



Action Clear Aerosol

Action Corrosion USA Inc.

Chemwatch: 5345-78

Version No: 4.1.1.1

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Chemwatch Hazard Alert Code: 4

Issue Date: 22/05/2019

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S.GHS.USA.EN

SECTION 1 IDENTIFICATION

Product Identifier

Product name	Action Clear Aerosol
Proper shipping name	Aerosols, flammable, (each not exceeding 1 L capacity)
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Application is by spray atomisation from a hand held aerosol pack Use according to manufacturer's directions. A specialty, clear coating to protect and rejuvenate bumpers and plastic trims parts. Also used as a clear U.V. and corrosion inhibitor.
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Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	Action Corrosion USA Inc.
Address	5230 SE Loop 820 Forest Hill TX 76140 United States
Telephone	+1 855 735 7253
Fax	Not Available
Website	w w w.actioncorrosion.com
Email	sales@actioncorrosion.com.au

Emergency phone number

Association / Organisation	Action Corrosion USA Inc.
Emergency telephone numbers	+1 855 735 7253 (M-F 9am-5pm)
Other emergency telephone numbers	Not Available

SECTION 2 HAZARD(S) IDENTIFICATION

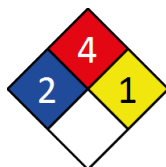
Classification of the substance or mixture

Considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Classified as Dangerous Goods for transport purposes.

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Action Clear Aerosol

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Aerosols Category 1, Acute Toxicity (Inhalation) Category 4, Eye Irritation Category 2A, Skin Sensitizer Category 1, Respiratory Sensitizer Category 1, Carcinogenicity Category 2, Reproductive Toxicity Category 2, Specific target organ toxicity - single exposure Category 3 (narcotic effects), Specific target organ toxicity - repeated exposure Category 2
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Label elements

Hazard pictogram(s)	  
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SIGNAL WORD	DANGER
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Hazard statement(s)

H222+H229	Extremely flammable aerosol; Pressurized container: may burst if heated.
H332	Harmful if inhaled.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s) Response

P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.

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Precautionary statement(s) Storage

P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
67-64-1	>30	<u>acetone</u>
540-88-5	<10	<u>tert-butyl acetate</u>
108-88-3	<10	<u>toluene</u>
110-43-0	<5	<u>amyl methyl ketone</u>
4098-71-9	<1	<u>isophorone diisocyanate</u>
95-63-6	<1	<u>1,2,4-trimethyl benzene</u>
111-76-2	<5	<u>ethylene glycol monobutyl ether</u>
98-56-6	<5	<u>4-chlorobenzotrifluoride</u>
27138-31-4	<5	<u>dipropylene glycol dibenzoate</u>
107-98-2	<1	<u>propylene glycol monomethyl ether - alpha isomer</u>
Not Available	<5	Ingredients determined not to be hazardous
68476-85-7.	<30	<u>hydrocarbon propellant</u>

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 FIRST-AID MEASURES

Description of first aid measures

Eye Contact	<p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"> ▸ 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	<p>If solids or aerosol mists are deposited upon the skin:</p> <ul style="list-style-type: none"> ▸ 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	<p>Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted.</p> <p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> ▸ Remove to fresh air. ▸ Lay patient down. Keep warm and rested. ▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ▸ If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a

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	<ul style="list-style-type: none"> ▸ demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▸ Transport to hospital, or doctor.
Ingestion	<ul style="list-style-type: none"> ▸ Avoid giving milk or oils. ▸ Avoid giving alcohol. <p>Not considered a normal route of entry.</p>

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate 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) 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.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- 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.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

Treat symptomatically.

For acute or short term repeated exposures to ethylene glycol:

- Early treatment of ingestion is important. Ensure emesis is satisfactory.
- Test and correct for metabolic acidosis and hypocalcaemia.
- Apply sustained diuresis when possible with hypertonic mannitol.
- Evaluate renal status and begin haemodialysis if indicated. [I.L.O.]
- Rapid absorption is an indication that emesis or lavage is effective only in the first few hours. Cathartics and charcoal are generally not effective.
- Correct acidosis, fluid/electrolyte balance and respiratory depression in the usual manner. Systemic acidosis (below 7.2) can be treated with intravenous sodium bicarbonate solution.
- Ethanol therapy prolongs the half-life of ethylene glycol and reduces the formation of toxic metabolites.
- Pyridoxine and thiamine are cofactors for ethylene glycol metabolism and should be given (50 to 100 mg respectively) intramuscularly, four times per day for 2 days.
- Magnesium is also a cofactor and should be replenished. The status of 4-methylpyrazole, in the treatment regime, is still uncertain. For clearance of the material and its metabolites, haemodialysis is much superior to peritoneal dialysis.

[Ellenhorn and Barceloux: Medical Toxicology]

It has been suggested that there is a need for establishing a new biological exposure limit before a workshift that is clearly below 100 mmol ethoxy-acetic acids per mole creatinine in morning urine of people occupationally exposed to ethylene glycol ethers. This arises from the finding that an increase in urinary stones may be associated with such exposures.

Laitinen J., et al: Occupational & Environmental Medicine 1996; 53, 595-600

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.

Eye Management:

- Irrigate thoroughly with running water or saline for 15 minutes.

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- 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

For sub-chronic and chronic exposures to isocyanates:

- This material may be a potent pulmonary sensitiser which causes bronchospasm even in patients without prior airway hyperreactivity.
- Clinical symptoms of exposure involve mucosal irritation of respiratory and gastrointestinal tracts.
- Conjunctival irritation, skin inflammation (erythema, pain vesiculation) and gastrointestinal disturbances occur soon after exposure.
- Pulmonary symptoms include cough, burning, substernal pain and dyspnoea.
- Some cross-sensitivity occurs between different isocyanates.
- Noncardiogenic pulmonary oedema and bronchospasm are the most serious consequences of exposure. Markedly symptomatic patients should receive oxygen, ventilatory support and an intravenous line.
- Treatment for asthma includes inhaled sympathomimetics (epinephrine [adrenalin], terbutaline) and steroids.
- Activated charcoal (1 g/kg) and a cathartic (sorbitol, magnesium citrate) may be useful for ingestion.
- Mydriatics, systemic analgesics and topical antibiotics (Sulamyd) may be used for corneal abrasions.
- There is no effective therapy for sensitised workers.

