

Signet Pty Ltd

Chemwatch: 72-9858 Version No: 2.1.1.1 Safety Data Sheet according to WHS and ADG requirements hemwatch Hazard Alert Code: 4

Issue Date: 22/12/2016 Print Date: 25/01/2017 L.GHS.AUS.EN

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

Product Identifier

Product name	Line Marking Paint- Lemon, Yellow, Orange
Synonyms	Product code: 11525,11527,11529
Proper shipping name	AEROSOLS
Other means of identification	Not Available

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

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

Details of the supplier of the safety data sheet

Registered company name	Signet Pty Ltd
Address	56 Ingleston Road Wakerley QLD 4154 Australia
Telephone	+61 7 3364 2100 +61 7 3313 7446
Fax	+1 300 304 305
Website	www.signet.net.au
Email	sales@signet.net.au

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	+61 7 3364 2100 (8am to 5pm)
Other emergency telephone numbers	1800 039 008 (24 Hours)

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
1800 039 008	1800 039 008	+612 9186 1132

Once connected and if the message is not in your prefered language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Poisons Schedule	S5	
Classification ^[1]	Aerosols Category 1, Gas under Pressure (Compressed gas), Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A, Reproductive Toxicity Category 1B, Specific target organ toxicity - repeated exposure Category 2	
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI	

Label elements



SIGNAL WORD DANGER Hazard statement(s) H222 Extremely flammable aerosol. H280 Contains gas under pressure; may explode if heated. H315 Causes skin irritation. H319 Causes serious eye irritation. H360 May damage fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. AUH044 Risk of explosion if heated under confinement

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.	
P281	Use personal protective equipment as required.	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P332+P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statement(s) Storage

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

Precautionary statement(s) Disposal

P501

Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
108-88-3	10-20	toluene
1330-20-7	10-20	xylene
141-78-6	10-20	ethyl acetate

68476-85-7.	10-20	hydrocarbon propellant
123-86-4	5-10	n-butyl acetate
Not Available	20-30	pigments
Not Available	1-10	Ingredients determined not to be hazardous

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	 If aerosols come in contact with the eyes: Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	 If solids or aerosol mists are deposited upon the skin: Flush skin and hair with running water (and soap if available). Remove any adhering solids with industrial skin cleansing cream. DO NOT use solvents. Seek medical attention in the event of irritation.
Inhalation	 If aerosols, fumes or combustion products are inhaled: Remove to fresh air. Lay patient down. Keep warm and rested. 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	 Avoid giving milk or oils. Avoid giving alcohol. Not considered a normal route of entry. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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
dvice 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. 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. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.
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. Vapour may travel a considerable distance to source of ignition.
	Continue

	 Heating may cause expansion or decomposition with violent container rupture. Aerosol cans may explode on exposure to naked flames.
	Rupturing containers may rocket and scatter burning materials.
	 Hazards may not be restricted to pressure effects.
	► May emit acrid, poisonous or corrosive fumes.
	 On combustion, may emit toxic fumes of carbon monoxide (CO).
	Combustion products include:
	,
	carbon monoxide (CO)
	,
	carbon dioxide (CO2)
	,
	other pyrolysis products typical of burning organic material.
	Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.
HAZCHEM	Not Applicable

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	 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. Water spray or fog may be used to disperse / absorb vapour. Absorb or cover spill with sand, earth, inert materials or vermiculite. If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely. Collect residues and seal in labelled drums for disposal.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

	The conductivity of this material may make it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, and only on the precaution of the precautions are the same the analytic is a difficult of a liquid.
	 presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid. DO NOT allow clothing wet with material to stay in contact with skin
	 Avoid all personal contact, including inhalation.
	 Wear protective clothing when risk of exposure occurs.
Safe handling	 Use in a well-ventilated area.
ouro nununig	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.
	When handling, DO NOT eat, drink or smoke.
	DO NOT incinerate or puncture aerosol cans.
	DO NOT spray directly on humans, exposed food or food utensils.

