

# Theo Forch Paint Black High Temperature 650 C 400 ml Forch Australia Pty Ltd

Chemwatch: 23-5906
Version No: 4.1.1.1
Safety Data Sheet according to WHS and ADG requirements

#### Chemwatch Hazard Alert Code: 4

Issue Date: **05/02/2020**Print Date: **22/02/2021**S.GHS.AUS.EN

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

#### **Product Identifier**

Product name	Theo Forch Paint Black High Temperature 650 C 400 ml	
Chemical Name	Not Applicable	
Synonyms	: 6210 2515, 6214 2515	
Proper shipping name	EROSOLS	
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	Lacquer spray.
Kelevant identined uses	Application is by spray atomisation from a hand held aerosol pack

# Details of the supplier of the safety data sheet

Registered company name	Forch Australia Pty Ltd	
Address	2 Forward Street Gnagnara WA 6077 Australia	
Telephone	1 8 9303 9113	
Fax	+61 8 9303 9114	
Website	www.forch.com.au	
Email	admin@forch.com.au	

# **Emergency telephone number**

Association / Organisation	+61 8 9303 9113	
Emergency telephone numbers	0413 550 330 (Terry Childs)	
Other emergency telephone numbers	0424 135 792	

## **SECTION 2 Hazards identification**

# Classification of the substance or mixture

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

ChemWatch Hazard Ratings

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Poisons Schedule	Not Applicable	
Classification [1] Flammable Aerosols Category 1, Serious Eye Damage/Eye Irritation Category 1, Reproductive Toxicity Category 3 (narcotic effects), Aspiration Hazard Category 1, Acute Aqui Category 3, Chronic Aquatic Hazard Category 3		
Legend:  1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU)  Annex VI		

#### Label elements

Hazard pictogram(s)









Signal word

Danger

# Hazard statement(s)

• •		
H222	Extremely flammable aerosol.	
H318	Causes serious eye damage.	
H361	Suspected of damaging fertility or the unborn child.	
H336	ay cause drowsiness or dizziness.	
H304	May be fatal if swallowed and enters airways.	
H412	Harmful to aquatic life with long lasting effects.	
AUH019	May form explosive peroxides.	
AUH044	Risk of explosion if heated under confinement.	
AUH066	Repeated exposure may cause skin dryness and cracking.	

# Precautionary statement(s) Prevention

P201	Obtain special instructions before use.	
P271	Use only a well-ventilated area.	
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/	
P261	Avoid breathing mist/vapours/spray.	
P273	Avoid release to the environment.	

# Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P308+P313	IF exposed or concerned: Get medical advice/attention.	
P331	Do NOT induce vomiting.	
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.	

# Precautionary statement(s) Storage

P405	Store locked up.	
P403+P233	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.

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# **SECTION 3 Composition / information on ingredients**

#### **Substances**

See section below for composition of Mixtures

#### **Mixtures**

CAS No	%[weight]	Name
67-64-1	20-25	acetone
108-65-6	1-10	propylene glycol monomethyl ether acetate, alpha-isomer
64742-82-1.	2.5-9.9	naphtha, petroleum, hydrodesulfurised heavy
64742-49-0.	1-9.9	naphtha petroleum, light, hydrotreated.
1330-20-7	1-5	xylene
64742-95-6	1-5	naphtha petroleum, light aromatic solvent
108-65-6	1-5	propylene glycol monomethyl ether - mixture of isomers
78-83-1	1-4.9	isobutanol

#### **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	<ul> <li>If aerosols, fumes or combustion products are inhaled:</li> <li>Remove to fresh air.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor.</li> </ul>
Ingestion	<ul> <li>Avoid giving milk or oils.</li> <li>Avoid giving alcohol.</li> <li>Not considered a normal route of entry.</li> <li>If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</li> </ul>

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

rreat symptomatically.	
for simple ketones:	
BASIC TREATMENT	

- ▶ Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- 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.

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- 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
- 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 Index Sampling Time Comments Methylhippu-ric acids in urine 1.5 gm/gm creatinine End of shift 2 mg/min Last 4 hrs of shift

## **SECTION 5 Firefighting measures**

## Extinguishing media

- Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog Large fires only.

#### SMALL FIRE:

▶ Water spray, dry chemical or CO2

## LARGE FIRE:

Water spray or fog.