[Ellenhorn and Barceloux; Medical Toxicology]

NOTE: Isocyanates cause airway restriction in naive individuals with the degree of response dependant on the concentration and duration of exposure. They induce smooth muscle contraction which leads to bronchoconstrictive episodes. Acute changes in lung function, such as decreased FEV1, may not represent sensitivity.

[Karol & Jin, Frontiers in Molecular Toxicology, pp 56-61, 1992]

Personnel who work with isocyanates, isocyanate prepolymers or polyisocyanates should have a pre-placement medical examination and periodic examinations thereafter, including a pulmonary function test. Anyone with a medical history of chronic respiratory disease, asthmatic or bronchial attacks, indications of allergic responses, recurrent eczema or sensitisation conditions of the skin should not handle or work with isocyanates. Anyone who develops chronic respiratory distress when working with isocyanates should be removed from exposure and examined by a physician. Further exposure must be avoided if a sensitivity to isocyanates or polyisocyanates has developed.

SECTION 5 FIRE-FIGHTING 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 result

Special protective equipment and precautions for fire-fighters

Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- **DO NOT** approach containers suspected to be hot.

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Fire/Explosion Hazard

- Liquid and vapour are flammable.
- Moderate fire hazard when exposed to heat or flame.
- Vapour forms an explosive mixture with air.
- Moderate explosion hazard when exposed to heat or flame.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- Aerosol cans may explode on exposure to naked flame.

Combustion products include:

carbon dioxide (CO₂)
isocyanates
and minor amounts of
hydrogen cyanide
nitrogen oxides (NO_x)
other pyrolysis products typical of burning organic material.

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

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Wear protective clothing, impervious gloves and safety glasses.
- Shut off all possible sources of ignition and increase ventilation.
- Wipe up.
- If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stowed safely.

Major Spills

For isocyanate spills of less than 40 litres (2 m²):

- Evacuate area from everybody not dealing with the emergency, keep them upwind and prevent further access, remove ignition sources and, if inside building, ventilate area as well as possible.
- Notify supervision and others as necessary.
- Put on personal protective equipment (suitable respiratory protection, face and eye protection, protective suit, gloves and impermeable boots).
- Control source of leakage (where applicable).
- Dike the spill to prevent spreading and to contain additions of decontaminating solution.
- Prevent the material from entering drains.
- Estimate spill pool volume or area.
- Avoid contamination with water, alkalies and detergent solutions.
- Material reacts with water and generates gas, pressurises containers with even drum rupture resulting.
- **DO NOT** reseal container if contamination is suspected.
- Open all containers with care.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.

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.

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	<ul style="list-style-type: none"> ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. ▶ DO NOT enter confined spaces until atmosphere has been checked. ▶ Avoid smoking, naked lights or ignition sources. ▶ Avoid contact with incompatible materials.
Other information	<ul style="list-style-type: none"> ▶ 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. Contents under pressure. ▶ Store away from incompatible materials. ▶ Store in a cool, dry, well ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> ▶ Aerosol dispenser. ▶ Check that containers are clearly labelled.
Storage incompatibility	<ul style="list-style-type: none"> ▶ Avoid contamination with water, alkalies and detergent solutions. ▶ Material reacts with water and generates gas, pressurises containers with even drum rupture resulting. ▶ DO NOT reseal container if contamination is suspected. ▶ Open all containers with care. ▶ Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the energy of reaction produced by the gas in chemical reaction with other substances ▶ 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
US NIOSH Recommended Exposure Limits (RELs)	acetone	Dimethyl ketone, Ketone propane, 2-Propanone	250 ppm / 590 mg/m ³	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	acetone	Acetone	250 ppm	500 ppm	Not Available	TLV® Basis: URT & eye irr; CNS impair; BEI
US OSHA Permissible Exposure Levels (PELs) - Table Z1	acetone	Acetone	1000 ppm / 2400 mg/m ³	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	tert-butyl acetate	tert-Butyl ester of acetic acid	200 ppm / 950 mg/m ³	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	tert-butyl acetate	Butyl acetate, all isomers	50 ppm	150 ppm	Not Available	TLV® Basis: Eye & URT irr
US OSHA Permissible Exposure Levels (PELs) - Table Z1	tert-butyl acetate	tert-Butyl acetate	200 ppm / 950 mg/m ³	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	toluene	Methyl benzene, Methyl benzol, Phenyl methane, Toluol	100 ppm / 375 mg/m ³	560 mg/m ³ / 150 ppm	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	toluene	Toluene	20 ppm	Not Available	Not Available	TLV® Basis: Visual impair; female repro; pregnancy loss; BEI
US OSHA Permissible Exposure Levels (PELs) - Table Z2	toluene	Toluene	200 ppm	Not Available	300 ppm	(Z37.12-1967)

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US OSHA Permissible Exposure Levels (PELs) - Table Z1	toluene	Toluene	Not Available	Not Available	Not Available	See Table Z-2
US NIOSH Recommended Exposure Limits (RELs)	amyl methyl ketone	Amyl methyl ketone, n-Amyl methyl ketone, 2-Heptanone	100 ppm / 465 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	amyl methyl ketone	Methyl n-amyl ketone	50 ppm	Not Available	Not Available	TLV® Basis: Eye & skin irr
US OSHA Permissible Exposure Levels (PELs) - Table Z1	amyl methyl ketone	Methyl n-amyl ketone	100 ppm / 465 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	isophorone diisocyanate	IPDI; 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl-isocyanate; Isophorone diamine diisocyanate	0.005 ppm / 0.045 mg/m3	0.180 mg/m3 / 0.02 ppm	Not Available	[skin]
US ACGIH Threshold Limit Values (TLV)	isophorone diisocyanate	Isophorone diisocyanate	0.005 ppm	Not Available	Not Available	TLV® Basis: Resp sens
US NIOSH Recommended Exposure Limits (RELs)	1,2,4-trimethyl benzene	Asymmetrical trimethylbenzene, psi-Cumene, Pseudocumene [Note: Hemimellitene is a mixture of the 1,2,3-isomer with up to 10% of related aromatics such as the 1,2,4-isomer.]	25 ppm / 125 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	ethylene glycol monobutyl ether	Butyl Cellosolve®, Butyl oxitol, Dowanol® EB, EGBE, Ektasolve EB®, Ethylene glycol monobutyl ether, Jeffersol EB	5 ppm / 24 mg/m3	Not Available	Not Available	[skin]
US ACGIH Threshold Limit Values (TLV)	ethylene glycol monobutyl ether	2-Butoxyethanol	20 ppm	Not Available	Not Available	TLV® Basis: Eye & URT irr; BEI
US OSHA Permissible Exposure Levels (PELs) - Table Z1	ethylene glycol monobutyl ether	2-Butoxyethanol	50 ppm / 240 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	propylene glycol monomethyl ether - alpha isomer	Dowtherm® 209, 1-Methoxy-2-hydroxypropane, 1-Methoxy-2-propanol, 2-Methoxy-1-methylethanol, Propylene glycol methyl ether	100 ppm / 360 mg/m3	540 mg/m3 / 150 ppm	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	propylene glycol monomethyl ether - alpha isomer	1-Methoxy-2-propanol	50 ppm	100 ppm	Not Available	TLV® Basis: Eye & URT irr
US NIOSH Recommended Exposure Limits (RELs)	hydrocarbon propellant	Bottled gas, Compressed petroleum gas, Liquefied hydrocarbon gas, Liquefied petroleum gas, LPG [Note: A fuel mixture of propane, propylene, butanes, and butylenes.]	Not Available	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	hydrocarbon propellant	* L.P.G. (Liquefied petroleum gas)	Not Available	Not Available	Not Available	TLV® Basis: Asphyxia; See Appendix F: Minimal Oxygen Content

