

GalMax[™] NPR Caterpillar® Yellow Paint (Aerosol) Chemtools Pty Ltd

Chemwatch: **5619-50**Version No: **2.1**

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Chemwatch Hazard Alert Code: 4

Issue Date: **31/07/2023**Print Date: **03/08/2023**S.GHS.AUS/NZ.EN.E

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)
Chemical Name	Not Applicable
Proper shipping name	AEROSOLS
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Quick drying direct to metal industrial paint. Application is by spray atomisation from a hand held aerosol pack
	Use according to manufacturer's directions.

Details of the manufacturer or supplier of the safety data sheet

Registered company name	Chemtools Pty Ltd	Chemtools Pty Ltd
Address	Unit 2, 14 - 16 Lee Holm Road St Marys NSW 2760 Australia	15/62 Factory Road Belfast Christchurch 8051 New Zealand
Telephone	1300 738 250, +61 2 9833 9766	+64 9 940 2745
Fax	+61 2 9623 3670	+61 2 9623 3670
Website	www.chemtools.com.au	www.chemtools.co.nz
Email	sales@chemtools.com.au	sales@chemtools.com.au

Emergency telephone number

Association / Organisation	Poisons Information Centre	National Poisons Centre
Emergency telephone numbers	13 11 26	0800 764 766
Other emergency telephone numbers	Not Available	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	Not Applicable
Classification [1]	Aerosols Category 1, Aspiration Hazard Category 1, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Carcinogenicity Category 2, Reproductive Toxicity Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

Label elements

Hazard pictogram(s)







Signal word

Danger

Hazard statement(s)

AUH044 Risk of explosion if heated under confinement. H222+H229 Extremely flammable aerosol. Pressurized container: may burst if heated. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H361d Suspected of damaging the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.		
H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H361d Suspected of damaging the unborn child.	AUH044	Risk of explosion if heated under confinement.
H315 Causes skin irritation. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H361d Suspected of damaging the unborn child.	H222+H229	Extremely flammable aerosol. Pressurized container: may burst if heated.
H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H361d Suspected of damaging the unborn child.	H304	May be fatal if swallowed and enters airways.
H336 May cause drowsiness or dizziness. H351 Suspected of causing cancer. H361d Suspected of damaging the unborn child.	H315	Causes skin irritation.
H351 Suspected of causing cancer. H361d Suspected of damaging the unborn child.	H319	Causes serious eye irritation.
H361d Suspected of damaging the unborn child.	H336	May cause drowsiness or dizziness.
	H351	Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.	H361d	Suspected of damaging the unborn child.
	H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.
P331	Do NOT induce vomiting.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
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/doctor/physician/first aider/if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

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 to authorised hazardous or special waste collection point in accordance with any local regulation.

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Classified as Dangerous Goods for transport purposes.

Version No: 2.1

Issue Date: **31/07/2023**Print Date: **03/08/2023**

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 [1]	Aerosols Category 1, Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Carcinogenicity Category 2, Reproductive Toxicity Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	2.1.2A, 6.1D (oral), 6.3A, 6.4A, 6.7B, 6.8B, 6.9B

Label elements

Hazard pictogram(s)







Signal word

Danger

Hazard statement(s)

H222+H229	Extremely flammable aerosol. Pressurized container: may burst if heated.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

	•			
P201	Obtain special instructions before use.			
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.			
P211	o not spray on an open flame or other ignition source.			
P251	Do not pierce or burn, even after use.			
P260	Do not breathe mist/vapours/spray.			
P271	Use only outdoors or in a well-ventilated area.			
P280	Wear protective gloves, protective clothing, eye protection and face protection.			
P264	Wash all exposed external body areas thoroughly after handling.			
P270	Do not eat, drink or smoke when using this product.			

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/ attention.			
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.			
P301+P312	SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.			
P302+P352	IF ON SKIN: Wash with plenty of water and soap.			
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.			
P330	Rinse mouth.			

Chemwatch: **5619-50**

Part Number: Version No: **2.1**

Page 4 of 21 GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

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 to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name		
67-64-1	<30	acetone		
1330-20-7	<30	xylene		
108-88-3	<30	toluene		
100-41-4	<10	<u>ethylbenzene</u>		
64-17-5	<10	ethanol		
108-65-6	<5	propylene glycol monomethyl ether acetate, alpha-isomer		
68476-85-7.	1-30	hydrocarbon propellant		
Legend: 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available				

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.

