

# **CRC(NZ) Hot Silver Aerosol**

**CRC Industries (CRC Industries New Zealand)** 

Chemwatch: **25-0436**Version No: **6.1.1.1** 

Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 4

Issue Date: **01/11/2019**Print Date: **03/04/2020**S.GHS.NZL.EN

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

Product Identifier	
Product name	CRC(NZ) Hot Silver Aerosol
Synonyms	Not Available
Proper shipping name	AEROSOLS
Other means of identification	Not Available

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

	High temperature aerosol paint.
Relevant identified uses	Application is by spray atomisation from a hand held aerosol pack
	Use according to manufacturer's directions.

# Details of the supplier of the safety data sheet

Registered company name	CRC Industries (CRC Industries New Zealand)
Address	10 Highbrook Drive East Tamaki Auckland New Zealand
Telephone	+64 9 272 2700
Fax	+64 9 274 9696
Website	www.crc.co.nz
Email	customerservices@crc.co.nz

# **Emergency telephone number**

Association / Organisation	CRC Industries (CRC Industries New Zealand)
Emergency telephone numbers	NZ Poisons Centre 0800 POISON (0800 764 766)
Other emergency telephone numbers	111 (NZ Emergency Services)

# **SECTION 2 HAZARDS IDENTIFICATION**

#### Classification of the substance or mixture

Classification <sup>[1]</sup>	Flammable Aerosols Category 1, Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Reproductive Toxicity Category 2, Specific target organ toxicity - single exposure Category 2, Specific target organ toxicity - repeated exposure Category 2, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 4, Acute Vertebrate Hazard Category 3	
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI	
Determined by Chemwatch using GHS/HSNO criteria	2.1.2A, 6.1D (dermal), 6.1D (oral), 6.3A, 6.4A, 6.8B, 6.9B, 9.1D, 9.3C	

# Label elements

Hazard pictogram(s)







SIGNAL WORD DANGER

Hazard statement(s)

H222

Extremely flammable aerosol.

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life.
H413	May cause long lasting harmful effects to aquatic life.
H433	Harmful to terrestrial vertebrates.

# Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
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.

# Precautionary statement(s) Response

P321	Specific treatment (see advice on this label).	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor/physician/first aider.	
P337+P313	If eye irritation persists: Get medical advice/attention.	

# Precautionary statement(s) Storage

P405	Store locked up.	
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.	

# Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

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

# **Substances**

See section below for composition of Mixtures

#### **Mixtures**

CAS No	%[weight]	Name
1330-20-7	30-60	xylene
108-88-3	10-30	toluene
67-64-1	10-30	acetone
78-93-3	1-10	methyl ethyl ketone
68476-85-7.	25-35	hydrocarbon propellant

# **SECTION 4 FIRST AID MEASURES**

# Description of first aid measures

Eye Contact	If aerosols come in contact with the eyes:  Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water.  Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.  Transport to hospital or doctor without delay.  Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If solids or aerosol mists are deposited upon the skin:  Flush skin and hair with running water (and soap if available).  Remove any adhering solids with industrial skin cleansing cream.  DO NOT use solvents.  Seek medical attention in the event of irritation.
Inhalation	If aerosols, fumes or combustion products are inhaled:  Remove to fresh air.  Lay patient down. Keep warm and rested.

	<ul> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor.</li> </ul>
Ingestion	<ul> <li>Avoid giving milk or oils.</li> <li>Avoid giving alcohol.</li> <li>Not considered a normal route of entry.</li> </ul>

#### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute or short term repeated exposures to acetone:

- ▶ Symptoms of acetone exposure approximate ethanol intoxication.
- About 20% is expired by the lungs and the rest is metabolised. Alveolar air half-life is about 4 hours following two hour inhalation at levels near the Exposure Standard; in overdose, saturable metabolism and limited clearance, prolong the elimination half-life to 25-30 hours.
- ▶ There are no known antidotes and treatment should involve the usual methods of decontamination followed by supportive care.

[Ellenhorn and Barceloux: Medical Toxicology]

Management:

Measurement of serum and urine acetone concentrations may be useful to monitor the severity of ingestion or inhalation.