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

Fire Incompatibility

· Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

# Advice for firefighters

#### FOR FIRES INVOLVING MANY GAS CYLINDERS:

- Fo stop the flow of gas, specifically trained personnel may inert the atmosphere to reduce oxygen levels thus allowing the capping of leaking container(s).
- PReduce the rate of flow and inject an inert gas, if possible, before completely stopping the flow to prevent flashback.
- DO NOT extinguish the fire until the supply is shut off otherwise an explosive re-ignition may occur. If the fire is extinguished and the flow of gas continues, used increased ventilation to prevent build-up, of explosive

# atmosphere.

- Use non-sparking tools to close container valves.
- ▶ Be CAUTIOUS of a Boiling Liquid Evaporating Vapour Explosion, BLEVE, if fire is impinging on surrounding containers.
- Direct 2500 litre/min (500 gpm) water stream onto containers above liquid level with the assistance remote monitors.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.

## Fire Fighting

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	<ul> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>If safe, switch off electrical equipment until vapour fire hazard removed.</li> <li>Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>DO NOT approach containers suspected to be hot.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Liquid and vapour are highly flammable.</li> <li>Severe fire hazard when exposed to heat or flame.</li> <li>Vapour forms an explosive mixture with air.</li> <li>Severe explosion hazard, in the form of vapour, when exposed to flame or spark.</li> <li>Vapour may travel a considerable distance to source of ignition.</li> <li>Heating may cause expansion or decomposition with violent container rupture.</li> <li>Aerosol cans may explode on exposure to naked flames.</li> <li>Combustion products include:</li> <li>carbon monoxide (CO)</li> <li>carbon dioxide (CO2)</li> <li>other pyrolysis products typical of burning organic material.</li> </ul>
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	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Wear protective clothing, impervious gloves and safety glasses.</li> <li>Shut off all possible sources of ignition and increase ventilation.</li> <li>Wipe up.</li> <li>If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated.</li> <li>Undamaged cans should be gathered and stowed safely.</li> </ul>
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>May be violently or explosively reactive.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water courses</li> <li>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</li> <li>Stop leak if safe to do so.</li> </ul>

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

# **SECTION 7 Handling and storage**

# Precautions for safe handling

The tendency of many ethers to form explosive peroxides is well documented. Ethers lacking non-methyl hydrogen atoms adjacent to the ether link are thought to be relatively safe

- DO NOT concentrate by evaporation, or evaporate extracts to dryness, as residues may contain explosive peroxides with **DETONATION** potential.
- Any static discharge is also a source of hazard.
- ▶ Before any distillation process remove trace peroxides by shaking with excess 5% aqueous ferrous sulfate solution or by percolation through a column of activated alumina.
- ▶ Distillation results in uninhibited ether distillate with considerably increased hazard because of risk of peroxide formation on storage.
- Add inhibitor to any distillate as required.
  - When solvents have been freed from peroxides by percolation through columns of activated alumina, the absorbed peroxides must promptly be desorbed by treatment with polar solvents such as methanol or water, which should then be disposed of safely.

The substance accumulates peroxides which may become hazardous only if it evaporates or is distilled or otherwise treated to concentrate the peroxides. The substance may concentrate around the container opening for example.

Purchases of peroxidisable chemicals should be restricted to ensure that the chemical is used completely before it can become

A responsible person should maintain an inventory of peroxidisable chemicals or annotate the general chemical inventory to

#### Safe handling

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indicate which chemicals are subject to peroxidation. An expiration date should be determined. The chemical should either be treated to remove peroxides or disposed of before this date.

- ▶ The person or laboratory receiving the chemical should record a receipt date on the bottle.
- 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.

#### Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can

- ▶ Store in original containers in approved flammable liquid storage area.
- ▶ **DO NOT** store in pits, depressions, basements or areas where vapours may be trapped.
- No smoking, naked lights, heat or ignition sources.
- ▶ Keep containers securely sealed. Contents under pressure.
- ▶ Store away from incompatible materials.
- ► Store in a cool, dry, well ventilated area.

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

#### Suitable container

Other information

- Aerosol dispenser.
- Check that containers are clearly labelled.
- Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic rings and strong oxidising agents.
- Aromatics can react exothermically with bases and with diazo compounds.

#### For alkyl aromatics:

The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms. The most common and dominant one is the attack by oxidation at benzylic carbon as the intermediate formed is stabilised by resonance structure of the ring.