Indication of any immediate medical attention and special treatment needed

For petroleum distillates

• In case of ingestion, gastric lavage with activated charcoal can be used promptly to prevent absorption - decontamination (induced emesis or lavage) is controversial and should be considered on the merits of each individual case; of course the usual precautions of an endotracheal tube should be considered prior to lavage, to prevent aspiration.

Page 5 of 21

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

- · Individuals intoxicated by petroleum distillates should be hospitalized immediately, with acute and continuing attention to neurologic and cardiopulmonary function
- · Positive pressure ventilation may be necessary.
- · Acute central nervous system signs and symptoms may result from large ingestions of aspiration-induced hypoxia.
- · After the initial episode, individuals should be followed for changes in blood variables and the delayed appearance of pulmonary oedema and chemical pneumonitis. Such patients should be followed for several days or weeks for delayed effects, including bone marrow toxicity, hepatic and renal impairment Individuals with chronic pulmonary disease will be more seriously impaired, and recovery from inhalation exposure may be complicated.
- · Gastrointestinal symptoms are usually minor and pathological changes of the liver and kidneys are reported to be uncommon in acute intoxications.
- · Chlorinated and non-chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

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Version No: 2.1

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BASIC TREATMENT

- Fistablish 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.
- Monitor and treat, where necessary, for pulmonary oedema.
- Monitor and treat, where necessary, for shock.
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5mL/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

ADVANCED TREATMENT

Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.

- ▶ Consider intubation at first sign of upper airway obstruction resulting from oedema.
- 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 with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ► 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.
- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- 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 xylene:

- Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The use of charcoal and cathartics is equivocal.
- Pulmonary absorption is rapid with about 60-65% retained at rest.
- Primary threat to life from ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 < 50 mm Hg or pCO2 > 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- 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.

BIOLOGICAL EXPOSURE INDEX - BEI

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

Determinant
Methylhippu-ric acids in urine

Index 1.5 gm/gm creatinine 2 mg/min Sampling Time End of shift Last 4 hrs of shift Comments

Chemwatch: **5619-50**

Page 6 of 21

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

Extinguishing media

SMALL FIRE:

Version No: 2.1

▶ 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

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. 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. 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 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.

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

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.

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: 31/07/2023 Print Date: 03/08/2023

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

SECTION 7 Handling and storage

Precautions for 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.
- 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.
- Safe handling
- ▶ DO NOT incinerate or puncture aerosol cans.
- ▶ DO NOT spray directly on humans, exposed food or food utensils.
- 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
- ▶ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of
- ▶ 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.
- ▶ Avoid storage at temperatures higher than 40 deg C.
- ▶ Store in an upright position.
- Protect containers against physical damage.
- Check regularly for spills and leaks.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container

Other information

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

Storage incompatibility

- Avoid reaction with oxidising agents
- · 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















- Must not be stored together
- May be stored together with specific preventions
- May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

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	acetone	Acetone	500 ppm / 1185 mg/m3	2375 mg/m3 / 1000 ppm	Not Available	Not Available

Version No: 2.1

Page 8 of 21

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	acetone	Acetone	500 ppm / 1185 mg/m3	2375 mg/m3 / 1000 ppm	Not Available	(bio) - Exposure can also be estimated by biological monitoring
Australia Exposure Standards	xylene	Xylene (o-, m-, p-isomers)	80 ppm / 350 mg/m3	655 mg/m3 / 150 ppm	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	xylene	Dimethylbenzene	50 ppm / 217 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	toluene	Toluene	50 ppm / 191 mg/m3	574 mg/m3 / 150 ppm	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	toluene	Toluene (Toluol)	20 ppm / 75 mg/m3	377 mg/m3 / 100 ppm	Not Available	(skin) - Skin absorption oto - Ototoxin (bio) - Exposure can also be estimated by biological monitoring
Australia Exposure Standards	ethylbenzene	Ethyl benzene	100 ppm / 434 mg/m3	543 mg/m3 / 125 ppm	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	ethylbenzene	Ethyl benzene	20 ppm / 88 mg/m3	176 mg/m3 / 40 ppm	Not Available	(skin) - Skin absorption oto - Ototoxin
Australia Exposure Standards	ethanol	Ethyl alcohol	1000 ppm / 1880 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	ethanol	Ethanol (Ethyl alcohol)	1000 ppm / 1880 mg/m3	Not Available	Not Available	oto - Ototoxin
Australia Exposure Standards	propylene glycol monomethyl ether acetate, alpha-isomer	1-Methoxy- 2-propanol acetate	50 ppm / 274 mg/m3	548 mg/m3 / 100 ppm	Not Available	Not Available
Australia Exposure Standards	hydrocarbon propellant	LPG (liquified petroleum gas)	1000 ppm / 1800 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	hydrocarbon propellant	LPG (Liquefied petroleum gas)	1000 ppm / 1800 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
acetone	Not Available	Not Available	Not Available
xylene	Not Available	Not Available	Not Available
toluene	Not Available	Not Available	Not Available
ethylbenzene	Not Available	Not Available	Not Available
ethanol	Not Available	Not Available	15000* ppm
propylene glycol monomethyl ether acetate, alpha-isomer	Not Available	Not Available	Not Available
hydrocarbon propellant	65,000 ppm	2.30E+05 ppm	4.00E+05 ppm