Inhalation Management:

- Maintain a clear airway, give humidified oxygen and ventilate if necessary.
- ▶ If respiratory irritation occurs, assess respiratory function and, if necessary, perform chest X-rays to check for chemical pneumonitis.
- ▶ Consider the use of steroids to reduce the inflammatory response.
- ► Treat pulmonary oedema with PEEP or CPAP ventilation.

Dermal Management:

- Remove any remaining contaminated clothing, place in double sealed, clear bags, label and store in secure area away from patients and staff.
- ▶ Irrigate with copious amounts of water.
- ▶ An emollient may be required.

Eve Management:

- Irrigate thoroughly with running water or saline for 15 minutes.
- ▶ Stain with fluorescein and refer to an ophthalmologist if there is any uptake of the stain.

Oral Management:

- ▶ No GASTRIC LAVAGE OR EMETIC
- Encourage oral fluids.

Systemic Management:

- Monitor blood glucose and arterial pH.
- Ventilate if respiratory depression occurs.
- ▶ If patient unconscious, monitor renal function.
- Symptomatic and supportive care.

The Chemical Incident Management Handbook:

Guy's and St. Thomas' Hospital Trust, 2000

BIOLOGICAL EXPOSURE INDEX

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant

Sampling Time

Index

Comments

Acetone in urine

End of shift

50 mg/L

NS

NS: Non-specific determinant; also observed after exposure to other material

Following acute or short term repeated exposures to toluene:

- Toluene is absorbed across the alveolar barrier, the blood/air mixture being 11.2/15.6 (at 37 degrees C.) The concentration of toluene, in expired breath, is of the order of 18 ppm following sustained exposure to 100 ppm. The tissue/blood proportion is 1/3 except in adipose where the proportion is 8/10.
- Metabolism by microsomal mono-oxygenation, results in the production of hippuric acid. This may be detected in the urine in amounts between 0.5 and 2.5 g/24 hr which represents, on average 0.8 gm/gm of creatinine. The biological half-life of hippuric acid is in the order of 1-2 hours.
- Primary threat to life from ingestion and/or inhalation is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (eg cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 <50 mm Hg or pCO2 > 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial damage has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenaline) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use.

## **BIOLOGICAL EXPOSURE INDEX - BEI**

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

 Determinant
 Index
 Sampling Time
 Comments

 o-Cresol in urine
 0.5 mg/L
 End of shift
 B

 Hippuric acid in urine
 1.6 g/g creatinine
 End of shift
 B, NS

 Toluene in blood
 0.05 mg/L
 Prior to last shift of workweek

NS: Non-specific determinant; also observed after exposure to other material

B: Background levels occur in specimens collected from subjects NOT exposed

For acute or short term repeated exposures to xylene:

▶ Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is

recommended. The use of charcoal and cathartics is equivocal.

- ▶ Pulmonary absorption is rapid with about 60-65% retained at rest.
- ▶ Primary threat to life from ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen.
  Patients with inadequate tidal volumes or poor arterial blood gases (pO2 < 50 mm Hg or pCO2 > 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
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- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

**BIOLOGICAL EXPOSURE INDEX - BEI** 

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

 Determinant
 Index
 Sampling Time
 Comments

 Methylhippu-ric acids in urine
 1.5 gm/gm creatinine
 End of shift

rine 1.5 gm/gm creatinine End of shift 2 mg/min Last 4 hrs of shift

## **SECTION 5 FIREFIGHTING MEASURES**

#### Extinguishing media

SMALL FIRE:

Water spray, dry chemical or CO2

LARGE FIRE:

Water spray or fog.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility	► Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may
i ile ilicompatibility	result

# Advice for firefighters

Advice for firefighters	
Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>May be violently or explosively reactive.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Liquid and vapour are highly flammable.</li> <li>Severe fire hazard when exposed to heat or flame.</li> <li>Vapour forms an explosive mixture with air.</li> <li>Severe explosion hazard, in the form of vapour, when exposed to flame or spark.</li> <li>Combustion products include:</li> <li>carbon dioxide (CO2)</li> <li>other pyrolysis products typical of burning organic material.</li> <li>Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.</li> </ul>

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

# Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

#### Methods and material for containment and cleaning up

Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Wear protective clothing, impervious gloves and safety glasses.</li> <li>Shut off all possible sources of ignition and increase ventilation.</li> </ul>
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>May be violently or explosively reactive.</li> <li>Wear breathing apparatus plus protective gloves.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

# **SECTION 7 HANDLING AND STORAGE**

# Precautions for safe handling

Safe handling

- ► Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- ▶ Use in a well-ventilated area.

