

SDS ATTACHMENT

PLEASE ATTACH THIS COMPLETED SHEET TO THE SDS FOR:

PRODUCT:

Smart Spray

DATE:

9-Dec-14

(SDS date)

1. Manufacturer/Supplier:

Tradegear Ltd
Level 1, 99 Clarence Street
Riccarton
Christchurch 8011
New Zealand
Phone: 0800 22 44 34 or +64 3 341 8055
Fax: 0800 22 11 51 or +64 9 522 8833
24 hr emergency contact: +64 21 510 622
Website: www.tradegear.co.nz
Email: office@tradegear.co.nz

Emergency Information:

National Poison Centre: 0800 764 766
Chemcall 24/7 Emergency Response Service: 0800 243 622

2 & 15. Hazards Identification & Regulatory Requirements:

Product Name:	Smart Spray
Group Standard, Approval #	Aerosols (Flammable) Group Standard 2017 - HSR002515
HSNO Classes (from GHS codes)	2.1.2A, 6.3B, 6.4A
Class 9 Hazard/Precautionary Statements	None
TEL or EEL applicable?	None



Dy-Mark 40073501 Smart Spray All Colours

Dy-Mark

Chemwatch Hazard Alert Code: 4

Chemwatch: 20-8055

Version No: 5.1.1.1

Material Safety Data Sheet according to NOHSC and ADG requirements

Issue Date: 09/12/2014

Print Date: 15/01/2015

Initial Date: Not Available

S.Local.AUS.EN

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

Product Identifier

Product name	Dy-Mark 40073501 Smart Spray All Colours
Chemical Name	Not Applicable
Synonyms	40073501 Black 350g, 40073502 Red 350g, 40073503 Blue 350g, 40073505 Yellow 350g, 40073511 White 350g, 40073522 F/Red 350g, 40073524 F/Green 350g, 40073526 F/Orange 350g, 40073529 F/Pink 350g, 40083501 Black 350g 360o, 40083502 Red 350g 360o, 40083503 Blue 350g 360o, 40083505 Yellow 350g 360o, 40083511 White 350g 360o, 40083522 F/Red 350g 360o, 40083524 F/Green 350g 360o, 40083526 F/Orange 350g 360o, 40083529 F/Pink 350g 360o
Proper shipping name	AEROSOLS
Chemical formula	Not Applicable
Other means of identification	Not Available
CAS number	Not Applicable

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

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

Details of the manufacturer/importer

Registered company name	Dy-Mark
Address	89 Formation Street Wacol 4076 QLD Australia
Telephone	+61 7 3271 2222
Fax	+61 7 3271 2751
Website	Not Available
Email	info@dymark.com.au

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	+61 403 186 708
Other emergency telephone numbers	+61 403 186 708



SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

Poisons Schedule	Not Applicable						
Risk Phrases ^[1]	<table><tr><td>R44</td><td>Risk of explosion if heated under confinement.</td></tr><tr><td>R36</td><td>Irritating to eyes.</td></tr><tr><td>R12</td><td>Extremely flammable.</td></tr></table>	R44	Risk of explosion if heated under confinement.	R36	Irritating to eyes.	R12	Extremely flammable.
R44	Risk of explosion if heated under confinement.						
R36	Irritating to eyes.						
R12	Extremely flammable.						
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI						
GHS Classification ^[1]	Flammable Aerosol Category 1, Eye Irritation Category 2						
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI						

Label elements

GHS label elements	 
--------------------	---

Continued...

Dy-Mark 40073501 Smart Spray All Colours

SIGNAL WORD **DANGER**

Hazard statement(s)

H222	Extremely flammable aerosol
H319	Causes serious eye irritation
AUH044	Risk of explosion if heated under confinement

Supplementary statement(s)

Not Applicable

CLP classification (additional)

Not Applicable

Precautionary statement(s) Prevention

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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