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	 Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Other information	Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can

Conditions for safe storage, including any incompatibilities

Suitable container	 Aerosol dispenser. Check that containers are clearly labelled.
Storage	Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the
incompatibility	energy of reaction produced by the gas in chemical reaction with other substances

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	toluene	Toluene	191 mg/m3 / 50 ppm	574 mg/m3 / 150 ppm	Not Available	Sk
Australia Exposure Standards	xylene	Xylene (o-, m-, p- isomers)	350 mg/m3 / 80 ppm	655 mg/m3 / 150 ppm	Not Available	Not Available
Australia Exposure Standards	ethyl acetate	Ethyl acetate	720 mg/m3 / 200 ppm	1440 mg/m3 / 400 ppm	Not Available	Not Available
Australia Exposure Standards	hydrocarbon propellant	LPG (liquified petroleum gas)	1800 mg/m3 / 1000 ppm	Not Available	Not Available	Not Available
Australia Exposure Standards	n-butyl acetate	n-Butyl acetate	713 mg/m3 / 150 ppm	950 mg/m3 / 200 ppm	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
toluene	Toluene	Not Available	Not Available	Not Available
xylene	Xylenes	Not Available	Not Available	Not Available
ethyl acetate	Ethyl acetate	1,200 ppm	1,700 ppm	10000 ppm
hydrocarbon propellant	Liquified petroleum gas; (L.P.G.)	65,000 ppm	2.30E+05 ppm	4.00E+05 ppm
n-butyl acetate	Butyl acetate, n-	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
toluene	2,000 ppm	500 ppm
xylene	1,000 ppm	900 ppm
ethyl acetate	10,000 ppm	2,000 [LEL] ppm
hydrocarbon propellant	19,000 [LEL] ppm	2,000 [LEL] ppm
n-butyl acetate	10,000 ppm	1,700 [LEL] ppm
pigments	Not Available	Not Available
Ingredients determined not to be hazardous	Not Available	Not Available

MATERIAL DATA

NOTE K: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.1%w/w 1,3-butadiene (EINECS No 203-450-8). - European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

Exposure controls

Appropriate engineering controls

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

	provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is of Enclosure and/or isolation of emission source which keeps a selected hazard ventilation that strategically "adds" and "removes" air in the work environment contaminant if designed properly. The design of a ventilation system must ma- contaminant in use. Employers may need to use multiple types of controls to prevent employee of General exhaust is adequate under normal conditions. If risk of overexposure fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocitive velocities" of fresh circulating air required to effectively remove the contaminant: aerosols, (released at low velocity into zone of active generation)	"physically" away from . Ventilation can remo tch the particular pro- verexposure. exists, wear SAA app ies which, in turn, det	n the worker and we or dilute an air cess and chemical or roved respirator. Correct
	direct spray, spray painting in shallow booths, gas discharge (active generatial air motion)	on into zone of rapid	1-2.5 m/s (200-500 f/min.)
	Within each range the appropriate value depends on:		
	Lower end of the range	Upper end of the r	ange
	1: Room air currents minimal or favourable to capture	1: Disturbing room	air currents
	2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of	of high toxicity
	3: Intermittent, low production.	3: High production	n, heavy use
	4: Large hood or large air mass in motion	4: Small hood-loca	al control only
	extraction apparatus, make it essential that theoretical air velocities are multip systems are installed or used.	blied by factors of 10	or more when extraction
Personal protection			
Eye and face protection	 Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absord document, describing the wearing of lenses or restrictions on use, should leinclude a review of lens absorption and adsorption for the class of chemical Medical and first-aid personnel should be trained in their removal and suitate event of chemical exposure, begin eye irrigation immediately and remove be removed at the first signs of eye redness or irritation - lens should be workers have washed hands thoroughly. [CDC NIOSH Current Intelligence equivalent] 	be created for each w als in use and an acc ble equipment should contact lens as soon removed in a clean en	orkplace or task. This should ount of injury experience. be readily available. In the as practicable. Lens should nvironment only after
Skin protection	See Hand protection below		
Hands/feet protection	 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	No special equipment needed when handling small quantities. OTHERWISE: • Overalls. • Skin cleansing cream. • Eyewash unit. • Do not spray on hot surfaces. • The clothing worn by process operators insulated from earth may develop	static charges far hig	her (up to 100 times) than

▶ Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.

including cotton.

Continued...

BRETHERICK: Handbook of Reactive Chemical Hazards.