#### Prevent concentration in hollows and sumps.

- ▶ Store below 38 deg. C.
- Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can
- ▶ Store in original containers in approved flammable liquid storage area.
- ▶ DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
- ▶ No smoking, naked lights, heat or ignition sources.
- Keep containers securely sealed.

#### Conditions for safe storage, including any incompatibilities

Suitable container

Other information

- ▶ Aerosol dispenser.
- Check that containers are clearly labelled.

Storage incompatibility

► Avoid reaction with oxidising agents

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

## **Control parameters**

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	xylene	Dimethylbenzene	50 ppm / 217 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	toluene	Toluene (Toluol)	50 ppm / 188 mg/m3	Not Available	Not Available	skin-Skin absorption
New Zealand Workplace Exposure Standards (WES)	acetone	Acetone	500 ppm / 1185 mg/m3	2375 mg/m3 / 1000 ppm	Not Available	bio-Exposure can also be estimated by biological monitoring.
New Zealand Workplace Exposure Standards (WES)	methyl ethyl ketone	MEK (Methyl ethyl ketone, 2-Butanone)	150 ppm / 445 mg/m3	890 mg/m3 / 300 ppm	Not Available	bio-Exposure can also be estimated by biological monitoring.
New Zealand Workplace Exposure Standards (WES)	hydrocarbon propellant	LPG (Liquefied petroleum gas)	1000 ppm / 1800 mg/m3	Not Available	Not Available	Not Available

## **EMERGENCY LIMITS**

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
xylene	Xylenes	Not Available	Not Available	Not Available
toluene	Toluene	Not Available	Not Available	Not Available
acetone	Acetone	Not Available	Not Available	Not Available
methyl ethyl ketone	Butanone, 2-; (Methyl ethyl ketone; MEK)	Not Available	Not Available	Not Available
hydrocarbon propellant	Liquified petroleum gas; (L.P.G.)	65,000 ppm	2.30E+05 ppm	4.00E+05 ppm

Ingredient	Original IDLH	Revised IDLH
xylene	900 ppm	Not Available
toluene	500 ppm	Not Available
acetone	2,500 ppm	Not Available
methyl ethyl ketone	3,000 ppm	Not Available
hydrocarbon propellant	2,000 ppm	Not Available

# **Exposure controls**

# Appropriate engineering controls

CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Personal protection









Eye and face protection	<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>
Skin protection	See Hand protection below
Hands/feet protection	<ul> <li>No special equipment needed when handling small quantities.</li> <li>OTHERWISE:</li> <li>For potentially moderate exposures:</li> <li>Wear general protective gloves, eg. light weight rubber gloves.</li> <li>For potentially heavy exposures:</li> <li>Wear chemical protective gloves, eg. PVC. and safety footwear.</li> </ul>
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities.  OTHERWISE:  Overalls.  Skin cleansing cream.  Eyewash unit.  The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton.  Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.  BRETHERICK: Handbook of Reactive Chemical Hazards.