Precautionary statement(s) Storage

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

Precautionary statement(s) Disposal

Not Applicable

Label elements



Relevant risk statements are found in section 2

Indication(s) of danger	F+, Xi
-------------------------	--------

SAFETY ADVICE

S09	Keep container in a well ventilated place.
S15	Keep away from heat.
S16	Keep away from sources of ignition. No smoking.
S23	Do not breathe gas/fumes/vapour/spray.
S25	Avoid contact with eyes.
S26	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
S29	Do not empty into drains.
S33	Take precautionary measures against static discharges.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S39	Wear eye/face protection.
S40	To clean the floor and all objects contaminated by this material, use water and detergent.
S41	In case of fire and/or explosion, DO NOT BREATHE FUMES.
S43	In case of fire use...
S46	If swallowed, seek medical advice immediately and show this container or label.
S51	Use only in well ventilated areas.
S56	Dispose of this material and its container at hazardous or special waste collection point.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

Other hazards

	Inhalation, skin contact and/or ingestion may produce health damage*.
	May produce discomfort of the respiratory system and skin*.
	Cumulative effects may result following exposure*.
	Vapours potentially cause drowsiness and dizziness*.
	Repeated exposure potentially causes skin dryness and cracking*.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Continued...

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
64-17-5	30-60	ethanol
107-98-2	1-10	propylene glycol monomethyl ether - alpha isomer
115-10-6	10-30	dimethyl ether
68476-85-7.	10-30	hydrocarbon propellant

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>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 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>

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 lower alkyl ethers:

BASIC TREATMENT

- ▶ Establish a patent airway with suction where necessary.
- ▶ Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- ▶ Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- ▶ A low-stimulus environment must be maintained.
- ▶ Monitor and treat, where necessary, for shock.
- ▶ Anticipate and treat, where necessary, for seizures.
- ▶ **DO NOT use emetics.** Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
- ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Hypotension without signs of hypovolaemia may require vasopressors.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

EMERGENCY DEPARTMENT

- ▶ Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- ▶ Ethers may produce anion gap acidosis. Hyperventilation and bicarbonate therapy might be indicated.
- ▶ Haemodialysis might be considered in patients with impaired renal function.
- ▶ Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For acute or short term repeated exposures to ethanol:

- ▶ Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
- ▶ Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
- ▶ Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).

Continued...

- ▶ Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
- ▶ Fructose administration is contra-indicated due to side effects.

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 result

Advice for firefighters

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.

Fire/Explosion Hazard

- ▶ Liquid and vapour are highly flammable.
- ▶ Severe fire hazard when exposed to heat or flame.
- ▶ Vapour forms an explosive mixture with air.
- ▶ Severe explosion hazard, in the form of vapour, when exposed to flame or spark.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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.

Major Spills

- ▶ Remove leaking cylinders to a safe place if possible.
- ▶ Release pressure under safe, controlled conditions by opening the valve.
- ▶ **DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.**
- ▶ Clear area of personnel and move upwind.

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

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.

Other information

- ▶ 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.

Conditions for safe storage, including any incompatibilities

Suitable container

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

Storage incompatibility

- ▶ Avoid reaction with oxidising agents
- ▶ Avoid strong bases.



+

X

X

X

X

+

- X** — Must not be stored together
0 — May be stored together with specific preventions
+ — May be stored together

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Dy-Mark 40073501 Smart Spray All Colours


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	ethanol	Ethyl alcohol	1880 mg/m ³ / 1000 ppm	Not Available	Not Available	Not Available
Australia Exposure Standards	propylene glycol monomethyl ether - alpha isomer	Propylene glycol monomethyl ether	369 mg/m ³ / 100 ppm	553 mg/m ³ / 150 ppm	Not Available	Not Available
Australia Exposure Standards	dimethyl ether	Dimethyl ether	760 mg/m ³ / 400 ppm	950 mg/m ³ / 500 ppm	Not Available	Not Available
Australia Exposure Standards	hydrocarbon propellant	LPG (liquefied petroleum gas)	1800 mg/m ³ / 1000 ppm	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
ethanol	Ethyl alcohol; (Ethanol)	Not Available	Not Available	Not Available
propylene glycol monomethyl ether - alpha isomer	Propylene glycol monomethyl ether; (Ucar Triol HG-170)	150 ppm	150 ppm	470 ppm
dimethyl ether	Methyl ether; (Dimethyl ether)	1,000 ppm	1000 ppm	7200 ppm
hydrocarbon propellant	Liquefied petroleum gas; (L.P.G.)	3,000 ppm	3200 ppm	19000 ppm