Ingredient	Original IDLH	Revised IDLH
acetone	2,500 ppm	Not Available
xylene	900 ppm	Not Available
toluene	500 ppm	Not Available
ethylbenzene	800 ppm	Not Available
ethanol	3,300 ppm	Not Available
propylene glycol monomethyl ether acetate, alpha-isomer	Not Available	Not Available
hydrocarbon propellant	2,000 ppm	Not Available

Chemwatch: 5619-50

Version No: 2.1

Page 9 of 21

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: 31/07/2023 Print Date: 03/08/2023

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

The basic types of engineering controls are:

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

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. 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. Employers may need to use multiple types of controls to prevent employee overexposure.

- Employees exposed to confirmed human carcinogens should be authorized to do so by the employer, and work in a regulated area
- Work should be undertaken in an isolated system such as a "glove-box". Employees should wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.
- Within regulated areas, the carcinogen should be stored in sealed containers, or enclosed in a closed system, including piping systems, with any sample ports or openings closed while the carcinogens are contained within.
- Open-vessel systems are prohibited.
- Each operation should be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation.
- Exhaust air should not be discharged to regulated areas, non-regulated areas or the external environment unless decontaminated. Clean make-up air should be introduced in sufficient volume to maintain correct operation of the local exhaust system.
- For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood
- Except for outdoor systems, regulated areas should be maintained under negative pressure (with respect to non-regulated
- Local exhaust ventilation requires make-up air be supplied in equal volumes to replaced air.
- Laboratory hoods must be designed and maintained so as to draw air inward at an average linear face velocity of 0.76 m/sec with a minimum of 0.64 m/sec. Design and construction of the fume hood requires that insertion of any portion of the employees body, other than hands and arms, be disallowed.

Individual protection measures, such as personal protective equipment

Appropriate engineering

controls









Eye and face protection

Hands/feet protection

No special equipment for minor exposure i.e. when handling small quantities.

OTHERWISE: For potentially moderate or heavy exposures:

- Safety glasses with side shields.
- ▶ NOTE: Contact lenses pose a special hazard; soft lenses may absorb irritants and ALL lenses concentrate them.

Skin protection

See Hand protection below

▶ 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

- Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent]
- Femployees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted. [AS/NZS 1715 or national equivalent]
- Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.
- Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood.
- Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.

No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.
- Skin cleansing cream.
- Evewash unit.

Other protection

Chemwatch: **5619-50**Part Number:
Version No: **2.1**

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

Do not spray on hot surfaces.

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:

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Material	СРІ
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/EVAL/PE	С
PVA	С
PVC	С
PVDC/PE/PVDC	С
SARANEX-23	С
SARANEX-23 2-PLY	С
TEFLON	С
VITON	С
VITON/CHLOROBUTYL	С
VITON/NEOPRENE	С

^{*} CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

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

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

Respiratory protection

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

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

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

^ - Full-face

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

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	Coloured liquid aerosol with a characteristic odour; does not mix with water. Coloured			
Dhysical state	1:	Relative density (Water =	Net Avellelle	
Physical state	Liquid	1)	Not Available	
Odour	Characteristic	Partition coefficient n-octanol / water	Not Available	
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available	
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available	

^{*} 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.