#### Recommended material(s)

#### GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

#### "Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the *computer-generated* selection:

CRC(NZ) Hot Silver Aerosol

Material	CPI
PE/EVAL/PE	A
TEFLON	В
BUTYL	С
BUTYL/NEOPRENE	С
CPE	С
HYPALON	С
NAT+NEOPR+NITRILE	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE	С
NEOPRENE/NATURAL	С
NITRILE	С
NITRILE+PVC	С
PVA	С
PVC	С
PVDC/PE/PVDC	С
SARANEX-23	С
SARANEX-23 2-PLY	С
VITON	С
VITON/CHLOROBUTYL	С
VITON/NEOPRENE	С

# \* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE**: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

#### Respiratory protection

Type AX Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 5 x ES	AX-AUS / Class 1	-	AX-PAPR-AUS / Class 1
up to 25 x ES	Air-line*	AX-2	AX-PAPR-2
up to 50 x ES	-	AX-3	-
50+ x ES	-	Air-line**	-

#### ^ - Full-face

 $A(All \ classes) = Organic \ vapours, \ B \ AUS \ or \ B1 = Acid \ gasses, \ B2 = Acid \ gas \ or \ hydrogen \ cyanide(HCN), \ B3 = Acid \ gas \ or \ hydrogen \ cyanide(HCN), \ E = Sulfur \ dioxide(SO2), \ G = Agricultural \ chemicals, \ K = Ammonia(NH3), \ Hg = Mercury, \ NO = Oxides \ of \ nitrogen, \ MB = Methyl \ bromide, \ AX = Low \ boiling point \ organic \ compounds(below \ 65 \ degC)$ 

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

#### Information on basic physical and chemical properties

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AΡ	pear	anice

Silver flammable liquid with a strong solvent odour; not miscible with water.

Supplied as an aerosol pack. Contents under PRESSURE. Contains highly flammable hydrocarbon propellant.

Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	-81 (propellant)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	>1	VOC g/L	Not Available

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

Reactivity	See section 7
Chemical stability	<ul> <li>Elevated temperatures.</li> <li>Presence of open flame.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

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

#### Information on toxicological effects

Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.

There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

The acute toxicity of inhaled alkylbenzene is best described by central nervous system depression. These compounds may also act as general anaesthetics. Whole body symptoms of poisoning include light-headedness, nervousness, apprehension, a feeling of well-being, confusion, dizziness, drowsiness, ringing in the ears, blurred or double vision, vomiting and sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness, depression of breathing, and arrest. Heart stoppage may result from cardiovascular collapse.

#### Inhaled

Inhalation of toxic gases may cause:

- ► Central Nervous System effects including depression, headache, confusion, dizziness, stupor, coma and seizures;
- respiratory: acute lung swellings, shortness of breath, wheezing, rapid breathing, other symptoms and respiratory arrest;
- heart: collapse, irregular heartbeats and cardiac arrest;
- gastrointestinal: irritation, ulcers, nausea and vomiting (may be bloody), and abdominal pain.

Inhalation hazard is increased at higher temperatures.

Inhaling high concentrations of mixed hydrocarbons can cause narcosis, with nausea, vomiting and lightheadedness. Low molecular weight (C2-C12) hydrocarbons can irritate mucous membranes and cause incoordination, giddiness, nausea, vertigo, confusion, headache, appetite loss, drowsiness, tremors and stupor.

Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.

	Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.
	Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure. Symptoms of asphyxia (suffocation) may include headache, dizziness, shortness of breath, muscular weakness, drowsiness and ringing in the ears. If the asphyxia is allowed to progress, there may be nausea and vomiting, further physical weakness and unconsciousness and, finally, convulsions, coma and death.  WARNING:Intentional misuse by concentrating/inhaling contents may be lethal.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.  Not normally a hazard due to physical form of product.  Considered an unlikely route of entry in commercial/industrial environments  Not a likely route of entry into the body in commercial or industrial environments. The liquid may produce considerable gastrointestinal discomfort and be harmful or toxic if swallowed.
Skin Contact	Skin contact with the material may be harmful; systemic effects may result following absorption.  The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.  Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.  Spray mist may produce discomfort  Open cuts, abraded or irritated skin should not be exposed to this material
Еуе	There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain.  Not considered to be a risk because of the extreme volatility of the gas.
Chronic	Harmful: danger of serious damage to health by prolonged exposure through inhalation.  This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.  Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother.  Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.  There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.  Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.  Main route of exposure to the gas in the workplace is by inhalation.  Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin.  Women exposed to xylene in the first 3 months of pregnancy showed a slightly increased risk of miscarriage and birth defects. Evaluation of workers chronically exposed to xylene has demonstrated lack of genetic toxicity.  Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS]