Ingredient	Original IDLH	Revised IDLH
ethanol	15,000 ppm	3,300 [LEL] ppm
propylene glycol monomethyl ether - alpha isomer	Not Available	Not Available
dimethyl ether	Not Available	Not Available
hydrocarbon propellant	19,000 [LEL] ppm	2,000 [LEL] ppm

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.</p>
Personal protection	
Eye and face protection	<ul style="list-style-type: none"> ▶ Safety glasses with side shields. ▶ Chemical goggles. ▶ 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.
Skin protection	See Hand protection below
Hands/feet protection	<ul style="list-style-type: none"> ▶ No special equipment needed when handling small quantities. ▶ OTHERWISE: ▶ 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	<p>No special equipment needed when handling small quantities.</p> <p>OTHERWISE:</p> <ul style="list-style-type: none"> ▶ Overalls. ▶ Skin cleansing cream. ▶ Eyewash unit.
Thermal hazards	Not Available

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:

Dy-Mark 40073501 Smart Spray All Colours

Material	CPI
BUTYL	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NITRILE	C
NITRILE+PVC	C
PE/EVAL/PE	C

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**	-

* - Continuous-flow; ** - Continuous-flow or positive pressure demand

Continued...

PVC	C
##dimethyl	ether
##propylene glycol monomethyl ether - alpha	isomer

^ - 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)

* 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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	22aer Coloured flammable liquid; partly mixes with water.		
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 (g/L)	Partly Miscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

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	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. Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. There is some evidence to suggest that the material can cause respiratory irritation in some persons.
Ingestion	Accidental ingestion of the material may be damaging 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
Skin Contact	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. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Spray mist may produce discomfort Alkyl ethers may defat and dehydrate the skin producing dermatoses.
Eye	Not considered to be a risk because of the extreme volatility of the gas. Eye contact with alkyl ethers (vapour or liquid) may produce irritation, redness and tears. 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.

Dy-Mark 40073501 Smart Spray All Colours

Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Principal route of occupational exposure to the gas is by inhalation. Chronic exposure to alkyl ethers may result in loss of appetite, excessive thirst, fatigue, and weight loss. When taken repeatedly, PGME may cause damage to liver and kidney, drowsiness and even unconsciousness and death.	
Dy-Mark 40073501 Smart Spray All Colours	TOXICITY Not Available	IRRITATION Not Available
ethanol	TOXICITY Inhalation (rat) LC50: 20,000 ppm/10h Inhalation (rat) LC50: 64000 ppm/4h Oral (rat) LD50: 7060 mg/kg Not Available	IRRITATION Eye (rabbit): 500 mg SEVERE Eye (rabbit):100mg/24hr-moderate Skin (rabbit):20 mg/24hr-moderate Skin (rabbit):400 mg (open)-mild Not Available
propylene glycol monomethyl ether - alpha isomer	TOXICITY Dermal (rabbit) LD50: 13000 mg/kg Inhalation (rat) LC50: 10000 ppm/5 h. Oral (rat) LD50: 3739 mg/kg Not Available	IRRITATION Eye (rabbit) 230 mg mild Eye (rabbit) 500 mg/24 h. - mild Eye (rabbit): 100 mg SEVERE Skin (rabbit) 500 mg open - mild Not Available
dimethyl ether	TOXICITY Inhalation (rat) LC50: 308000 mg/m3 Not Available	IRRITATION Not Available
hydrocarbon propellant	TOXICITY Not Available	IRRITATION Not Available

* Value obtained from manufacturer's MSDs
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

ETHANOL	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.
PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER	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.
HYDROCARBON PROPELLANT	No significant acute toxicological data identified in literature search. inhalation of the gas
Dy-Mark 40073501 Smart Spray All Colours, PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER	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); tripropylene glycol methyl ether (TPM). Testing of a wide variety of propylene glycol ethers 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 reproductive organs, the developing embryo and fetus, blood (haemolytic effects), or thymus, are not seen with the commercial-grade propylene glycol ethers. In the ethylene series, metabolism of the terminal hydroxyl group produces an alkoxyacetic acid.