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:

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Material	CPI
##ethyl	acetate
##n-butyl	acetate
BUTYL	С
BUTYL/NEOPRENE	С
CPE	С
HYPALON	С
NAT+NEOPR+NITRILE	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE	С
NEOPRENE/NATURAL	С
NITRILE	С
NITRILE+PVC	С
PE	С
PE/EVAL/PE	С
PVA	С
PVC	С
PVDC/PE/PVDC	С
SARANEX-23	С
SARANEX-23 2-PLY	С
TEFLON	С
VITON	С
VITON/BUTYL	С
VITON/CHLOROBUTYL	С
VITON/NEOPRENE	С

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. * Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Aerosol.		
-		Relative density	
Physical state	Liquid	Relative density (Water = 1)	1.0
Odour	Not Available	Partition coefficient n-octanol / water	Not Available

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 10 x ES	AX-AUS / Class 1	-	AX-PAPR-AUS / Class 1
up to 50 x ES	Air-line*	-	-
up to 100 x ES	-	AX-3	-
100+ x ES	-	Air-line**	-

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

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate. 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.

Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	-81 (hydrocarbon propellant)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Immiscible	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	 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

	Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.
Inhaled	 Common, generalised symptoms associated with toxic gas inhalation include: central nervous system effects such as depression, headache, confusion, dizziness, progressive stupor, coma and seizures; respiratory system complications may include acute pulmonary oedema, dyspnoea, stridor, tachypnoea, bronchospasm, wheezing and other reactive airway symptoms, and respiratory arrest; cardiovascular effects may include cardiovascular collapse, arrhythmias and cardiac arrest; gastrointestinal effects may also be present and may include mucous membrane irritation, nausea and vomiting (sometimes bloody), and abdominal pain. Acute effects from inhalation of high concentrations of vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination WARNING:Intentional misuse by concentrating/inhaling contents may be lethal.

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 Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result. Signs and symptoms of chemical (aspiration) pneumonitis may include coughing, gasping, choking, burning of the mouth, difficult breathing, and bluish coloured skin (cyanosis).		
The material produces moderate skin irritation; evidence exists, or practical experience predicts, that the material either • produces moderate inflammation of the skin in a substantial number of individuals following direct contact, and/or • produces significant, but moderate, inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Spray mist may produce discomfort Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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.		
Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctive (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.		
Harmful: danger of serious damage to health by prolonged exposure through inhalation. Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure. As a rule the material produces, or contains a substance which produces severe lesions. Such damage may become apparent following direct application in subchronic (90 day) toxicity studies or following sub-acute (28 day) or chronic (two-year) toxicity tests. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in impaired fertility on the basis of: - clear evidence in animal studies of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects but which is not a secondary non-specific consequence of other toxic effects. There is sufficient evidence to provide a strong presumption that human exposure to the material may result in developmental toxicity, generally on the basis of: - clear results in appropriate animal studies where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Principal route of occupational exposure to the gas is by inhalation. WARNING : Aerosol containers may present pressure related hazards.		
τογιατγ	IRRITATION	
Not Available	Not Available	
TOXICITY Dermal (rabbit) LD50: 12124 mg/kg ^[2] Inhalation (rat) LC50: >26700 ppm/1hr ^[2] Inhalation (rat) LC50: 49 mg/L/4hr ^[2] Oral (rat) LD50: 636 mg/kg ^[2]	IRRITATIONEye (rabbit): 2mg/24h - SEVEREEye (rabbit):0.87 mg - mildEye (rabbit):100 mg/30sec - mildSkin (rabbit):20 mg/24h-moderateSkin (rabbit):500 mg - moderate	
TOXICITY Dermal (rabbit) LD50: >1700 mg/kg ^[2] Inhalation (rat) LC50: 5000 ppm/4hr ^[2] Oral (rat) LD50: 4300 mg/kg ^[2]	IRRITATIONEye (human): 200 ppm irritantEye (rabbit): 5 mg/24h SEVEREEye (rabbit): 87 mg mildSkin (rabbit):500 mg/24h moderate	
TOXICITY Dermal (rabbit) LD50: >18000 mg/kg ^[2]	IRRITATION Eye (human): 400 ppm	
	Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial of Swallowing of the liquid may cause aspiration of vormit into the progressing to chemical pneumonitis; serious consequences in Signs and symptoms of chemical (aspiration) pneumonitis may difficult breathing, and bluish coloured skin (cyanosis). The material produces moderate skin irritation; evidence exists > produces significant, but moderate, inflammation when app such inflammation being present twenty-four hours or more Skin irritation may also be present after prolonged or repeated (nonallergic). The dermatitis is often characterised by skin redn blistering (vesiculation), scaling and thickening of the epidermis of the spony layer of the skin (spongiosis) and intracellular oo Skin contact with the material may damage the health of the ir Spray mist may produce discomfort Open cuts, abraded or irritated skin should not be exposed to the Evidence exists, or practical experience predicts, that the material individuals and/or may produce significant ocular lesions which eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation of conjunctiva (conjunctivitis); temporary impairment of vision and Harmful: danger of serious damage to health by prolonged exp Serious damage (clear functional disturbance or morphological be caused by repeated or prolonged exposure. As a rule the may severe lesions. Such damage may become apparent following following sub-acute (28 day) or chronic (two-year) taxicity tests There is sufficient evidence to provide a strong presumption th fertility on the basis of: - clear evidence in animal studies of in impaired fertility occurring at around the same dose levels as or consequence of other taxic effects. There is sufficient evidence to provide a strong presumption th developmental toxicity, generally on the basis of: - clear results in appropriate animal studies where effects have at around the same dose lev	