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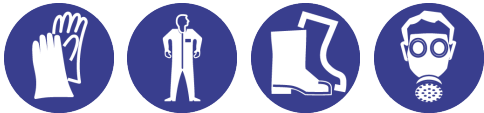
US OSHA Permissible Exposure Levels (PELs) - Table Z1	hydrocarbon propellant	L.P.G. (Liquefied petroleum gas)	1000 ppm / 1800 mg/m3	Not Available	Not Available	Not Available
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EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
acetone	Acetone	Not Available	Not Available	Not Available
tert-butyl acetate	Butyl acetate, tert-	600 ppm	1,700 ppm	10,000 ppm
toluene	Toluene	Not Available	Not Available	Not Available
amyl methyl ketone	Methyl n-amyl ketone	150 ppm	670 ppm	4000 ppm
isophorone diisocyanate	Isophorone diisocyanate	0.02 ppm	0.14 ppm	0.6 ppm
1,2,4-trimethyl benzene	Permafluor E+	140 mg/m3	360 mg/m3	2,200 mg/m3
1,2,4-trimethyl benzene	Trimethylbenzene, 1,2,4-; (Pseudocumene)	Not Available	Not Available	480 ppm
ethylene glycol monobutyl ether	Butoxyethanol, 2-; (Glycol ether EB)	60 ppm	120 ppm	700 ppm
propylene glycol monomethyl ether - alpha isomer	Propylene glycol monomethyl ether; (Ucar Triol HG-170)	100 ppm	160 ppm	660 ppm
hydrocarbon propellant	Liquified petroleum gas; (L.P.G.)	65,000 ppm	2.30E+05 ppm	4.00E+05 ppm

Ingredient	Original IDLH	Revised IDLH
acetone	2,500 ppm	Not Available
tert-butyl acetate	1,500 ppm	Not Available
toluene	500 ppm	Not Available
amyl methyl ketone	800 ppm	Not Available
isophorone diisocyanate	Not Available	Not Available
1,2,4-trimethyl benzene	Not Available	Not Available
ethylene glycol monobutyl ether	700 ppm	Not Available
4-chlorobenzotrifluoride	Not Available	Not Available
dipropylene glycol dibenzoate	Not Available	Not Available
propylene glycol monomethyl ether - alpha isomer	Not Available	Not Available
hydrocarbon propellant	2,000 ppm	Not Available

Exposure controls

Appropriate engineering controls	<p>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.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p>
Personal protection	
Eye and face protection	<p>No special equipment for minor exposure i.e. when handling small quantities.</p> <p>OTHERWISE: For potentially moderate or heavy exposures:</p> <ul style="list-style-type: none"> ▸ Safety glasses with side shields.

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	<ul style="list-style-type: none"> ▶ NOTE: Contact lenses pose a special hazard; soft lenses may absorb irritants and ALL lenses concentrate them.
Skin protection	See Hand protection below
Hands/feet protection	NOTE: <ul style="list-style-type: none"> ▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. ▶ No special equipment needed when handling small quantities. OTHERWISE: <ul style="list-style-type: none"> ▶ For potentially moderate exposures: ▶ Wear general protective gloves, eg. light weight rubber gloves. ▶ For potentially heavy exposures: ▶ Wear chemical protective gloves, eg. PVC. and safety footwear.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. OTHERWISE: <ul style="list-style-type: none"> ▶ Overalls. ▶ Skin cleansing cream. ▶ Eyewash unit. ▶ Do not spray on hot surfaces.

Respiratory protection

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

Aerosols, in common with most vapours/ mists, should never be used in confined spaces without adequate ventilation. Aerosols, containing agents designed to enhance or mask smell, have triggered allergic reactions in predisposed individuals.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear highly flammable liquid with a characteristic odour; does not mix with water. Liquid in spray form.		
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)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	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)	Not Available	VOC g/L	Not Available

Continued...

Action Clear Aerosol

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> ▸ Elevated temperatures. ▸ Presence of open flame. ▸ Product is considered stable. ▸ Hazardous polymerisation will not occur.
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

Inhaled	<p>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.</p> <p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.</p> <p>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.</p> <p>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. 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.</p> <p>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</p>
Ingestion	<p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Not normally a hazard due to physical form of product.</p> <p>Considered an unlikely route of entry in commercial/industrial environments</p>
Skin Contact	<p>The material may cause mild but significant 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.</p> <p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.</p> <p>Spray mist may produce discomfort</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	<p>Not considered to be a risk because of the extreme volatility of the gas.</p> <p>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.</p> <p>The liquid may produce eye discomfort and is capable of causing temporary impairment of vision and/or transient eye inflammation, ulceration</p>
Chronic	<p>There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.</p> <p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.</p> <p>Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems.</p> <p>Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation.</p> <p>This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it</p>

Continued...

Action Clear Aerosol

contains a substance which can produce severe defects.

Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.

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.

Main route of exposure to the gas in the workplace is by inhalation.

Intentional abuse (glue sniffing) or occupational exposure to toluene can result in chronic habituation. Chronic abuse has caused inco-ordination, tremors of the extremities (due to widespread cerebrum withering), headache, abnormal speech, temporary memory loss, convulsions, coma, drowsiness, reduced colour perception, blindness, nystagmus (rapid, involuntary eye movements), hearing loss leading to deafness and mild dementia.

Prolonged exposure to ethanol may cause damage to the liver and cause scarring. It may also worsen damage caused by other agents.