Chemwatch: 5619-50 Page 11 of 21

Part Number: Version No: **2.1**

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

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

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 effect	ffects	l (ogical	lo	CO	toxi	on	tion	orma	Inf
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Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. There is strong evidence to suggest that this material can cause, if inhaled once, very serious, irreversible damage of organs. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

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.

Inhaled

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.

Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure.

WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.

Ingestion

Not normally a hazard due to physical form of product.

Considered an unlikely route of entry in commercial/industrial environments

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

There is strong evidence to suggest that this material can cause, if swallowed once, very serious, irreversible damage of organs.

Skin Contact

There is strong evidence to suggest that this material, on a single contact with skin, can cause very serious, irreversible damage of organs

The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.

Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.

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 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.

Ey

Not considered to be a risk because of the extreme volatility of the gas.

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.

Chemwatch: **5619-50** Page **12** of **21**

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

The liquid may produce eye discomfort and is capable of causing temporary impairment of vision and/or transient eye inflammation, ulceration

Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems.

There is sufficient evidence to suggest that this material directly causes cancer in humans.

This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.

Ample evidence exists that this material directly causes reduced fertility

Ample evidence exists that developmental disorders are directly caused by human exposure to the material.

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

Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the material.

Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material.

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

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

Chronic

Version No: 2.1

Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin.

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 extremeties (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.

Industrial workers exposed to 14 parts per million ethylbenzene experienced headaches, irritability and rapid fatigue. Some workers exposed for over 7 years showed nervous system disturbances, while other workers had enlarged livers.

Prolonged and repeated exposure may be harmful to the central nervous system (CNS), upper respiratory tract, and/or may cause liver disorders. It may also cause drying, scaling and blistering of the skin. Animal testing showed that chronic exposure to ethylbenzene may increase the incidence of tumours of the kidney, lung and liver.

Women exposed to xylene in the first 3 months of pregnancy showed a slightly increased risk of miscarriage and birth defects. Evaluation of workers chronically exposed to xylene has demonstrated lack of genetic toxicity.

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.

alMax™ NPR Caterpillar®	TOXICITY	IRRITATION
Yellow Paint (Aerosol)	Not Available	Not Available
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 20000 mg/kg ^[2]	Eye (human): 500 ppm - irritant
	Inhalation(Mouse) LC50; 44 mg/L4h ^[2]	Eye (rabbit): 20mg/24hr -moderate
	Oral (Rat) LD50: 5800 mg/kg ^[2]	Eye (rabbit): 3.95 mg - SEVERE
acetone		Eye: adverse effect observed (irritating) ^[1]
		Skin (rabbit): 500 mg/24hr - mild
		Skin (rabbit):395mg (open) - mild
		Skin: no adverse effect observed (not irritating) $^{[1]}$
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1700 mg/kg ^[2]	Eye (human): 200 ppm irritant
	Inhalation(Rat) LC50: 5000 ppm4h ^[2]	Eye (rabbit): 5 mg/24h SEVERE
xylene	Oral (Mouse) LD50; 2119 mg/kg ^[2]	Eye (rabbit): 87 mg mild
		Eye: adverse effect observed (irritating) ^[1]
		Skin (rabbit):500 mg/24h moderate
		Skin: adverse effect observed (irritating) ^[1]
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 12124 mg/kg ^[2]	Eye (rabbit): 2mg/24h - SEVERE
	Inhalation(Rat) LC50: >13350 ppm4h ^[2]	Eye (rabbit):0.87 mg - mild
toluene	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