Acute Toxicity	☐	Carcinogenicity	☐
Skin Irritation/Corrosion	☐	Reproductivity	☐
Serious Eye Damage/Irritation	✔	STOT - Single Exposure	☐
Respiratory or Skin sensitisation	☐	STOT - Repeated Exposure	☐
Mutagenicity	☐	Aspiration Hazard	☐

Legend: ✔ – Data required to make classification available
✘ – Data available but does not fill the criteria for classification
☐ – Data Not Available to make classification

CMR STATUS

Not Applicable

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

DO NOT discharge into sewer or waterways.

Continued...

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)
propylene glycol monomethyl ether - alpha isomer	LOW (Half-life = 56 days)	LOW (Half-life = 1.7 days)
dimethyl ether	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
ethanol	LOW (LogKOW = -0.31)
propylene glycol monomethyl ether - alpha isomer	LOW (BCF = 2)
dimethyl ether	LOW (LogKOW = 0.1)

Mobility in soil

Ingredient	Mobility
ethanol	HIGH (KOC = 1)
propylene glycol monomethyl ether - alpha isomer	HIGH (KOC = 1)
dimethyl ether	HIGH (KOC = 1.292)

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.

SECTION 14 TRANSPORT INFORMATION**Labels Required**

	
Marine Pollutant	NO
HAZCHEM	2YE

Land transport (ADG)

UN number	1950				
Packing group	Not Applicable				
UN proper shipping name	AEROSOLS				
Environmental hazard	No relevant data				
Transport hazard class(es)	<table border="0"> <tr> <td>Class</td> <td>2.1</td> </tr> <tr> <td>Subrisk</td> <td>Not Applicable</td> </tr> </table>	Class	2.1	Subrisk	Not Applicable
Class	2.1				
Subrisk	Not Applicable				
Special precautions for user	<table border="0"> <tr> <td>Special provisions</td> <td>63 190 277 327 344</td> </tr> <tr> <td>Limited quantity</td> <td>See SP 277</td> </tr> </table>	Special provisions	63 190 277 327 344	Limited quantity	See SP 277
Special provisions	63 190 277 327 344				
Limited quantity	See SP 277				

Air transport (ICAO-IATA / DGR)

UN number	1950								
Packing group	Not Applicable								
UN proper shipping name	Aerosols, flammable								
Environmental hazard	No relevant data								
Transport hazard class(es)	<table border="0"> <tr> <td>ICAO/IATA Class</td> <td>2.1</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>Not Applicable</td> </tr> <tr> <td>ERG Code</td> <td>10L</td> </tr> </table>	ICAO/IATA Class	2.1	ICAO / IATA Subrisk	Not Applicable	ERG Code	10L		
ICAO/IATA Class	2.1								
ICAO / IATA Subrisk	Not Applicable								
ERG Code	10L								
Special precautions for user	<table border="0"> <tr> <td>Special provisions</td> <td>A145A167A802</td> </tr> <tr> <td>Cargo Only Packing Instructions</td> <td>203</td> </tr> <tr> <td>Cargo Only Maximum Qty / Pack</td> <td>150 kg</td> </tr> <tr> <td>Passenger and Cargo Packing Instructions</td> <td>203</td> </tr> </table>	Special provisions	A145A167A802	Cargo Only Packing Instructions	203	Cargo Only Maximum Qty / Pack	150 kg	Passenger and Cargo Packing Instructions	203
Special provisions	A145A167A802								
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	
Packing group	Not Applicable	
UN proper shipping name	AEROSOLS	
Environmental hazard	No relevant data	
Transport hazard class(es)	IMDG Class	2.1
	IMDG Subrisk	See SP63
Special precautions for user	EMS Number	F-D , S-U
	Special provisions	63 190 277 327 344 959
	Limited Quantities	See SP277

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	propylene glycol monomethyl ether - alpha isomer	Z

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture**

ethanol(64-17-5) is found on the following regulatory lists	"Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"
propylene glycol monomethyl ether - alpha isomer(107-98-2) is found on the following regulatory lists	"Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"
dimethyl ether(115-10-6) is found on the following regulatory lists	"Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"
hydrocarbon propellant(68476-85-7.) is found on the following regulatory lists	"Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"

SECTION 16 OTHER INFORMATION**Other information****Ingredients with multiple cas numbers**

Name	CAS No
dimethyl ether	115-10-6, 157621-61-9
hydrocarbon propellant	68476-85-7., 68476-86-8.

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.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)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.

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.