- Following reaction with oxygen and under the influence of sunlight, a hydroperoxide at the alpha-position to the aromatic ring, is the primary oxidation product formed (provided a hydrogen atom is initially available at this position) this product is often short-lived but may be stable dependent on the nature of the aromatic substitution; a secondary C-H bond is more easily attacked than a primary C-H bond whilst a tertiary C-H bond is even more susceptible to attack by oxygen
- Monoalkylbenzenes may subsequently form monocarboxylic acids; alkyl naphthalenes mainly produce the corresponding naphthalene carboxylic acids.
- Dividation in the presence of transition metal salts not only accelerates but also selectively decomposes the hydroperoxides.
- Hock-rearrangement by the influence of strong acids converts the hydroperoxides to hemiacetals. Peresters formed from the hydroperoxides undergo Criegee rearrangement easily.
- ▶ Alkali metals accelerate the oxidation while CO2 as co-oxidant enhances the selectivity.

#### ▶ m

- may react violently with chloroform, activated charcoal, aliphatic amines, bromine, bromine trifluoride, chlorotriazine, chromic(IV) acid, chromic(VI) acid, chromium trioxide, chromyl chloride, hexachloromelamine, iodine heptafluoride, iodoform, liquid oxygen, nitrosyl chloride, nitrosyl perchlorate, nitryl perchlorate, perchloromelamine, peroxomonosulfuric acid, platinum, potassium tert-butoxide, strong acids, sulfur dichloride, trichloromelamine, xenon tetrafluoride
- reacts violently with bromoform and chloroform in the presence of alkalies or in contact with alkaline surfaces.

# • may form unstable and explosive peroxides in contact with strong oxidisers, fluorine, hydrogen peroxide (90%), sodium perchlorate. 2-methyl-1.3-butadiene

- can increase the explosive sensitivity of nitromethane on contact flow or agitation may generate electrostatic charges due to low conductivity
- dissolves or attacks most rubber, resins, and plastics (polyethylenes, polyester, vinyl ester, PVC, Neoprene, Viton) Ketones in this group:
- reactive with many acids and bases liberating heat and flammable gases (e.g., H2).
- react with reducing agents such as hydrides, alkali metals, and nitrides to produce flammable gas (H2) and heat.
- are incompatible with isocyanates, aldehydes, cyanides, peroxides, and anhydrides.
- react violently with aldehydes, HNO3 (nitric acid), HNO3 + H2O2 (mixture of nitric acid and hydrogen peroxide), and HClO4 (perchloric acid)
- ▶ may react with hydrogen peroxide to form unstable peroxides; many are heat- and shock-sensitive explosives.

A significant property of most ketones is that the hydrogen atoms on the carbons next to the carbonyl group are relatively acidic when compared to hydrogen atoms in typical hydrocarbons. Under strongly basic conditions these hydrogen atoms may be abstracted to form an enolate anion.

Propylene glycol monomethyl ether acetate:

- ▶ may polymerise unless properly inhibited due to peroxide formation
- lacktriangledown should be isolated from UV light, high temperatures, free radical initiators
- may react with strong oxidisers to produce fire and/ or explosion
- reacts violently with with sodium peroxide, uranium fluoride
- is incompatible with sulfuric acid, nitric acid, caustics, aliphatic amines, isocyanates, boranes
- 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

# Storage incompatibility

#### SECTION 8 Exposure controls / personal protection

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# **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
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	naphtha, petroleum, hydrodesulfurised heavy	White spirits	790 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	xylene	Xylene (o-, m-, p- isomers)	80 ppm / 350 mg/m3	655 mg/m3 / 150 ppm	Not Available	Not Available
Australia Exposure Standards	propylene glycol monomethyl ether - mixture of isomers	1-Methoxy-2-propanol acetate	50 ppm / 274 mg/m3	548 mg/m3 / 100 ppm	Not Available	Not Available
Australia Exposure Standards	propylene glycol monomethyl ether - mixture of isomers	Propylene glycol monomethyl ether	100 ppm / 369 mg/m3	553 mg/m3 / 150 ppm	Not Available	Not Available
Australia Exposure Standards	isobutanol	Isobutyl alcohol	50 ppm / 152 mg/m3	Not Available	Not Available	Not Available