Chemwatch: **5619-50** Page **13** of **21**

Part Number: Version No: **2.1**

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

		Skin (rabbit):500 mg - moderate
		Skin: adverse effect observed (irritating) ^[1]
		Skin: no adverse effect observed (not irritating) ^[1]
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 17800 mg/kg ^[2]	Eye (rabbit): 500 mg - SEVERE
ethylbenzene	Inhalation(Rat) LC50: 17.2 mg/l4h ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (Rat) LD50: 3500 mg/kg ^[2]	Skin (rabbit): 15 mg/24h mild
		Skin: no adverse effect observed (not irritating) ^[1]
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 17100 mg/kg ^[1]	Eye (rabbit): 500 mg SEVERE
	Inhalation(Rat) LC50: 64000 ppm4h ^[2]	Eye (rabbit):100mg/24hr-moderate
ethanol	Oral (Rat) LD50: 7060 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
		Skin (rabbit):20 mg/24hr-moderate
		Skin (rabbit):400 mg (open)-mild
		Skin: no adverse effect observed (not irritating) ^[1]
propylene glycol	TOXICITY	IRRITATION
monomethyl ether acetate,	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
alpha-isomer	Oral (Rat) LD50: 3739 mg/kg ^[2]	Skin: no adverse effect observed (not irritating) ^[1]
	TOXICITY	IRRITATION
hydrocarbon propellant	Inhalation(Rat) LC50: 658 mg/l4h ^[2]	Not Available
Legend:	Value obtained from Europe ECHA Registered Sul Unless otherwise specified data extracted from RTE	ostances - Acute toxicity 2. Value obtained from manufacturer's SDS.

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 anaemia. Studies in humans have shown that exposure to acetone at a level of 2375 mg/m3 does not negatively impact an individual's emotional regulation, behaviour, or learning ability.

XYLENE

Reproductive effector in rats

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

For toluene:

Acute toxicity: Humans exposed to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis (sleepiness) and death. When inhaled or swallowed, toluene can cause severe central nervous system depression, and in large doses has a narcotic effect. 60mL has caused death. Death of heart muscle fibres, liver swelling, congestion and bleeding of the lungs and kidney injury were all found on autopsy. Exposure to inhalation at a concentration of 600 parts per million for 8 hours resulted in the same and more serious symptoms including euphoria (a feeling of well-being), dilated pupils, convulsions and nausea. 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. Subchronic/chronic effects: Repeat doses of toluene cause adverse central nervous system effects and can damage the upper airway, the liver and the kidney. Adverse effects occur from both swallowing and inhalation. In humans, a reported lowest level causing adverse effects on the nervous system is 88 parts per million. In one case, toluene caused heart sensitization and death. In several cases of "glue sniffing", damage to the cerebellum was noted. Workers chronically exposed to toluene fumes have reported reduced white cell counts.

TOLUENE

Developmental/Reproductive toxicity: Exposure to high levels of toluene can result in adverse effects in the developing foetus. Several studies have indicated that high levels of toluene can also adversely affect the developing offspring in laboratory animals. In children who were exposed to toluene before birth, as a result of solvent abuse by the mother, variable growth, a small head, central nervous system dysfunction, attention deficits, minor facial and limb abnormalities, and developmental delay were seen. Absorption: Studies in humans and animals have shown that toluene is easily absorbed through the lungs and gastrointestinal tract, with much less being absorbed through the skin.

Distribution: Animal studies show that toluene may be distributed in the body fat, bone marrow, spinal nerves, spinal cord and brain white matter, with lower levels in the blood, kidney and liver. Toluene has generally been found to accumulate in fatty tissue, and in highly vascularised tissues.

Metabolism: Inhaled or ingested toluene may be metabolized to benzyl alcohol, after which it is further oxidized to benzaldehyde and benzoic acid. Benzoic acid is sometimes conjugated with glycine to form hippuric acid or reacted with glycuronic acid to form benzoyl glycuronide. O-cresol and p-cresol formed by ring hydroxylation are considered minor metabolites.

Excretion: Toluene is mainly (60-70%) excreted through the urine as hippuric acid. Benzoyl glycuronide accounts for 10-20% of