Based on experience with similar materials, there is a possibility that exposure to the material may reduce fertility in humans at levels which do not cause other toxic effects.

Workers exposed to acetone for long periods showed inflammation of the airways, stomach and small bowel, attacks of giddiness and loss of strength. Exposure to acetone may enhance the liver toxicity of chlorinated solvents.

Action Clear Aerosol	TOXICITY	IRRITATION
	Not Available	Not Available
acetone	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: =20 mg/kg ^[2]	Eye (human): 500 ppm - irritant
	Inhalation (rat) LC50: 100.2 mg/l/8hr ^[2]	Eye (rabbit): 20mg/24hr -moderate
	Oral (rat) LD50: 1800-7300 mg/kg ^[2]	Eye (rabbit): 3.95 mg - SEVERE
		Eye: adverse effect observed (irritating) ^[1]
		Skin (rabbit): 500 mg/24hr - mild
		Skin (rabbit):395mg (open) - mild
tert-butyl acetate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Eye (human): 300 mg
	Inhalation (rat) LC50: >2.23 mg/l/4H ^[2]	Eye (rabbit): 20 mg (open)-SEVERE
	Oral (rat) LD50: 4100 mg/kg ^[1]	Eye (rabbit): 20 mg/24h - moderate
toluene		Skin (rabbit): 500 mg/24h-moderate
	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit): 2mg/24h - SEVERE
	Inhalation (rat) LC50: 49 mg/l/4H ^[2]	Eye (rabbit):0.87 mg - mild
	Oral (rat) LD50: 636 mg/kg ^[2]	Eye (rabbit):100 mg/30sec - mild
		Eye: adverse effect observed (irritating) ^[1]
		Skin (rabbit):20 mg/24h-moderate
amyl methyl ketone		Skin (rabbit):500 mg - moderate
		Skin: adverse effect observed (irritating) ^[1]
		Skin: no adverse effect observed (not irritating) ^[1]
	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye: adverse effect observed (irritating) ^[1]
	Inhalation (rat) LC50: 3995.436 mg/l/4h ^[2]	Skin (rabbit): 14 mg/24h Mild
	Oral (rat) LD50: 1600 mg/kg ^[2]	Skin (rabbit): Primary Irritant
		Skin: adverse effect observed (irritating) ^[1]

Continued...

Action Clear Aerosol

		Skin: no adverse effect observed (not irritating) ^[1]
isophorone diisocyanate	TOXICITY	IRRITATION
	dermal (rat) LD50: >=2000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Inhalation (rat) LC50: 0.123 mg/l/4hd ^[2]	Skin: adverse effect observed (irritating) ^[1]
	Oral (rat) LD50: >=2000 mg/kg ^[1]	Skin: no adverse effect observed (not irritating) ^[1]
1,2,4-trimethyl benzene	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >3160 mg/kg ^[2]	Not Available
	Inhalation (rat) LC50: 18 mg/l/4hd ^[2]	
	Oral (rat) LD50: 5000 mg/kg ^[1]	
ethylene glycol monobutyl ether	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit): 100 mg SEVERE
	Inhalation (rat) LC50: 449.48655 mg/l/4H ^[2]	Eye (rabbit): 100 mg/24h-moderate
	Oral (rat) LD50: 250 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
		Skin (rabbit): 500 mg, open; mild
		Skin: adverse effect observed (irritating) ^[1]
4-chlorobenzotrifluoride	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2 mg/kg ^[2]	Not Available
	Oral (rat) LD50: 13000 mg/kg ^[2]	
dipropylene glycol dibenzoate	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Inhalation (rat) LC50: >200 mg/l/4h ^[2]	Skin: no adverse effect observed (not irritating) ^[1]
	Oral (rat) LD50: 3295 mg/kg ^[1]	
propylene glycol monomethyl ether - alpha isomer	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit) 230 mg mild
	Inhalation (rat) LC50: 12485.7375 mg/l/5h.d ^[2]	Eye (rabbit) 500 mg/24 h. - mild
	Oral (rat) LD50: 3739 mg/kg ^[2]	Eye (rabbit): 100 mg SEVERE
hydrocarbon propellant	TOXICITY	IRRITATION
	Not Available	Not Available

Legend: 1. Value 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

ACETONE

For acetone:

The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitizer, but it removes fat from the skin, and it also irritates the eye. Animal testing shows acetone may cause macrocytic anaemia. Studies in humans have shown that exposure to acetone at a level of 2375 mg/cubic metre has not caused neurobehavioural deficits.


Continued...

Action Clear Aerosol

TOLUENE	<p>For toluene:</p> <p>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.</p> <p>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. Exposure to 10000-30000 parts per million (1-3%) has been reported to cause narcosis and death. Toluene can also strip the skin of lipids, causing skin inflammation.</p>
ISOPHORONE DIISOCYANATE	<p>Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins.</p> <p>Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema.</p> <p>Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.</p> <p>Aromatic and aliphatic diisocyanates may cause airway toxicity and skin sensitization. Monomers and prepolymers exhibit similar respiratory effect. Of the several members of diisocyanates tested on experimental animals by inhalation and oral exposure, some caused cancer while others produced a harmless outcome. This group of compounds has therefore been classified as cancer-causing.</p> <p>Isocyanate vapours are irritating to the airways and can cause their inflammation, with wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, inco-ordination, anxiety, depression and paranoia.</p>
1,2,4-TRIMETHYL BENZENE	<p>For trimethylbenzenes:</p> <p>Absorption of 1,2,4-trimethylbenzene occurs after exposure by swallowing, inhalation, or skin contact. In the workplace, inhalation and skin contact are the most important routes of absorption; whole-body toxic effects from skin absorption are unlikely to occur as the skin irritation caused by the chemical generally leads to quick removal. The substance is fat-soluble and may accumulate in fatty tissues. It is also bound to red blood cells in the bloodstream. It is excreted from the body both by exhalation and in the urine.</p> <p>Acute toxicity: Direct contact with liquid 1,2,4-trimethylbenzene is irritating to the skin, and breathing the vapour is irritating to the airway, causing lung inflammation. Breathing high concentrations of the chemical vapour causes headache, fatigue and drowsiness.</p> <p>Other Toxicity data is available for CHEMWATCH 12172 1,2,3-trimethylbenzene CHEMWATCH 2325 1,3,5-trimethylbenzene</p>
ETHYLENE GLYCOL MONOBUTYL ETHER	<p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>For ethylene glycol monoalkyl ethers and their acetates (EGMAEs):</p> <p>Typical members of this category are ethylene glycol propylene ether (EGPE), ethylene glycol butyl ether (EGBE) and ethylene glycol hexyl ether (EGHE) and their acetates.</p> <p>EGMAEs are substrates for alcohol dehydrogenase isozyme ADH-3, which catalyzes the conversion of their terminal alcohols to aldehydes (which are transient metabolites). Further, rapid conversion of the aldehydes by aldehyde dehydrogenase produces alkoxyacetic acids, which are the predominant urinary metabolites of mono substituted glycol ethers.</p> <p>Acute Toxicity: Oral LD50 values in rats for all category members range from 739 (EGHE) to 3089 mg/kg bw (EGPE), with values increasing with decreasing molecular weight. Four to six hour acute inhalation toxicity studies were conducted for these chemicals in rats at the highest vapour concentrations practically achievable. Values range from LC0 > 85 ppm (508 mg/m³) for EGHE, LC50 > 400ppm (2620 mg/m³) for EGBEA to LC50 > 2132 ppm (9061 mg/m³) for EGPE. No lethality was observed for any of these materials under these conditions.</p> <p>Animal testing showed that exposure to ethylene glycol monobutyl ether resulted in toxicity to both the mother and the embryo. Reproductive effects were thought to be less than that of other monoalkyl ethers of ethylene glycol.</p> <p>Chronic exposure may cause anaemia, with enlargement and fragility of red blood cells. It is thought that in animals butoxyethanol may cause generalized clotting and bone infarction. In animals, 2-butoxyethanol also increased the rate of some cancers, including liver cancer.</p> <p>For ethylene glycol:</p> <p>Ethylene glycol is quickly and extensively absorbed throughout the gastrointestinal tract. Limited information suggests that it is also absorbed through the airways; absorption through skin is apparently slow. Following absorption, it is distributed throughout the body. In humans, it is initially</p>