CRC(NZ) Hot Silver	TOXICITY	IRRITATION
Aerosol	Not Available	Not Available
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1700 mg/kg <sup>[2]</sup>	Eye (human): 200 ppm irritant
	Inhalation (rat) LC50: 4994.295 mg/l/4h <sup>[2]</sup>	Eye (rabbit): 5 mg/24h SEVERE
xylene	Oral (rat) LD50: 3523-8700 mg/kg <sup>[2]</sup>	Eye (rabbit): 87 mg mild
		Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin (rabbit):500 mg/24h moderate
		Skin: adverse effect observed (irritating) <sup>[1]</sup>
	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye (rabbit): 2mg/24h - SEVERE
	Inhalation (rat) LC50: 49 mg/l/4H <sup>[2]</sup>	Eye (rabbit):0.87 mg - mild
	Oral (rat) LD50: 636 mg/kg <sup>[2]</sup>	Eye (rabbit):100 mg/30sec - mild
toluene		Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin (rabbit):20 mg/24h-moderate
		Skin (rabbit):500 mg - moderate
		Skin: adverse effect observed (irritating) <sup>[1]</sup>
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
	TOXICITY	IRRITATION
agetana	Dermal (rabbit) LD50: =20 mg/kg <sup>[2]</sup>	Eye (human): 500 ppm - irritant
acetone	Inhalation (rat) LC50: 100.2 mg/l/8hr <sup>[2]</sup>	Eye (rabbit): 20mg/24hr -moderate

	Oral (rat) LD50: 1800-7300 mg/kg <sup>[2]</sup>	Eye (rabbit): 3.95 mg - SEVERE	
		Eye: adverse effect observed (irritating) <sup>[1]</sup>	
		Skin (rabbit): 500 mg/24hr - mild	
		Skin (rabbit):395mg (open) - mild	
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
	TOXICITY	IRRITATION	
	Dermal (rabbit) LD50: ~6400-8000 mg/kg <sup>[2]</sup>	Eye (human): 350 ppm -irritant	
methyl ethyl ketone	Inhalation (rat) LC50: 47 mg/l/8H <sup>[2]</sup>	Eye (rabbit): 80 mg - irritant	
	Oral (rat) LD50: 2054 mg/kg <sup>[1]</sup>	Skin (rabbit): 402 mg/24 hr - mild	
		Skin (rabbit):13.78mg/24 hr open	
hydrocarbon propellant	TOXICITY	IRRITATION	
	Not Available	Not Available	
Legend:	Nalue obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS.     Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances		

XYLENE	Reproductive effector in rats The substance is classified by IARC as Group 3:  NOT classifiable as to its carcinogenicity to humans.  Evidence of carcinogenicity may be inadequate or limited in animal testing.				
METHYL ETHYL KETONE	Asthma-like symptoms may continue for months non-allergic condition known as reactive airways highly irritating compound. Main criteria for diagrindividual, with sudden onset of persistent asthmirritant. Other criteria for diagnosis of RADS inclubronchial hyperreactivity on methacholine challe eosinophilia.  Methyl ethyl ketone is considered to have a low	dysfunction syndrome (RADS) who sing RADS include the absence halike symptoms within minutes to take a reversible airflow pattern or ange testing, and the lack of minimum order of toxicity; however, methyl	which can occur after exposure to high levels of the of previous airways disease in a non-atopic to hours of a documented exposure to the following function tests, moderate to severe that lymphocytic inflammation, without the ethyl ketone is often used in combination with		
	other solvents and the mixture may have greater ketone, and also methyl n-butyl ketone with meth progressive disorder of the nerves of the extrem	nyl ethyl ketone may result in an i	ncreased in peripheral neuropathy, a		
HYDROCARBON PROPELLANT	No significant acute toxicological data identified in literature search. inhalation of the gas				
CRC(NZ) Hot Silver Aerosol & XYLENE	The material may produce severe irritation to the irritants may produce conjunctivitis.	eye causing pronounced inflam	mation. Repeated or prolonged exposure to		
CRC(NZ) Hot Silver Aerosol & XYLENE & TOLUENE & ACETONE & METHYL ETHYL KETONE	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.				
CRC(NZ) Hot Silver Aerosol & TOLUENE	For toluene:  Acute toxicity: Humans exposed to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis (sleepiness) and death. When inhaled or swallowed, toluene can cause severe central nervous system depression, and in large doses has a narcotic effect. 60mL has caused death. Death of heart muscle fibres, liver swelling, congestion and bleeding of the lungs and kidney injury were all found on autopsy. Exposure to inhalation at a concentration of 600 parts per million for 8 hours resulted in the same and more serious symptoms including euphoria (a feeling of well-being), dilated pupils, convulsions and nausea.				
CRC(NZ) Hot Silver Aerosol & ACETONE	For acetone: The acute toxicity of acetone is low. Acetone is rethe eye. Animal testing shows acetone may cause at a level of 2375 mg/cubic metre has not cause	se macrocytic anaemia. Studies i			
Acute Toxicity	<b>✓</b>	Carcinogenicity	×		