# **Emergency Limits**

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
acetone	Acetone	Not Available	Not Available	Not Available
propylene glycol monomethyl ether acetate, alpha-isomer	Propylene glycol monomethyl ether acetate, alpha-isomer; (1-Methoxypropyl-2-acetate)	Not Available	Not Available	Not Available
naphtha, petroleum,	Naphtha, hydrotreated heavy; (Isopar L-rev 2)	350	1,800	40,000
hydrodesulfurised heavy		mg/m3	mg/m3	mg/m3
naphtha, petroleum,	Naphtha (coal tar); includes solvent naphtha, petroleum (64742-88-7), naphtha (petroleum) light aliphatic, rubber solvent (64742-89-8), heaevy catalytic cracked (64741-54-4), light straight run (64741-46-4), heavy aliphatic solvent (64742-96-7), high flash aromatic and aromatic solvent naphtha (64742-95-6)	1,200	6,700	40,000
hydrodesulfurised heavy		mg/m3	mg/m3	mg/m3
naphtha, petroleum,	Naphtha (coal tar); includes solvent naphtha, petroleum (64742-88-7), naphtha (petroleum) light aliphatic, rubber solvent (64742-89-8), heaevy catalytic cracked (64741-54-4), light straight run (64741-46-4), heavy aliphatic solvent (64742-96-7), high flash aromatic and aromatic solvent naphtha (64742-95-6)	1,200	6,700	40,000
hydrodesulfurised heavy		mg/m3	mg/m3	mg/m3
naphtha, petroleum,	Petroleum distillates; petroleum ether; includes clay-treated light naphthenic [64742-45-6]; low boiling [68477-31-6]; petroleum extracts [64742-06-9]; petroleum base oil [64742-46-7]; petroleum 50 thinner, petroleum spirits [64475-85-0], Soltrol, VM&P naphtha [8032-32-4]; Ligroine, and paint solvent; petroleum paraffins C5-C20 [64771-72-8]; hydrotreated light naphthenic [64742-53-6]; solvent refined light naphthenic [64741-97-5]; and machine coolant 1	1,100	1,800	40,000
hydrodesulfurised heavy		mg/m3	mg/m3	mg/m3
naphtha, petroleum,	Naphtha (coal tar); includes solvent naphtha, petroleum (64742-88-7), naphtha (petroleum) light aliphatic, rubber solvent (64742-89-8), heaevy catalytic cracked (64741-54-4), light straight run (64741-46-4), heavy aliphatic solvent (64742-96-7), high flash aromatic and aromatic solvent naphtha (64742-95-6)	1,200	6,700	40,000
hydrodesulfurised heavy		mg/m3	mg/m3	mg/m3
naphtha, petroleum,	Petroleum distillates; petroleum ether; includes clay-treated light naphthenic [64742-45-6]; low boiling [68477-31-6]; petroleum extracts [64742-06-9]; petroleum base oil [64742-46-7]; petroleum 50 thinner, petroleum spirits [64475-85-0], Soltrol, VM&P naphtha [8032-32-4]; Ligroine, and paint solvent; petroleum paraffins C5-C20 [64771-72-8]; hydrotreated light naphthenic [64742-53-6]; solvent refined light naphthenic [64741-97-5]; and machine coolant 1	1,100	1,800	40,000
hydrodesulfurised heavy		mg/m3	mg/m3	mg/m3
naphtha, petroleum,	Stoddard solvent; (Mineral spirits, 85% nonane and 15% trimethyl benzene)	300	1,800	29500**
hydrodesulfurised heavy		mg/m3	mg/m3	mg/m3
naphtha petroleum, light,	Naphtha (petroleum),hydrotreated light	1,000	11,000	66,000
hydrotreated.		mg/m3	mg/m3	mg/m3
xylene	Xylenes	Not Available	Not Available	Not Available
naphtha petroleum, light	Naphtha (coal tar); includes solvent naphtha, petroleum (64742-88-7), naphtha (petroleum) light aliphatic, rubber solvent (64742-89-8), heaevy catalytic cracked (64741-54-4), light straight run (64741-46-4), heavy aliphatic solvent (64742-96-7), high flash aromatic and aromatic solvent naphtha (64742-95-6)	1,200	6,700	40,000
aromatic solvent		mg/m3	mg/m3	mg/m3

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Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
propylene glycol monomethyl ether - mixture of isomers	Propylene glycol monomethyl ether; (Ucar Triol HG-170)	100 ppm	160 ppm	660 ppm
propylene glycol monomethyl ether - mixture of isomers	Propylene glycol monomethyl ether acetate, alpha-isomer; (1-Methoxypropyl-2-acetate)	Not Available	Not Available	Not Available
isobutanol	Isobutyl alcohol	150 ppm	1,300 ppm	8000* ppm