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	<p>metabolized by alcohol dehydrogenase to form glycoaldehyde, which is rapidly converted to glycolic acid and glyoxal. These breakdown products are oxidized to glyoxylate, which may be further metabolized to formic acid, oxalic acid, and glycine. Breakdown of both glycine and formic acid can generate carbon dioxide, which is one of the major elimination products of ethylene glycol. In addition to exhaled carbon dioxide, ethylene glycol is eliminated in the urine as both the parent compound and glycolic acid.</p> <p>NOTE: Changes in kidney, liver, spleen and lungs are observed in animals exposed to high concentrations of this substance by all routes. ** ASCC (NZ) SDS</p>
4-CHLOROBENZOTRIFLUORIDE	<p>Medium to long term exposure to chlorobenzotrifluoride may produce increase in weight of the liver, kidney, and thyroid gland at high doses. Only limited reproductive effects were noted, and no gene alteration effects. There was also no evidence of cancer-causing potential. No data on its ability to cause birth defects was available.</p>
DIPROPYLENE GLYCOL DIBENZOATE	<p>The U.S. EPA High Production Volume Information System (HPVIS 2009) lists both diethylene glycol dibenzoate (DEGDB) and dipropylene glycol dibenzoate (DPGDB) as non-mutagenic and non-carcinogenic.</p>
PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER	<p>For propylene glycol ethers (PGEs): Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA) and tripropylene glycol methyl ether (TPM).</p> <p>Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. The common toxicities associated with the lower molecular weight homologues of the ethylene series, such as adverse effects on the reproductive organs, the developing embryo and foetus, blood or thymus gland, are not seen with the commercial-grade propylene glycol ethers. In the ethylene series, metabolism of the terminal hydroxyl group produces an alkoxyacetic acid. The reproductive and developmental toxicities of the lower molecular weight homologues in the ethylene series are due specifically to the formation of methoxyacetic and ethoxyacetic acids.</p> <p>Longer chain homologues in the ethylene series are not associated with reproductive toxicity, but can cause haemolysis in sensitive species, also through formation of an alkoxyacetic acid. The predominant alpha isomer of all the PGEs (which is thermodynamically favoured during manufacture of PGEs) is a secondary alcohol incapable of forming an alkoxypropionic acid.</p> <p>NOTE: For PGE - mixed isomers: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm. Foetotoxic effects were seen in rats but not in rabbits at this concentration; maternal toxicity was noted in both species.</p>
HYDROCARBON PROPELLANT	<p>No significant acute toxicological data identified in literature search. inhalation of the gas</p>
ACETONE & TOLUENE & AMYL METHYL KETONE & ETHYLENE GLYCOL MONOBUTYL ETHER	<p>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.</p>
ISOPHORONE DIISOCYANATE & DIPROPYLENE GLYCOL DIBENZOATE	<p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p>
ISOPHORONE DIISOCYANATE & 1,2,4-TRIMETHYL BENZENE & 4-CHLOROBENZOTRIFLUORIDE	<p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.</p>

Acute Toxicity Carcinogenicity 

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Action Clear Aerosol

Skin Irritation/Corrosion	✗	Reproductivity	✓
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	✓
Mutagenicity	✗	Aspiration Hazard	✗

Legend: ✗ – Data either not available or does not fill the criteria for classification
 ✓ – Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Action Clear Aerosol	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available

acetone	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	5-540mg/L	2
	EC50	48	Crustacea	>100mg/L	4
	EC50	96	Algae or other aquatic plants	20.565mg/L	4
	NOEC	240	Crustacea	1-866mg/L	2

tert-butyl acetate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	24.219mg/L	3
	EC50	48	Crustacea	350mg/L	2
	EC50	96	Algae or other aquatic plants	1.910mg/L	3
	EC10	24	Algae or other aquatic plants	=280mg/L	4
	NOEC	96	Algae or other aquatic plants	2.3mg/L	2

toluene	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.0073mg/L	4
	EC50	48	Crustacea	3.78mg/L	5
	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

amyl methyl ketone	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	30.530mg/L	3
	EC50	48	Crustacea	>90.1mg/L	2
	EC50	72	Algae or other aquatic plants	75.5mg/L	2
	NOEC	72	Algae or other aquatic plants	42.68mg/L	2

isophorone diisocyanate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	>1.51mg/L	2
	EC50	48	Crustacea	>3.36mg/L	2
	EC50	72	Algae or other aquatic plants	>3.1mg/L	2
	NOEC	96	Crustacea	0.56mg/L	2

1,2,4-trimethyl benzene	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	1.318mg/L	3
	EC50	48	Crustacea	ca.6.14mg/L	2
	EC50	96	Algae or other aquatic plants	2.154mg/L	3

Continued...