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Page 14 of 21

Issue Date: 31/07/2023 Print Date: 03/08/2023

Version No: 2.1 excretion, and unchanged toluene through exhaled air also accounts for 10-20%. Excretion of hippuric acid is usually complete within 24 hours of exposure. Liver changes, utheral tract, effects on fertility, foetotoxicity, specific developmental abnormalities (musculoskeletal system) Ethylbenzene is readily absorbed when inhaled, swallowed or in contact with the skin. It is distributed throughout the body, and passed out through urine. It may irritate the skin, eyes and may cause hearing loss if exposed to high doses. Long Term exposure may cause damage to the kidney, liver and lungs, including a tendency to cancer formation, according to animal **ETHYLBENZENE** testing. There is no research on its effect on sex organs and unborn babies. NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA. WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans. A BASF report (in ECETOC) showed that inhalation exposure to 545 ppm PGMEA (beta isomer) was associated with a teratogenic response in rabbits; but exposure to 145 ppm and 36 ppm had no adverse effects. The beta isomer of PGMEA comprises only 10% of the commercial material, the remaining 90% is alpha isomer. Hazard appears low but emphasizes the need for care in handling this chemical. [I.C.I] *Shin-Etsu SDS 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). 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 and 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. 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. In contrast, beta-isomers are able to form the alkoxypropionic acids and these are linked to birth defects (and possibly, haemolytic effects). The alpha isomer comprises more than 95% of the isomeric mixture in the commercial product, and therefore PGEs show relatively little toxicity. One of the main metabolites of the propylene glycol ethers is propylene glycol, which is of low toxicity and completely metabolized in the body. PROPYLENE GLYCOL As a class, PGEs have low acute toxicity via swallowing, skin exposure and inhalation. PnB and TPM are moderately irritating to MONOMETHYL ETHER the eyes, in animal testing, while the remaining members of this category caused little or no eye irritation. None caused skin **ACETATE, ALPHA-ISOMER** sensitization. Animal testing showed that repeat dosing caused few adverse effects. Animal testing also shows that PGEs do not cause skin effects or reproductive toxicity. Commercially available PGEs have not been shown to cause birth defects. Available instance indicates that propylene glycol ethers are unlikely to possess genetic toxicity. Generally, linear and branched-chain alkyl esters are hydrolysed to their component alcohols and carboxylic acids in the intestinal tract, blood and most tissues throughout the body. Following hydrolysis the component alcohols and carboxylic acids are metabolized Oral acute toxicity studies have been reported for 51 of the 67 esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids. The very low oral acute toxicity of this group of esters is demonstrated by oral LD50 values greater than 1850 mg/kg bw Genotoxicity studies have been performed in vitro using the following esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids: methyl acetate, butyl acetate, butyl stearate and the structurally related isoamyl formate and demonstrates that these substances are not genotoxic. The JEFCA Committee concluded that the substances in this group would not present safety concerns at the current levels of intake the esters of aliphatic acyclic primary alcohols and aliphatic linear saturated carboxylic acids are generally used as to 30 mg/kg foods and in special food categories like candy and alcoholic beverages up to 300 mg/kg foods

flavouring substances up to average maximum levels of 200 mg/kg. Higher levels of use (up to 3000 mg/kg) are permitted in food categories such as chewing gum and hard candy. In Europe the upper use levels for these flavouring substances are generally 1 InternationI Program on Chemical Safety: the Joint FAO/WHO Expert Committee on Food Additives (JECFA)

Esters of Aliphatic acyclic primary alcohols with aliphatic linear saturated carboxylic acids.; 1998

HYDROCARBON PROPELLANT

No significant acute toxicological data identified in literature search. inhalation of the gas

ACETONE & XYLENE & TOLUENE & ETHYLBENZENE & 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.

XYLENE & **ETHYLBENZENE**

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Acute Toxicity	~	Carcinogenicity	~
Skin Irritation/Corrosion	~	Reproductivity	✓
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×

Legend:

Issue Date: **31/07/2023**Print Date: **03/08/2023**

Mutagenicity

×

Aspiration Hazard

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X − Data either not available or does not fill the criteria for classification
 y − Data available to make classification