Acute Toxicity	<b>~</b>	Carcinogenicity	×
Skin Irritation/Corrosion	<b>~</b>	Reproductivity	<b>~</b>
Serious Eye Damage/Irritation	<b>~</b>	STOT - Single Exposure	<b>~</b>
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	<b>~</b>
Mutagenicity	×	Aspiration Hazard	×

**Legend: X** − Data either not available or does not fill the criteria for classification

✓ – Data available to make classification

# **SECTION 12 ECOLOGICAL INFORMATION**

CRC(NZ) Hot Silver Aerosol	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	2.6mg/L	2
xylene	EC50	48	Crustacea	1.8mg/L	2
	EC50	72	Algae or other aquatic plants	3.2mg/L	2
	NOEC	73	Algae or other aquatic plants	0.44mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.0073mg/L	4
_	EC50	48	Crustacea	3.78mg/L	5
toluene	EC50	72	Algae or other aquatic plants	12.5mg/L	4
	BCF	24	Algae or other aquatic plants	10mg/L	4
	NOEC	168	Crustacea	0.74mg/L	5
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	5-540mg/L	2
acetone	EC50	48	Crustacea	>100mg/L	4
	EC50	96	Algae or other aquatic plants	20.565mg/L	4
	NOEC	240	Crustacea	1-866mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	2-993mg/L	2
	EC50	48	Crustacea	5-91mg/L	2
methyl ethyl ketone	EC50	72	Algae or other aquatic plants	1-972mg/L	2
	EC0	96	Fish	1-848mg/L	2
	NOEC	96	Fish	1-170mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	24.11mg/L	2
hydrocarbon propellant	EC50	96	Algae or other aquatic plants	7.71mg/L	2
	LC50	96	Fish	24.11mg/L	2
	EC50	96	Algae or other aquatic plants	7.71mg/L	2
Legend:	3. EPIWIN Su	ite V3.12 (QSAR) - Aquatic Toxicity Da	CHA Registered Substances - Ecotoxicologio ata (Estimated) 4. US EPA, Ecotox database E (Japan) - Bioconcentration Data 7. METI (Ja	- Aquatic Toxicity Da	ata 5.

Harmful to aquatic organisms.

For Aromatic Substances Series:

Environmental Fate: Large, molecularly complex polycyclic aromatic hydrocarbons, or PAHs, are persistent in the environment longer than smaller PAHs. Atmospheric Fate: PAHs are 'semi-volatile substances" which can move between the atmosphere and the Earth's surface in repeated, temperature-driven cycles of deposition and volatilization. Terrestrial Fate: BTEX compounds have the potential to move through soil and contaminate ground water, and their vapors are highly flammable and explosive.

Ecotoxicity - Within an aromatic series, acute toxicity increases with increasing alkyl substitution on the aromatic nucleus.