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ethylene glycol monobutyl ether	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	1-700mg/L	2
	EC50	48	Crustacea	ca.1-800mg/L	2
	EC50	72	Algae or other aquatic plants	1-840mg/L	2
	NOEC	24	Crustacea	>1-mg/L	2
4-chlorobenzotrifluoride	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	2.083mg/L	3
	EC50	48	Crustacea	=3.68mg/L	1
	EC50	72	Algae or other aquatic plants	>0.41mg/L	2
	NOEC	504	Crustacea	=0.03mg/L	1
dipropylene glycol dibenzoate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.25mg/L	2
	EC50	48	Crustacea	19.3mg/L	2
	EC50	96	Algae or other aquatic plants	0.358mg/L	3
	EL10	72	Algae or other aquatic plants	0.15mg/L	2
propylene glycol monomethyl ether - alpha isomer	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	>=1-mg/L	2
	EC50	48	Crustacea	>=1-mg/L	2
	EC50	96	Algae or other aquatic plants	>1-mg/L	2
	EC0	48	Crustacea	>=1-mg/L	2
hydrocarbon propellant	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	24.11mg/L	2
	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: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)
tert-butyl acetate	LOW	LOW
toluene	LOW (Half-life = 28 days)	LOW (Half-life = 4.33 days)
amyl methyl ketone	LOW	LOW
isophorone diisocyanate	HIGH	HIGH
1,2,4-trimethyl benzene	LOW (Half-life = 56 days)	LOW (Half-life = 0.67 days)
ethylene glycol monobutyl ether	LOW (Half-life = 56 days)	LOW (Half-life = 1.37 days)
4-chlorobenzotrifluoride	HIGH	HIGH

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dipropylene glycol dibenzoate	HIGH	HIGH
propylene glycol monomethyl ether - alpha isomer	LOW (Half-life = 56 days)	LOW (Half-life = 1.7 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
acetone	LOW (BCF = 0.69)
tert-butyl acetate	LOW (LogKOW = 1.76)
toluene	LOW (BCF = 90)
amyl methyl ketone	LOW (LogKOW = 1.98)
isophorone diisocyanate	HIGH (LogKOW = 4.7519)
1,2,4-trimethyl benzene	LOW (BCF = 275)
ethylene glycol monobutyl ether	LOW (BCF = 2.51)
4-chlorobenzotrifluoride	LOW (BCF = 202)
dipropylene glycol dibenzoate	MEDIUM (LogKOW = 4.0228)
propylene glycol monomethyl ether - alpha isomer	LOW (BCF = 2)

Mobility in soil

Ingredient	Mobility
acetone	HIGH (KOC = 1.981)
tert-butyl acetate	LOW (KOC = 13.53)
toluene	LOW (KOC = 268)
amyl methyl ketone	LOW (KOC = 24.01)
isophorone diisocyanate	LOW (KOC = 36450)
1,2,4-trimethyl benzene	LOW (KOC = 717.6)
ethylene glycol monobutyl ether	HIGH (KOC = 1)
4-chlorobenzotrifluoride	LOW (KOC = 1912)
dipropylene glycol dibenzoate	LOW (KOC = 1845)
propylene glycol monomethyl ether - alpha isomer	HIGH (KOC = 1)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ 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. ▶ 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.
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Action Clear Aerosol

► Bury residues and emptied aerosol cans at an approved site.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	NO Not Applicable

Land transport (DOT)

UN number	1950
UN proper shipping name	Aerosols, flammable, (each not exceeding 1 L capacity)
Transport hazard class(es)	Class 2.1 Subrisk Not Applicable
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special precautions for user	Hazard Label 2.1 Special provisions N82

Air transport (ICAO-IATA / DGR)

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

Continued...

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture****ACETONE(67-64-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

GESAMP/EHS Composite List - GESAMP Hazard Profiles	US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
IMO IBC Code Chapter 17: Summary of minimum requirements	US ACGIH Threshold Limit Values (Spanish)
IMO IBC Code Chapter 18: List of products to which the Code does not apply	US ACGIH Threshold Limit Values (TLV)
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances	US ACGIH Threshold Limit Values (TLV) - Carcinogens
International Air Transport Association (IATA) Dangerous Goods Regulations	US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)
International Maritime Dangerous Goods Requirements (IMDG Code)	US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides
United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)	US Department of Transportation (DOT), Hazardous Material Table
US - Alaska Limits for Air Contaminants	US DOE Temporary Emergency Exposure Limits (TEELs)
US - California Permissible Exposure Limits for Chemical Contaminants	US DOT Coast Guard Bulk Hazardous Materials - List of Flammable and Combustible Bulk Liquid Cargoes
US - Hawaii Air Contaminant Limits	US Drug Enforcement Administration (DEA) List I and II Regulated Chemicals
US - Idaho - Limits for Air Contaminants	US EPA Carcinogens Listing
US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits	US NIOSH Recommended Exposure Limits (RELs)
US - Massachusetts - Right To Know Listed Chemicals	US NIOSH Recommended Exposure Limits (RELs) (Spanish)
US - Michigan Exposure Limits for Air Contaminants	US OSHA Permissible Exposure Levels (PELs) - Table Z1
US - Minnesota Permissible Exposure Limits (PELs)	US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)
US - Oregon Permissible Exposure Limits (Z-1)	US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide
US - Pennsylvania - Hazardous Substance List	US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number
US - Rhode Island Hazardous Substance List	US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	US TSCA Chemical Substance Inventory - Interim List of Active Substances
US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants	US TSCA Section 4/12 (b) - Sunset Dates/Status
US - Washington Permissible exposure limits of air contaminants	

TERT-BUTYL ACETATE(540-88-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Action Clear Aerosol

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US - Alaska Limits for Air Contaminants

US - California Permissible Exposure Limits for Chemical Contaminants

US - Hawaii Air Contaminant Limits

US - Idaho - Limits for Air Contaminants

US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits

US - Massachusetts - Right To Know Listed Chemicals

US - Michigan Exposure Limits for Air Contaminants

US - Minnesota Permissible Exposure Limits (PELs)

US - Oregon Permissible Exposure Limits (Z-1)

US - Pennsylvania - Hazardous Substance List

US - Rhode Island Hazardous Substance List

US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants

US - Washington Permissible exposure limits of air contaminants

US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants

US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)