SECTION 12 Ecological information

Toxicity

Version No: 2.1

alMax™ NPR Caterpillar®	Endpoint	Test Duration (hr)	Species		Value	Source
Yellow Paint (Aerosol)	Not Available	Not Available	Not Available		Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value		Source
	LC50	96h	Fish	3744.6-	5000.7mg/L	4
	NOEC(ECx)	12h	Fish	0.001m	0.001mg/L	
acetone	EC50	72h	Algae or other aquatic plants	5600-10	0000mg/l	4
	EC50	48h	Crustacea	6098.4r	6098.4mg/L	
	EC50	96h	Algae or other aquatic plants	9.873-2	7.684mg/l	4
	Endpoint	Test Duration (hr)	Species		Value	Sourc
	EC50	72h	Algae or other aquatic	plants	4.6mg/l	2
xylene	EC50	48h	Crustacea		1.8mg/l	2
	LC50	96h	Fish		2.6mg/l	2
	NOEC(ECx)	73h	Algae or other aquatic	plants	0.44mg/l	2
	Endpoint	Test Duration (hr)	Species	V	'alue	Sourc
	EC50	96h	Algae or other aquatic pla	ants >	376.71mg/L	4
	EC50	72h	Algae or other aquatic pla	ants 1	12.5mg/l	
toluene	EC50	48h	Crustacea	3	3.78mg/L	
	LC50	96h	Fish	5	5-35mg/l	
	NOEC(ECx)	168h	Crustacea	0	0.74mg/L	
	Endpoint	Test Duration (hr)	Species	Value	9	Sourc
	EC50	96h	Algae or other aquatic plant	s 1.7-7	.6mg/l	4
adadh arasa	EC50	72h	Algae or other aquatic plant	s 2.4-9	2.4-9.8mg/l	
ethylbenzene	EC50	48h	Crustacea	1.37-	1.37-4.4mg/l	
	LC50	96h	Fish	3.381	3.381-4.075mg/L	
	EC50(ECx)	24h	Algae or other aquatic plant	r other aquatic plants 0.02-938mg/l		4
	Endpoint	Test Duration (hr)	Species		Value	Sourc
	EC50	72h	Algae or other aquatic pla	ants	275mg/l	2
a tha mail	EC50	48h	Crustacea		2mg/l	4
ethanol	EC50	96h	Algae or other aquatic pla	ants	<0.001mg/L	4
	LC50	96h	Fish		42mg/l	4
	EC50(ECx)	96h	Algae or other aquatic pla	ants	<0.001mg/L	4
	Endpoint	Test Duration (hr)	Species		Value	Sourc
	EC50	96h	Algae or other aquatic p	lants	>1000mg/l	2
propylene glycol	EC50	72h	Algae or other aquatic p	lants	>1000mg/l	2
nonomethyl ether acetate, alpha-isomer	EC50	48h	Crustacea		373mg/l	2
	LC50	96h	Fish		100mg/l	1
	NOEC(ECx)	336h	Fish		47.5mg/l	2
	Endpoint	Test Duration (hr)	Species		Value	Sourc
hydrocarbon propellant	EC50	96h	Algae or other aquatic p	lants	7.71mg/l	2
	LC50	96h	Fish		24.11mg/l	2

Part Number: Version No: **2.1**

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

EC50(ECx) 96h 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 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

Toxic to aquatic organisms.

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.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)
xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.83 days)
toluene	LOW (Half-life = 28 days)	LOW (Half-life = 4.33 days)
ethylbenzene	HIGH (Half-life = 228 days)	LOW (Half-life = 3.57 days)
ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)
propylene glycol monomethyl ether acetate, alpha-isomer	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
acetone	LOW (BCF = 0.69)
xylene	MEDIUM (BCF = 740)
toluene	LOW (BCF = 90)
ethylbenzene	LOW (BCF = 79.43)
ethanol	LOW (LogKOW = -0.31)
propylene glycol monomethyl ether acetate, alpha-isomer	LOW (LogKOW = 0.56)

Mobility in soil

Ingredient	Mobility
acetone	HIGH (KOC = 1.981)
toluene	LOW (KOC = 268)
ethylbenzene	LOW (KOC = 517.8)
ethanol	HIGH (KOC = 1)
propylene glycol monomethyl ether acetate, alpha-isomer	HIGH (KOC = 1.838)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging

disposal

- ▶ DO NOT allow wash water from cleaning or process equipment to enter drains.
- $\mbox{\ensuremath{}^{\blacktriangleright}}$ 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.
- ▶ Bury residues and emptied aerosol cans at an approved site.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and

Page 17 of 21

GalMax[™] NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

Part Number: Version No: **2.1**

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

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

DO NOT deposit the hazardous substance into or onto a landfill or a sewage facility.

Burning the hazardous substance must happen under controlled conditions with no person or place exposed to

- (1) a blast overpressure of more than 9 kPa; or
- (2) an unsafe level of heat radiation.

The disposed hazardous substance must not come into contact with class 1 or 5 substances.