		I.
	Inhalation (mouse) LC50: >18 mg/l/4hr ^[1]	
	Inhalation (mouse) LC50: 33.5 mg/l/2hr ^[1]	
	Inhalation (mouse) LC50: 45 mg/L/2hr ^[2]	
	Inhalation (rat) LC50: >6000 ppm/6hr ^[2]	
	Inhalation (rat) LC50: 1600 ppm/8hr ^[2]	
	Inhalation (rat) LC50: 200 mg/l1 hr ^[1]	
	Oral (rat) LD50: 10170 mg/kg ^[1]	
	TOXICITY	IRRITATION
	Inhalation (mouse) LC50: >15.6-<17.9 mm/l/2hr ^[1]	Not Available
	Inhalation (mouse) LC50: >15.6-<17.9 mm/l/2hr ^[1]	
	Inhalation (mouse) LC50: 410000 ppm/2hr ^[1]	
	Inhalation (mouse) LC50: 410000 ppm/2hr ^[1]	
	Inhalation (rat) LC50: >800000 ppm15 min ^[1]	
hydrocarbon	Inhalation (rat) LC50: >800000 ppm15 min ^[1]	
propellant	Inhalation (rat) LC50: 1354.944 mg/L15 min ^[1]	
	Inhalation (rat) LC50: 1355 mg/I15 min ^[1]	
	Inhalation (rat) LC50: 1442.738 mg/L15 min ^[1]	
	Inhalation (rat) LC50: 1442.738 mg/L15 min ^[1]	
	Inhalation (rat) LC50: 1443 mg/l15 min ^[1]	
	Inhalation (rat) LC50: 1443 mg/l15 min ^[1]	
	Inhalation (rat) LC50: 570000 ppm15 min ^[1]	
	ΤΟΧΙΟΙΤΥ	IRRITATION
n-butyl acetate	Dermal (rabbit) LD50: >14080 mg/kg ^[1]	Eye (human): 300 mg
	Inhalation (rat) LC50: 2000 ppm/4hr ^[2]	Eye (rabbit): 20 mg (open)-SEVERE
	Inhalation (rat) LC50: 390 ppm/4hr ^[2]	Eye (rabbit): 20 mg/24h - moderate
	Oral (rat) LD50: 10736 mg/kg ^[1]	Skin (rabbit): 500 mg/24h-moderate
Legend:	1. Value obtained from Europe ECHA Registered Substance Unless otherwise specified data extracted from RTECS - R	es - Acute toxicity 2.* Value obtained from manufacturer's SDS. Register of Toxic Effect of chemical Substances