US Coast Guard, Department of Homeland Security Part 153: Ships Carrying Bulk Liquid, Liquefied gas or compressed gas hazardous materials. Table 1 to Part 153 --Summary of Minimum Requirements

US CWA (Clean Water Act) - List of Hazardous Substances

US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides

US Department of Transportation (DOT), Hazardous Material Table

US DOE Temporary Emergency Exposure Limits (TEELs)

US DOT Coast Guard Bulk Hazardous Materials - List of Flammable and Combustible Bulk Liquid Cargoes

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs) (Spanish)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

TOLUENE(108-88-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Action Clear Aerosol

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards

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

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US - Alaska Limits for Air Contaminants

US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)

US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)

US - California Office of Environmental Health Hazard Assessment Proposition 65 No Significant Risk Levels (NSRLs) for Carcinogens and Maximum Allowable Dose Levels (MADLs) for Chemicals Causing Reproductive Toxicity

US - California Permissible Exposure Limits for Chemical Contaminants

US - California Proposition 65 - Maximum Allowable Dose Levels (MADLs) for Chemicals Causing Reproductive Toxicity

US - California Proposition 65 - Reproductive Toxicity

US - Hawaii Air Contaminant Limits

US - Idaho - Acceptable Maximum Peak Concentrations

US - Idaho - Limits for Air Contaminants

US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits

US - Massachusetts - Right To Know Listed Chemicals

US - Michigan Exposure Limits for Air Contaminants

US - Minnesota Permissible Exposure Limits (PELs)

US - Oregon Permissible Exposure Limits (Z-1)

US - Oregon Permissible Exposure Limits (Z-2)

US - Pennsylvania - Hazardous Substance List

US - Rhode Island Hazardous Substance List

US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants

US - Washington Permissible exposure limits of air contaminants

US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values

US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants

US - Wyoming Toxic and Hazardous Substances Table Z-2 Acceptable ceiling concentration, Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift

US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)

US ACGIH Threshold Limit Values (TLV) - Carcinogens

US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)

US Chemical Footprint Project - Chemicals of High Concern List

US Clean Air Act - Hazardous Air Pollutants

US Coast Guard, Department of Homeland Security Part 153: Ships Carrying Bulk Liquid, Liquefied gas or compressed gas hazardous materials. Table 1 to Part 153 --Summary of Minimum Requirements

US CWA (Clean Water Act) - List of Hazardous Substances

US CWA (Clean Water Act) - Priority Pollutants

US CWA (Clean Water Act) - Toxic Pollutants

US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides

US Department of Transportation (DOT), Hazardous Material Table

US DOE Temporary Emergency Exposure Limits (TEELs)

US DOT Coast Guard Bulk Hazardous Materials - List of Flammable and Combustible Bulk Liquid Cargoes

US Drug Enforcement Administration (DEA) List I and II Regulated Chemicals

US EPA Carcinogens Listing

US EPCRA Section 313 Chemical List

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs) (Spanish)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Levels (PELs) - Table Z2

US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)

US OSHA Permissible Exposure Limits - Annotated Table Z-2 (Spanish)

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

AMYL METHYL KETONE(110-43-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Action Clear Aerosol

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US - Alaska Limits for Air Contaminants

US - California Permissible Exposure Limits for Chemical Contaminants

US - Hawaii Air Contaminant Limits

US - Idaho - Limits for Air Contaminants

US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits

US - Massachusetts - Right To Know Listed Chemicals

US - Michigan Exposure Limits for Air Contaminants

US - Minnesota Permissible Exposure Limits (PELs)

US - Oregon Permissible Exposure Limits (Z-1)

US - Pennsylvania - Hazardous Substance List

US - Rhode Island Hazardous Substance List

US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants

US - Washington Permissible exposure limits of air contaminants

US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants

US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)

US Department of Transportation (DOT), Hazardous Material Table

US DOE Temporary Emergency Exposure Limits (TEELs)

US DOT Coast Guard Bulk Hazardous Materials - List of Flammable and Combustible Bulk Liquid Cargoes

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs) (Spanish)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

ISOPHORONE DIISOCYANATE(4098-71-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US - Alaska Limits for Air Contaminants

US - California Permissible Exposure Limits for Chemical Contaminants

US - Hawaii Air Contaminant Limits

US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits

US - Massachusetts - Right To Know Listed Chemicals

US - Michigan Exposure Limits for Air Contaminants

US - Minnesota Permissible Exposure Limits (PELs)

US - Oregon Permissible Exposure Limits (Z-1)

US - Oregon Permissible Exposure Limits (Z-2)

US - Pennsylvania - Hazardous Substance List

US - Rhode Island Hazardous Substance List

US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants

US - Washington Permissible exposure limits of air contaminants

US ACGIH Threshold Limit Values (TLV)

US Coast Guard, Department of Homeland Security Part 153: Ships Carrying Bulk Liquid, Liquefied gas or compressed gas hazardous materials. Table 1 to Part 153 --Summary of Minimum Requirements

US Department of Transportation (DOT), Hazardous Material Table

US DOE Temporary Emergency Exposure Limits (TEELs)

US EPCRA Section 313 Chemical List

US NIOSH Recommended Exposure Limits (RELs)

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US SARA Section 302 Extremely Hazardous Substances

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

1,2,4-TRIMETHYL BENZENE(95-63-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Action Clear Aerosol

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO

IMO Provisional Categorization of Liquid Substances - List 3: (Trade-named) mixtures containing at least 99% by weight of components already assessed by IMO, presenting safety hazards

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US - California Permissible Exposure Limits for Chemical Contaminants

US - Massachusetts - Right To Know Listed Chemicals

US - Pennsylvania - Hazardous Substance List

US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants

US Coast Guard, Department of Homeland Security Part 153:

Ships Carrying Bulk Liquid, Liquefied gas or compressed gas hazardous materials. Table 1 to Part 153 --Summary of Minimum Requirements

US Department of Transportation (DOT), Hazardous Material Table

US DOE Temporary Emergency Exposure Limits (TEELs)

US DOT Coast Guard Bulk Hazardous Materials - List of Flammable and Combustible Bulk Liquid Cargoes

US EPA Carcinogens Listing

US EPCRA Section 313 Chemical List

US NIOSH Recommended Exposure Limits (RELs)

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

ETHYLENE GLYCOL MONOBUTYL ETHER(111-76-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances

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

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US - Alaska Limits for Air Contaminants

US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)

US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)