Ingredient	Original IDLH	Revised IDLH
acetone	2,500 ppm	Not Available
propylene glycol monomethyl ether acetate, alpha-isomer	Not Available	Not Available
naphtha, petroleum, hydrodesulfurised heavy	20,000 mg/m3 / 1,100 ppm / 1,000 ppm	Not Available
naphtha petroleum, light, hydrotreated.	Not Available	Not Available
xylene	900 ppm	Not Available
naphtha petroleum, light aromatic solvent	Not Available	Not Available
propylene glycol monomethyl ether - mixture of isomers	Not Available	Not Available
isobutanol	1,600 ppm	Not Available

#### **Occupational Exposure Banding**

	-		
Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
naphtha petroleum, light, hydrotreated.	Е	≤ 0.1 ppm	
naphtha petroleum, light aromatic solvent	E	≤ 0.1 ppm	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.		

# **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 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.

## Personal protection











# Eye and face protection

- ► Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable.

## 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**

Hands/feet protection

See Other protection below

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#### No special equipment needed when handling small quantities. OTHERWISE:

- Overalls.
- ► Skin cleansing cream.
- Eyewash unit.
- Other protection
- Do not spray on hot surfaces.
- The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton.
- Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.

BRETHERICK: Handbook of Reactive Chemical Hazards.

# Recommended material(s)

#### **GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the:

#### "Forsberg Clothing Performance Index".

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

Theo Forch Paint Black High Temperature 650 C 400 ml

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/NEOPRENE	С

<sup>\*</sup> CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

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

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

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

#### Respiratory protection

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

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

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

#### ^ - Full-face

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

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

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

Black aerosol with solvent odour; doesnt mix with water.

#### Appearance

Note that all of the monopropylene glycol ethers may exist in two isomeric forms, alpha or beta. The alpha form, which is thermodynamically favored during synthesis, consists of a secondary alcohol configuration. The beta form consists of a primary alcohol. The two isomeric forms are shown above. The di- and tripropylene glycol ethers may form up to 4 and 8 isomeric forms, respectively. Even so, all isomers exhibit either the "alpha" or "beta" configuration, existing as secondary or primary alcohols,

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respectively. The distribution of isomeric forms for the di- and tripropylene glycols, as with the mono-PGEs, also results in predominantly the alpha form (i.e., a secondary alcohol).

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

# **SECTION 10 Stability and reactivity**

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

# **SECTION 11 Toxicological information**

# Information on toxicological effects

Inhaled	Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.  Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.  There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.  Inhalation hazard is increased at higher temperatures.  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.
Ingestion	Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)  Accidental ingestion of the material may be damaging to the health of the individual.  Not normally a hazard due to physical form of product.  Considered an unlikely route of entry in commercial/industrial environments
Skin Contact	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.  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.  There is some evidence to suggest that the material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness,

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swelling and blistering.

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	Swelling and blistering.	
Еуе	instillation. Severe inflammation may be expected with	ation in some persons and produce eye damage 24 hours or more after n pain.  e of causing temporary impairment of vision and/or transient eye
Chronic	There has been some concern that this material can cassessment.  Substance accumulation, in the human body, may occocupational exposure.  There is some evidence from animal testing that expomain route of exposure to the gas in the workplace is Women exposed to xylene in the first 3 months of preexpluation of workers chronically exposed to xylene he exposure to the material for prolonged periods may cannot be substantial.	with cracking, irritation and possible dermatitis following. cause cancer or mutations but there is not enough data to make an cur and may cause some concern following repeated or long-term sure to this material may result in toxic effects to the unborn baby. by inhalation. gnancy showed a slightly increased risk of miscarriage and birth defects. as demonstrated lack of genetic toxicity. ause physical defects in the developing embryo (teratogenesis). inflammation of the airways, stomach and small bowel, attacks of giddiness
Theo Forch Paint Black	TOXICITY	IRRITATION
High Temperature 650 C 400 ml	Not Available	Not Available
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >7.426 mg/kg <sup>[1]</sup>	Eye (human): 500 ppm - irritant
	Inhalation(Mouse) LC50; 44 mg/L4hrs <sup>[2]</sup>	Eye (rabbit): 20mg/24hr -moderate
acetone	Oral(Mouse) LD50; 0.003 mg/kg <sup>[2]</sup>	Eye (rabbit): 3.95 mg - SEVERE
acetone		Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin (rabbit): 500 mg/24hr - mild
		Skin (rabbit):395mg (open) - mild
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
propylene glycol	TOXICITY	IRRITATION
monomethyl ether acetate,	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
alpha-isomer	Oral(Rat) LD50; 5155 mg/kg <sup>[1]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
	TOXICITY	IRRITATION
naphtha, petroleum,	Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
hydrodesulfurised heavy	Oral(Rat) LD50; >4500 mg/kg <sup>[1]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
	TOXICITY	IRRITATION
naphtha petroleum, light,	Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
hydrotreated.	Inhalation(Rat) LC50; 73860 ppm4hrs[1]	Skin: adverse effect observed (irritating) <sup>[1]</sup>
	Oral(Rat) LD50; >2000 mg/kg <sup>[1]</sup>	
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1700 mg/kg <sup>[2]</sup>	Eye (human): 200 ppm irritant
	Inhalation(Rat) LC50; 5922 ppm4hrs <sup>[1]</sup>	Eye (rabbit): 5 mg/24h SEVERE
xylene	Oral(Rat) LD50; 8.70 mg/kg <sup>[1]</sup>	Eye (rabbit): 87 mg mild
		Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin (rabbit):500 mg/24h moderate
		Skin: adverse effect observed (irritating) <sup>[1]</sup>
	TOXICITY	IRRITATION
naphtha petroleum, light	Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
aromatic solvent	Inhalation(Rat) LC50; >5.2 mg/l4hrs <sup>[2]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>
	Oral(Rat) LD50; >4500 mg/kg <sup>[1]</sup>	