	For toluene:
	Acute Toxicity
	Humans exposed to intermediate to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis, and death. Similar effects are observed in short-term animal studies.
	Humans - Toluene ingestion or inhalation can result in severe central nervous system depression, and in large doses, can act as a narcotic. The ingestion of about 60 mL resulted in fatal nervous system depression within 30 minutes in one reported case.
	Constriction and necrosis of myocardial fibers, markedly swollen liver, congestion and haemorrhage of the lungs and acute tubular necrosis were found on autopsy.
	Central nervous system effects (headaches, dizziness, intoxication) and eye irritation occurred following inhalation exposure to 100 ppm toluene 6 hours/day for 4 days.
TOLUENE	Exposure to 600 ppm for 8 hours resulted in the same and more serious symptoms including euphoria, dilated pupils, convulsions, and nausea . Exposure to 10,000-30,000 ppm has been reported to cause narcosis and death Toluene can also strip the skin of lipids causing dermatitis
	Animals - The initial effects are instability and incoordination, lachrymation and sniffles (respiratory exposure), followed by narcosis. Animals die of respiratory failure from severe nervous system depression. Cloudy swelling of the kidneys was reported in rats following inhalation exposure to 1600 ppm, 18-20 hours/day for 3 days
	Subchronic/Chronic Effects:
	Repeat doses of toluene cause adverse central nervous system effects and can damage the upper respiratory system, the liver, and the kidney. Adverse effects occur as a result from both oral and the inhalation exposures. A reported lowest-observed-effect level in humans for adverse neurobehavioral effects is 88 ppm.
	Humans - Chronic occupational exposure and incidences of toluene abuse have resulted in hepatomegaly and liver function changes. It has also resulted in nephrotoxicity and, in one case, was a cardiac sensitiser and fatal cardiotoxin. Neural and cerebellar dystrophy were reported in several cases of habitual "glue sniffing." An epidemiological study in France
	on workers chronically exposed to toluene fumes reported leukopenia and neutropenia. Exposure levels were not given in the

	secondary reference; however, the average urinary excretion of hippuric acid, a metabolite of toluene, was given as 4 g/L compared to a normal level of 0.6 g/L. Animals - The major target organs for the subchronic/chronic toxicity of toluene are the nervous system, liver, and kidney. Depressed immune response has been reported in male mice given doses of 105 mg/kg/day for 28 days. Toluene in corn oil administered to F344 male and female rats by gavage 5 days/week for 13 weeks, induced prostration, hypoactivity, ataxia, piloerection, lachrymation, excess salivation, and body tremors at doses 2500 mg/kg. Liver, kidney, and heart weights were also increased at this dose and histopathologic lesions were seen in the liver, kidneys, brain and urinary bladder. The no-observed-adverse effect level (IOAEL) for the study was 312 mg/kg (223 mg/kg/day) and the lowest-observed-adverse effect level (LOAEL) for the study was 325 mg/kg (446 mg/kg/day). Developmental/Reproductive Toxicity Exposures to high levels of toluene can result in adverse effects in the developing diffspring in laboratory animals. Humans - Variable growth, microcephaly, CNS dysfunction, attentional deficits, minor craniofacial and limb abnormalities, and developmental delay were seen in three children exposed to toluene in utero as a result of maternal solvent abuse before and during pregnancy Animals - Sternebral alterations, extra ribs, and missing tails were reported following treatment of rats with 1500 mg/m3 toluene 24 hours/day during days 9-14 of gestation. No on therand deaths or toxicity occurred, however, minor skeletal retardation was present in the exposed fetuses. CFLP Mice were exposed to 500 or 1500 mg/m3 toluene continuously during days 0-13 of pregnancy. All dams died at the high dose during the first 24 hours of exposure, however none died at 500 mg/m3. Decreased fotal weight was reported, but there were no differences in the incidences of skeletal malformations or anomalies between the treated and control offspring. Absorption - Studie
XYLENE	The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. Reproductive effector in rats
HYDROCARBON PROPELLANT	No significant acute toxicological data identified in literature search. for Petroleum Hydrocarbon Gases: In many cases, there is more than one potentially toxic constituent in a refinery gas. In those cases, the constituent that is most toxic for a particular endpoint in an individual refinery stream is used to characterize the endpoint hazard for that stream. The hazard potential for each mammalian endpoint for each of the petroleum hydrocarbon gases is dependent upon each petroleum hydrocarbon gas constituent endpoint toxicity values (LC50, LOAEL, etc.) and the relative concentration of the constituent present in that gas. It should also be noted that for an individual petroleum hydrocarbon gas, the constituent characterizing toxicity may be different for different mammalian endpoints, again, being dependent upon the concentration of the different constituents in each, distinct petroleum hydrocarbon gas. All Hydrocarbon Gases Category members contain primarily hydrocarbons (i.e., alkanes and alkenes) and occasionally asphyxiant gases like hydrogen. The inorganic components of the petroleum hydrocarbon gases are less toxic than the C1 - C4 and C5 - C6 hydrocarbon components to both mammalian and aquatic organisms. Unlike other petroleum prduct categories (e.g. gasoline, diesel fuel, lubricating oils, etc.), the inorganic and hydrocarbon constituents of hydrocarbon gases can be evaluated for hazard individually to then predict the screening level hazard of the Category members Acute toxicity : No acute toxicity O petroleum hydrocarbon gas constituents from most to least toxic is: C5-C6 HCS (LC50 > 1063 ppm) > C1-C4 HCS (LC50 > 10,000 ppm) > benzene (LC50 = 13,700 ppm) > butadiene (LC50 = 129,000 ppm) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen). Repeat dose toxicity : With the exception of the asphyxiant gases, repeated dose toxicity has been observed in individual selected petroleum hydrocarbon gas constituents. Based upon LOAEL values, the order of order of repeated-dose toxicity of these consti