For Methyl Ethyl Ketone:

log Kow: 0.26-0.69;

log Koc: 0.69;

Koc: 34;

Half-life (hr) air: 2.3;

Half-life (hr) H2O surface water: 72-288;

Henry's atm m3 /mol: 1.05E-05;

BOD 5: 1.5-2.24, 46%; COD: 2.2-2.31, 100%;

ThOD: 2.44; BCF: 1.

Environmental Fate: Terrestrial Fate - Measured Koc values of 29 and 34 were obtained for methyl ethyl ketone in silt loams. Methyl ethyl ketone is expected to have very high mobility in soil. Volatilization of methyl ethyl ketone from moist and dry soil surfaces is expected.

For Xylenes:

log Koc : 2.05-3.08; Koc : 25.4-204; Half-life (hr) air : 0.24-42; Half-life (hr) H2O surface water : 24-672; Half-life (hr) H2O ground : 336-8640; Half-life (hr) soil : 52-672; Henry's Pa m3 /mol : 637-879; Henry's atm m3 /mol - 7.68E-03; BOD 5 if unstated - 1.4,1%; COD - 2.56,13% ThOD - 3.125 : BCF : 23; log BCF : 1.17-2.41.

Environmental Fate: Most xylenes released to the environment will occur in the atmosphere and volatilisation is the dominant environmental fate process. Soil - Xylenes are expected to have moderate mobility in soil evaporating rapidly from soil surfaces. The extent of the degradation is expected to depend on its

concentration, residence time in the soil, the nature of the soil, and whether resident microbial populations have been acclimated.

For Ketones: Ketones, unless they are alpha, beta--unsaturated ketones, can be considered as narcosis or baseline toxicity compounds.

Aquatic Fate: Hydrolysis of ketones in water is thermodynamically favourable only for low molecular weight ketones. Reactions with water are reversible with no permanent change in the structure of the ketone substrate. Ketones are stable to water under ambient environmental conditions.

For Toluene: log Kow : 2.1-3; log Koc : 1.12-2.85; Koc : 37-260; log Kom : 1.39-2.89; Half-life (hr) air : 2.4-104;

Half-life (hr) H2O surface water: 5.55-528; Half-life (hr) H2O ground: 168-2628;

Half-life (hr) soil : <48-240; Henry's Pa m3 /mol : 518-694; Henry's atm m3 /mol : 5.94;

E-03BOD 5 0.86-2.12, 5%COD - 0.7-2.52,21-27%;

ThOD - 3.13 ; BCF - 1.67-380;

log BCF - 0.22-3.28.

Atmospheric Fate: The majority of toluene evaporates to the atmosphere from the water and soil. The main degradation pathway for toluene in the atmosphere is reaction with photochemically produced hydroxyl radicals. The estimated atmospheric half life for toluene is about 13 hours.

#### DO NOT discharge into sewer or waterways.

For Acetone: log Kow : -0.24;

Half-life (hr) air : 312-1896; Half-life (hr) H2O surface water : 20; Henry's atm m3 /mol : 3.67E-05 BOD 5: 0.31-1.76,46-55%

COD: 1.12-2.07 ThOD: 2.2BCF: 0.69

Environmental Fate: The relatively long half-life allows acetone to be transported long distances from its emission source.

Atmospheric Fate: Acetone preferentially locates in the air compartment when released to the environment. In air, acetone is lost by photolysis and reaction with photochemically produced hydroxyl radicals; the estimated half-life of these combined processes is about 22 days.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.83 days)
toluene	LOW (Half-life = 28 days)	LOW (Half-life = 4.33 days)
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)
methyl ethyl ketone	LOW (Half-life = 14 days)	LOW (Half-life = 26.75 days)

## **Bioaccumulative potential**

Ingredient	Bioaccumulation
xylene	MEDIUM (BCF = 740)
toluene	LOW (BCF = 90)
acetone	LOW (BCF = 0.69)
methyl ethyl ketone	LOW (LogKOW = 0.29)

# Mobility in soil

Ingredient	Mobility
toluene	LOW (KOC = 268)
acetone	HIGH (KOC = 1.981)
methyl ethyl ketone	MEDIUM (KOC = 3.827)

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

disposal

#### Waste treatment methods

- ▶ DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Product / Packaging 
   Where in doubt contact the responsible authority.
  - ► Consult State Land Waste Management Authority for disposal.
  - Discharge contents of damaged aerosol cans at an approved site.
  - ► Allow small quantities to evaporate.
  - ► DO NOT incinerate or puncture aerosol cans.