US - California Permissible Exposure Limits for Chemical Contaminants

US - Hawaii Air Contaminant Limits

US - Idaho - Limits for Air Contaminants

US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits

US - Massachusetts - Right To Know Listed Chemicals

US - Michigan Exposure Limits for Air Contaminants

US - Minnesota Permissible Exposure Limits (PELs)

US - New Jersey Right to Know - Special Health Hazard Substance List (SHHS): Carcinogens

US - Oregon Permissible Exposure Limits (Z-1)

US - Pennsylvania - Hazardous Substance List

US - Rhode Island Hazardous Substance List

US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants

US - Washington Permissible exposure limits of air contaminants

US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values

US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants

US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)

US ACGIH Threshold Limit Values (TLV) - Carcinogens

US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)

US Chemical Footprint Project - Chemicals of High Concern List

US Clean Air Act - Hazardous Air Pollutants

US Coast Guard, Department of Homeland Security Part 153:

Ships Carrying Bulk Liquid, Liquefied gas or compressed gas hazardous materials. Table 1 to Part 153 --Summary of Minimum Requirements

US Department of Transportation (DOT), Hazardous Material Table

US DOE Temporary Emergency Exposure Limits (TEELs)

US EPA Carcinogens Listing

US EPCRA Section 313 Chemical List

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs) (Spanish)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

4-CHLOROBENZOTRIFLUORIDE(98-56-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Action Clear Aerosol

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US Department of Transportation (DOT), Hazardous Material Table

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

US TSCA Section 12(b) - List of Chemical Substances Subject to Export Notification Requirements

US TSCA Section 4/12 (b) - Sunset Dates/Status

DIPROPYLENE GLYCOL DIBENZOATE(27138-31-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO Provisional Categorization of Liquid Substances - List 5: Substances not shipped in pure form but as components in mixtures

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US Department of Transportation (DOT), Hazardous Material Table

US DOT Coast Guard Bulk Hazardous Materials - List of Flammable and Combustible Bulk Liquid Cargoes

US List of Active Substances Exempt from the TSCA Inventory Notifications (Active-Inactive) Rule

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER(107-98-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US - Alaska Limits for Air Contaminants

US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)

US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)

US - California Permissible Exposure Limits for Chemical Contaminants

US - Hawaii Air Contaminant Limits

US - Idaho Toxic Air Pollutants Non- Carcinogenic Increments - Occupational Exposure Limits

US - Massachusetts - Right To Know Listed Chemicals

US - Michigan Exposure Limits for Air Contaminants

US - Minnesota Permissible Exposure Limits (PELs)

US - Oregon Permissible Exposure Limits (Z-1)

US - Pennsylvania - Hazardous Substance List

US - Rhode Island Hazardous Substance List

US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants

US - Washington Permissible exposure limits of air contaminants

US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values

US ACGIH Threshold Limit Values (TLV)

US ACGIH Threshold Limit Values (TLV) - Carcinogens

US Chemical Footprint Project - Chemicals of High Concern List

US Clean Air Act - Hazardous Air Pollutants

US Department of Transportation (DOT), Hazardous Material Table

US DOE Temporary Emergency Exposure Limits (TEELs)

US DOT Coast Guard Bulk Hazardous Materials - List of Flammable and Combustible Bulk Liquid Cargoes

US EPCRA Section 313 Chemical List

US NIOSH Recommended Exposure Limits (RELs)

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

HYDROCARBON PROPELLANT(68476-85-7.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Action Clear Aerosol

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

US - Alaska Limits for Air Contaminants

US - California Permissible Exposure Limits for Chemical Contaminants

US - Hawaii Air Contaminant Limits

US - Idaho - Limits for Air Contaminants

US - Massachusetts - Right To Know Listed Chemicals

US - Michigan Exposure Limits for Air Contaminants

US - Minnesota Permissible Exposure Limits (PELs)

US - Oregon Permissible Exposure Limits (Z-1)

US - Pennsylvania - Hazardous Substance List

US - Rhode Island Hazardous Substance List

US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants

US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants

US - Washington Permissible exposure limits of air contaminants

US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants

US ACGIH Threshold Limit Values (Spanish)

US ACGIH Threshold Limit Values (TLV)

US Chemical Footprint Project - Chemicals of High Concern List

US Department of Transportation (DOT), Hazardous Material Table

US DOE Temporary Emergency Exposure Limits (TEELs)

US NIOSH Recommended Exposure Limits (RELs)

US NIOSH Recommended Exposure Limits (RELs) (Spanish)

US OSHA Permissible Exposure Levels (PELs) - Table Z1

US OSHA Permissible Exposure Limits - Annotated Table Z-1 (Spanish)

US Postal Service (USPS) Hazardous Materials Table: Postal Service Mailability Guide

US Postal Service (USPS) Numerical Listing of Proper Shipping Names by Identification (ID) Number

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SECTION 311/312 HAZARD CATEGORIES

Flammable (Gases, Aerosols, Liquids, or Solids)	Yes
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	Yes
Acute toxicity (any route of exposure)	Yes
Reproductive toxicity	Yes
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	Yes
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg
Acetone	5000	2270

Continued...

Action Clear Aerosol

tert-Butyl acetate	5000	2270
Benzene, methyl-	1000	454

State Regulations

US. CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm

US - CALIFORNIA PROPOSITION 65 - REPRODUCTIVE TOXICITY: LISTED SUBSTANCE

Toluene Listed

National Inventory Status

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (toluene; acetone; propylene glycol monomethyl ether - alpha isomer; dipropylene glycol dibenzoate; hydrocarbon propellant; 1,2,4-trimethyl benzene; isophorone diisocyanate; tert-butyl acetate; amyl methyl ketone; ethylene glycol monobutyl ether; 4-chlorobenzotrifluoride)
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	No (4-chlorobenzotrifluoride)
Vietnam - NCI	Yes
Russia - ARIPS	Yes
Thailand - TECI	No (hydrocarbon propellant; 1,2,4-trimethyl benzene)
Legend:	Yes = All declared ingredients are on the inventory No = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Revision Date	22/05/2019
Initial Date	14/05/2019

SDS Version Summary

Version	Issue Date	Sections Updated
3.1.1.1	16/05/2019	Classification, Ingredients
4.1.1.1	22/05/2019	Classification, Ingredients

Other information

Ingredients with multiple cas numbers

Name	CAS No
dipropylene glycol dibenzoate	27138-31-4, 20109-39-1

Continued...

hydrocarbon propellant	68476-85-7., 68476-86-8.
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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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TEL (+61 3) 9572 4700.