	Developmental toxicity: Developmental effects were induced by two of the petroleum hydrocarbon gas constituents, benzene and the C5 -C6 hydrocarbon fraction. No developmental toxicity was observed at the highest exposure levels tested for the other petroleum hydrocarbon gas constituents tested for this effect. The asphyxiant gases have not been tested for developmental toxicity. Based on LOAEL and NOAEL values, the order of acute toxicity of these constituents from most to least toxic is: Benzene (LOAEL = 20 ppm) > butadiene (NOAEL .>=1,000 ppm) > C5-C6 HCs (LOAEL = 3,463 ppm) > C1-C4 HCs (NOAEL >=5,000 ppm; assumed to be 100% 2-butene) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen). Reproductive toxicity: Reproductive effects were induced by only two petroleum hydrocarbon gas constituents, benzene and isobutane (a constituent of the the C1-C4 hydrocarbon fraction). No reproductive toxicity was observed at the highest exposure levels tested for reproductive toxicity. Based on LOAEL and NOAEL and NOAEL and NOAEL values, the order of reproductive toxicity of these constituents from most to least toxic is: Benzene (LOAEL = 300 ppm) > butadiene (NOAEL .>=6,000 ppm) > C5-C6 HCs (NOAEL .>=6,521 ppm) > C1-C4 HCs (LOAEL = 9,000 ppm; assumed to be 100% isobutane) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen)		
TOLUENE & XYLENE & N-BUTYL ACETATE	The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.		
XYLENE & N-BUTYL ACETATE	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.		
Acute Toxicity	0	Carcinogenicity	0
Skin Irritation/Corrosion	≁	Reproductivity	✓
Serious Eye Damage/Irritation	*	STOT - Single Exposure	\otimes
Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	~
Mutagenicity	0	Aspiration Hazard	0
		🗸 – Data requ	ilable but does not fill the criteria for classification wired to make classification available

 \bigcirc – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
toluene	LC50	96	Fish	0.0073mg/L	4
toluene	EC50	48	Crustacea	3.78mg/L	5
toluene	EC50	72	Algae or other aquatic plants	12.5mg/L	4
toluene	BCF	24	Algae or other aquatic plants	10mg/L	4
toluene	EC50	384	Crustacea	1.533mg/L	3
toluene	NOEC	168	Crustacea	0.74mg/L	5
xylene	LC50	96	Fish	2.6mg/L	2
xylene	EC50	48	Crustacea	>3.4mg/L	2
xylene	EC50	72	Algae or other aquatic plants	4.6mg/L	2
xylene	EC50	24	Crustacea	0.711mg/L	4
xylene	NOEC	73	Algae or other aquatic plants	0.44mg/L	2
ethyl acetate	LC50	96	Fish	54.314mg/L	3
ethyl acetate	EC50	48	Crustacea	=164mg/L	1
ethyl acetate	EC50	96	Algae or other aquatic plants	4.146mg/L	3
ethyl acetate	BCF	24	Algae or other aquatic plants	0.05mg/L	4
ethyl acetate	EC0	168	Algae or other aquatic plants	=15mg/L	1
ethyl acetate	NOEC	504	Crustacea	2.4mg/L	4
n-butyl acetate	LC50	96	Fish	18mg/L	2
n-butyl acetate	EC50	48	Crustacea	=32mg/L	1
n-butyl acetate	EC50	96	Algae or other aquatic plants	1.675mg/L	3
n-butyl acetate	EC50	96	Fish	18mg/L	2