#### **Disposal Requirements**

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

# **SECTION 14 TRANSPORT INFORMATION**

#### **Labels Required**

	2
Marine Pollutant	NO
HAZCHEM	Not Applicable

# Land transport (UN)

UN number	950		
UN proper shipping name	AEROSOLS		
Transport hazard class(es)	Class 2.1 Subrisk Not Applicable		
Packing group	ot Applicable		
Environmental hazard	Not Applicable		
Special precautions for user	Special provisions         63; 190; 277; 327; 344; 381           Limited quantity         1000ml		

# Air transport (ICAO-IATA / DGR)

UN number	1950			
UN proper shipping name	Aerosols, flammable			
	ICAO/IATA Class 2.1			
Transport hazard class(es)	ICAO / IATA Subrisk	Not Applicable		
	ERG Code	10L		
Packing group	Not Applicable	Not Applicable		
Environmental hazard	Not Applicable			
	Special provisions		A145 A167 A802	
	Cargo Only Packing Instructions		203	
	Cargo Only Maximum Qty / Pack		150 kg	
Special precautions for user	Passenger and Cargo Packing Instructions		203	
	Passenger and Cargo Maximum Qty / Pack		75 kg	
	Passenger and Cargo	Limited Quantity Packing Instructions	Y203	
	Passenger and Cargo Limited Maximum Qty / Pack		30 kg G	

# Sea transport (IMDG-Code / GGVSee)

UN number	1950		
UN proper shipping name	AEROSOLS		
Transport hazard class(es)	IMDG Class 2.1  IMDG Subrisk Not Applicable		
Packing group	Not Applicable		
Environmental hazard	Not Applicable		
Special precautions for user	EMS Number         F-D , S-U           Special provisions         63 190 277 327 344 381 959           Limited Quantities         1000 ml		

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

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

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard	
HSR002515	Aerosols (Flammable) Group Standard 2017	

#### XYLENE IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

#### **TOLUENE IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Chemical Footprint Project - Chemicals of High Concern List International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

New Zealand Approved Hazardous Substances with controls New Zealand Hazardous Substances and New Organisms (HSNO) Act -Classification of Chemicals New Zealand Hazardous Substances and New Organisms (HSNO) Act Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

#### ACETONE IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

#### METHYL ETHYL KETONE IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

#### HYDROCARBON PROPELLANT IS FOUND ON THE FOLLOWING REGULATORY LISTS

Chemical Footprint Project - Chemicals of High Concern List
New Zealand Approved Hazardous Substances with controls
New Zealand Hazardous Substances and New Organisms (HSNO) Act Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

#### **Hazardous Substance Location**

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers	
2.1.2A	3 000 L (aggregate water capacity)	3 000 L (aggregate water capacity)	

# Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities	
2.1.2A	3 000 L aggregate water capacity	

Refer Group Standards for further information

# **Tracking Requirements**

Not Applicable

#### **National Inventory Status**

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (toluene; acetone; xylene; hydrocarbon propellant; methyl ethyl ketone)

China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	Yes	
Japan - ENCS	Yes	
Korea - KECI	Yes	
New Zealand - NZIoC	Yes	
Philippines - PICCS	Yes	
USA - TSCA	Yes	
Taiwan - TCSI	Yes	
Mexico - INSQ	Yes	
Vietnam - NCI	Yes	
Russia - ARIPS	Yes	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)	

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

Revision Date	01/11/2019
Initial Date	13/10/2010

#### **SDS Version Summary**

Version	Issue Date	Sections Updated
4.1.1.1	05/10/2017	Fire Fighter (fire/explosion hazard), Physical Properties, Spills (major)
6.1.1.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification

## Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### **Definitions and abbreviations**

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index

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