007733)
Manufactured or sold by:	
Company name	CRC Industries Trading (Shanghai) Co., Ltd.
Address	Room 1710, No. 488 South Wuning Road Jingan District - 200042 Shanghai, PR China
General Information	+86 21 6236 6035
24-Hour Emergency	+86 532 83889090
Website	www.crcindustries.cn

Recommended use and Limitations on use

Recommended use	Leak detector
Issue date	03-09-2015
Revision date	11-02-2017
Supersedes date	11-10-2015

SECTION 2 Hazards identification

Emergency overview	Aerosol. CONTENTS UNDER PRESSURE. Pressurized container may explode when exposed to heat or flame. Causes serious eye irritation. Causes skin irritation.
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GHS-classification

Physical hazards	Aerosols	Category 3
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
Environmental hazards	Not classified.	
Other hazards which do not result in classification	Not classified.	

Label elements

Pictograms



GHS-labeling

Signal word Warning

Hazard statement

H229	Pressurized container: May burst if heated.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Precautionary statement

Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P251	Do not pierce or burn, even after use.
P264	Wash thoroughly after handling.
P280	Wear eye protection/face protection.
P280	Wear protective gloves.

Response

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

Dispose of waste and residues in accordance with local authority requirements.

Physical and chemical hazards

The product is stable and non-reactive under normal conditions of use, storage and transport.

Health hazards

Prolonged inhalation may be harmful. Causes skin irritation. Expected to be a low ingestion hazard. Causes serious eye irritation.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Environmental hazards

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 3 Composition/information on ingredients

Substance/mixture	Mixture	
Chemical name	Concentration (%)	CAS Number
water	80 - 90	7732-18-5
1,1-difluoroethane	5 - 10	75-37-6
2-butoxyethanol	3 - 5	111-76-2

SECTION 4 First aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
Most important symptoms and health effects	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Expected acute symptoms and delayed symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Personal protection for first-aid responders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Notes to physician	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5 Fire-fighting measures

Extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Extinguishing media to avoid	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards	During fire, gases hazardous to health may be formed.
Special fire fighting procedures	Containers should be cooled with water to prevent vapor pressure build up.
Protection of fire-fighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Clean-up methods and materials and containment measures	Stop leak if you can do so without risk. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Prevention of secondary hazards	Not available.

SECTION 7 Handling and storage

Handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Storage	Level 1 Aerosol. Contents under pressure. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8 Exposure controls/personal protection

Exposure limits

Not available.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Monitoring methods

Follow standard monitoring procedures.

Engineering measures

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Personal protective equipment

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Hand protection

Wear protective gloves such as: Nitrile. Rubber.

Eye protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Hygiene measures

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9 Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Aerosol.
Color	Colorless.

Odor Mild.

pH 10.4

Melting point/freezing point 32 °F (0 °C) estimated

Boiling point, initial boiling point, and boiling range	212 °F (100 °C) estimated
Flash point	None (Tag Closed Cup)
Flammability limit - lower (%)	1.3 % estimated
Flammability limit - upper (%)	23.5 % estimated
Explosive limit - lower (%)	1.3 % estimated
Explosive limit - upper (%)	23.5 % estimated
Vapor pressure	446.6 hPa estimated
Vapor density	Not available.
Relative density	0.99
Density	Not available.
Solubility(ies)	
Solubility (water)	Soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	446 °F (230 °C) estimated
Decomposition temperature	Not available.
Evaporation rate	Slow.
Flammability (solid, gas)	Not available.
Other data	
Percent volatile	99.7 % estimated

SECTION 10 Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Aldehydes. Ketones. Organic acids.

SECTION 11 Toxicological information

Acute toxicity	Species	Test Results
2-butoxyethanol (CAS 111-76-2)		
Acute		
Oral		
LD50	Rat	1300 mg/kg

* Estimates for product may be based on additional component data not shown.

Routes of exposure	Inhalation. Skin contact. Eye contact.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Respiratory or skin sensitization	
Skin sensitizer	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	
IARC Monographs. Overall Evaluation of Carcinogenicity	
2-butoxyethanol (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.

Toxic to reproduction	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity following single exposure	Not classified.
Specific target organ toxicity following repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	May be harmful if absorbed through skin. Prolonged inhalation may be harmful. 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

SECTION 12 Ecological information

Ecotoxicological data

Components	Species	Test Results
2-butoxyethanol (CAS 111-76-2)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna) 1550 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) >= 1000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

Bioaccumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

1,1-difluoroethane	0.75
2-butoxyethanol	0.81, log Pow

Mobility in soil This product is miscible in water.

Other hazardous effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13 Disposal considerations

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.
Local disposal regulations	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14 Transport information

CNDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-

Packing group Not applicable.
Environmental hazards No.
ERG Code 2L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

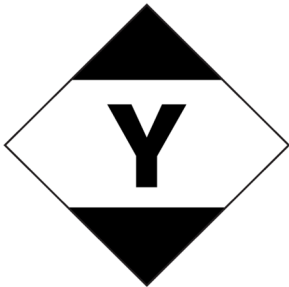
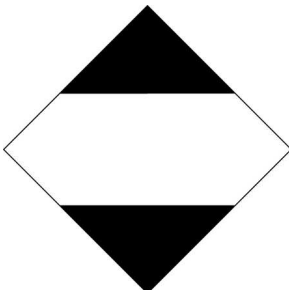
Other information

Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN1950
UN proper shipping name AEROSOLS, Limited Quantity
Transport hazard class(es)
Class 2.2
Subsidiary risk -
Packing group Not applicable.
Environmental hazards
Marine pollutant No.
EmS F-D, S-U
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

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

CNDG**IATA****IMDG**

SECTION 15 Regulatory information
Inventory of Existing Chemical Substances in China

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Applicable regulations	This safety data sheet conforms to the following laws, regulations and standards: Regulations on the Control over Safety of Dangerous Chemicals Regulations on Labor Protection in Workplaces Where Toxic Products Are Used Measures for the Safe Use of Chemicals in Workplaces Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008) General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009) Packing Symbol of Dangerous Goods(GB190-2009) Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)
General Rule For Classification and Hazard Communication of Chemicals (GB 13690-2009) and Catalog of Hazardous Chemicals	1,1-difluoroethane (CAS 75-37-6) 2-butoxyethanol (CAS 111-76-2)
Occupational exposure limits for hazardous agents in the workplace (GBZ 2.1-2007)	Not listed.
National Catalogue of Hazardous Wastes	2-butoxyethanol (CAS 111-76-2)
Restricted Import/Export Toxic Chemical List (MEP and GCA Announcement No. 2008-66, Dec. 1, 2008, amended through MEP and Customs Notice No. 2013-85, December 30, 2013)	Not regulated.
Classification and code of dangerous goods (GB 6944-2012)	Regulated.
List of Dangerous Goods (GB 12268-2005)	Regulated.
The Principle of Classification of Transport Packaging Groups of Dangerous Goods (GB/T15098-2008)	Regulated.
General Specifications for Transport Packages of Dangerous Goods (GB 12463-2009)	Regulated.
Regulations on Road Transport of Dangerous Goods	Regulated.
Regulations on Rail Road Transport of Dangerous Goods	Regulated.
UN Recommendations on the Transport of Dangerous Goods (UN RTDG)	Regulated.

SECTION 16 Other information

References	EPA: AQUIRE database GB6944-2012: Classification and Code of Dangerous Goods. GB12268-2012: List of Dangerous Goods. NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents
Further information	CRC # 843A/1002817
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Revision Information	This document has undergone significant changes and should be reviewed in its entirety.