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - 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

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
toluene	LOW (Half-life = 28 days)	LOW (Half-life = 4.33 days)
xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.83 days)
ethyl acetate	LOW (Half-life = 14 days)	LOW (Half-life = 14.71 days)
n-butyl acetate	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
toluene	LOW (BCF = 90)
xylene	MEDIUM (BCF = 740)
ethyl acetate	HIGH (BCF = 3300)
n-butyl acetate	LOW (BCF = 14)

Mobility in soil

Ingredient	Mobility
toluene	LOW (KOC = 268)
ethyl acetate	LOW (KOC = 6.131)
n-butyl acetate	LOW (KOC = 20.86)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods Product / Packaging disposal • 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. • Bury residues and emptied aerosol cans at an approved site.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	2
Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG)

UN number	1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	Class 2.1

	Subrisk Not Applicable
Packing group	Not Applicable
Environmental hazard	Not Applicable
Special precautions for user	Special provisions63 190 277 327 344Limited quantity1000ml

Air transport (ICAO-IATA / DGR)

UN number	1950			
UN proper shipping name	Aerosols, flammable; Aerosols, flammable (engine starting fluid)			
Transport hazard class(es)	ICAO/IATA Class	2.1 Not Applicable		
0.200(00)	ERG Code 10L			
Packing group	Not Applicable			
Environmental hazard	Not Applicable			
Special precautions for user	Special provisions		A145A167A802; A1A145A167A802	
	Cargo Only Packing Ir	nstructions	203	
	Cargo Only Maximum	Qty / Pack	150 kg	
	Passenger and Cargo	Packing Instructions	203; Forbidden	
	Passenger and Cargo	Maximum Qty / Pack	75 kg; Forbidden	
	Passenger and Cargo	Limited Quantity Packing Instructions	Y203; Forbidden	
	Passenger and Cargo	Limited Maximum Qty / Pack	30 kg G; Forbidden	

Sea transport (IMDG-Code / GGVSee)

UN number	1950	
UN proper shipping name	AEROSOLS	
Transport hazard class(es)	IMDG Class 2.1 IMDG Subrisk Not Applicable	
Packing group	Not Applicable	
Environmental hazard	Not Applicable	
Special precautions for user	EMS NumberF-D, S-USpecial provisions63 190 277 327 344 959Limited Quantities1000ml	

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

TOLUENE(108-88-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS	
Australia Exposure Standards	Australia Inventory of Chemical Substances (AICS)
Australia Hazardous Substances Information System - Consolidated Lists	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
XYLENE(1330-20-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS	
XYLENE(1330-20-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS Australia Exposure Standards	Australia Inventory of Chemical Substances (AICS)

Australia Exposure Stand	lards	Australia Inventory of Chemical Substances (AICS)
•	ostances Information System - Consolidated Lists	
HYDROCARBON PROP	ELLANT(68476-85-7.) IS FOUND ON THE FOLLOW	
	· · ·	Australia Inventory of Chemical Substances (AICS)
Australia Exposure Standards Australia Hazardous Substances Information System - Consolidated Lists		International Air Transport Association (IATA) Dangerous Goods Regulation - Prohibited List Passenger and Cargo Aircraft
N-BUTYL ACETATE(123-	86-4) IS FOUND ON THE FOLLOWING REGULATO	DRY LISTS
Australia Exposure Stand	lards	Australia Inventory of Chemical Substances (AICS)
Australia Hazardous Sub	ostances Information System - Consolidated Lists	
National Inventory	Status	
Australia - AICS	Y	
Canada - DSL	Y	
Canada - NDSL	N (toluene; xylene; ethyl acetate; n-butyl acetate; hydrocarbon propellant)	
China - IECSC	Y	
Europe - EINEC / ELINCS / NLP	Y	
Japan - ENCS	Y	
Korea - KECI	Y	
New Zealand - NZIoC	Y	
Philippines - PICCS	Y	
USA - TSCA	Y	
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients an	re not on the inventory and are not exempt from listing(see specific ingredients

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

Name	CAS No
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

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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