SECTION 14 Transport information

Labels Required



Marine Pollutant

NO

HAZCHEM

Not Applicable

Land transport (ADG)

• • •				
UN number or ID number	1950	1950		
UN proper shipping name	AEROSOLS	AEROSOLS		
Transport hazard class(es)		2.1 Not Applicable		
Packing group	Not Applicable			
Environmental hazard	Not Applicable			
Special precautions for user	Special provisions Limited quantity	63 190 277 327 344 381 1000ml		

Land transport (UN)

UN number or ID number	1950	1950		
UN proper shipping name	AEROSOLS	AEROSOLS		
Transport hazard class(es)		2.1Not Applicable		
Packing group	Not Applicable			
Environmental hazard	Not Applicable			
Special precautions for user	Special provisions Limited quantity	63; 190; 277; 327; 344; 381 1000ml		

Air transport (ICAO-IATA / DGR)

UN number	1950	1950			
UN proper shipping name	Aerosols, flammable	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 Cargo Only Packing Instructions			A145 A167 A802 203	

Page 18 of 21

Chemwatch: **5619-50**Part Number:
Version No: **2.1**

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

- 1		
	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	AEROSOLS		
Transport hazard class(es)		2.1 Not Applicable		
Packing group	Not Applicable			
Environmental hazard	Not Applicable			
Special precautions for user	EMS Number Special provisions Limited Quantities	F-D, S-U 63 190 277 327 344 381 959 1000 ml		

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

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
acetone	Not Available
xylene	Not Available
toluene	Not Available
ethylbenzene	Not Available
ethanol	Not Available
propylene glycol monomethyl ether acetate, alpha-isomer	Not Available
hydrocarbon propellant	Not Available

Transport in bulk in accordance with the IGC Code

Ship Type
Not Available

SECTION 15 Regulatory information

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

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

HSR Number	Group Standard	
HSR002517	Aerosols Flammable Carcinogenic Group Standard 2020	

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

Page 19 of 21

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

Version No: 2.1

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australian Inventory of Industrial Chemicals (AIIC)

New Zealand Approved Hazardous Substances with controls

xylene is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule $\bf 6$

Australian Inventory of Industrial Chemicals (AIIC)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

Classification of Chemicals

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act -

Classification of Chemicals

Classification of Chemicals - Classification Data

New Zealand Hazardous Substances and New Organisms (HSNO) Act -

New Zealand Hazardous Substances and New Organisms (HSNO) Act

New Zealand Hazardous Substances and New Organisms (HSNO) Act -

New Zealand Inventory of Chemicals (NZIoC)

Classification of Chemicals - Classification Data

New Zealand Workplace Exposure Standards (WES)

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

toluene is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

New Zealand Approved Hazardous Substances with controls

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

Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act -

Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

ethylbenzene is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

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

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

New Zealand Approved Hazardous Substances with controls

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

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

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

ethanol is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous

Australian Inventory of Industrial Chemicals (AIIC)

New Zealand Approved Hazardous Substances with controls

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

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

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

propylene glycol monomethyl ether acetate, alpha-isomer is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

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

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

New Zealand Inventory of Chemicals (NZIoC)

hydrocarbon propellant is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

New Zealand Approved Hazardous Substances with controls

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

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

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

Chemwatch: **5619-50**Part Number:
Version No: **2.1**

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

Hazardous Substance Location

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

Hazard Class	Quantity (Closed Containers)	Quantity (Open Containers)	
2.1.2A	3 000 L (aggregate water capacity)	3 000 L (aggregate water capacity)	

Certified Handler

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

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
2.1.2A				1L (aggregate water capacity)

Tracking Requirements

Not Applicable

National Inventory Status

National Inventory	Status		
Australia - AIIC / Australia Non-Industrial Use	Yes		
Canada - DSL	Yes		
Canada - NDSL	No (acetone; xylene; toluene; ethylbenzene; ethanol; propylene glycol monomethyl ether acetate, alpha-isomer; hydrocarbon propellant)		
China - IECSC	Yes		
Europe - EINEC / ELINCS / NLP	Yes		
Japan - ENCS	Yes		
Korea - KECI	Yes		
New Zealand - NZIoC	Yes		
Philippines - PICCS	Yes		
USA - TSCA	Yes		
Taiwan - TCSI	Yes		
Mexico - INSQ	Yes		
Vietnam - NCI	Yes		
Russia - FBEPH	Yes		
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.		

SECTION 16 Other information

Revision Date	31/07/2023
Initial Date	31/07/2023

Other information

Chemwatch: **5619-50**Part Number:

Version No: 2.1

Page 21 of 21

GalMax™ NPR Caterpillar® Yellow Paint (Aerosol)

Issue Date: **31/07/2023**Print Date: **03/08/2023**

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.