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	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye (rabbit) 230 mg mild
propylene glycol	Oral(Rat) LD50; 5155 mg/kg <sup>[1]</sup>	Eye (rabbit) 500 mg/24 h mild
nonomethyl ether - mixture of isomers		Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
		Skin (rabbit) 500 mg open - mild
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
	TOXICITY	IRRITATION
	TOXICITY  Dermal (rabbit) LD50: >2000 mg/kg <sup>[2]</sup>	IRRITATION  Eye (rabbit): 2 20 mg/24h-moderate
isobutanol		

#### PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER

Version No: 4.1.1.1

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 Low Boiling Point Naphthas (LBPNs):

#### Acute toxicity:

LBPNs generally have low acute toxicity by the oral (median lethal dose [LD50] in rats > 2000 mg/kg-bw), inhalation (LD50 in rats > 5000 mg/m3) and dermal (LD50 in rabbits > 2000 mg/kg-bw) routes of exposure

Most LBPNs are mild to moderate eye and skin irritants in rabbits, with the exception of heavy catalytic cracked and heavy catalytic reformed naphthas, which have higher primary skin irritation indices.

#### Sensitisation:

LBPNs do not appear to be skin sensitizers, but a poor response in the positive control was also noted in these studies **Repeat dose toxicity:** 

The lowest-observed-adverse-effect concentration (LOAEC) and lowest-observed-adverse-effect level (LOAEL) values identified following short-term (2-89 days) and subchronic (greater than 90 days) exposure to the LBPN substances. These values were determined for a variety of endpoints after considering the toxicity data for all LBPNs in the group. Most of the studies were carried out by the inhalation route of exposure. Renal effects, including increased kidney weight, renal lesions (renal tubule dilation, necrosis) and hyaline droplet formation, observed in male rats exposed orally or by inhalation to most LBPNs, were considered species- and sex-specific These effects were determined to be due to a mechanism of action not relevant to humans -specifically, the interaction between hydrocarbon metabolites and alpha-2-microglobulin, an enzyme not produced in substantial amounts in female rats, mice and other species, including humans. The resulting nephrotoxicity and subsequent carcinogenesis in male rats were therefore not considered in deriving LOAEC/LOAEL values.

# NAPHTHA PETROLEUM, LIGHT, HYDROTREATED.

Only a limited number of studies of short-term and subchronic duration were identified for site-restricted LBPNs. The lowest LOAEC identified in these studies, via the inhalation route, is 5475 mg/m3, based on a concentration-related increase in liver weight in both male and female rats following a 13-week exposure to light catalytic cracked naphtha. Shorter exposures of rats to this test substance resulted in nasal irritation at 9041 mg/m3

No systemic toxicity was reported following dermal exposure to light catalytic cracked naphtha, but skin irritation and accompanying histopathological changes were increased, in a dose-dependent manner, at doses as low as 30 mg/kg-bw per day when applied 5 days per week for 90 days in rats

No non-cancer chronic toxicity studies (= 1 year) were identified for site-restricted LBPNs and very few non-cancer chronic toxicity studies were identified for other LBPNs.

For petroleum: This product contains benzene, which can cause acute myeloid leukaemia, and n-hexane, which can be metabolized to compounds which are toxic to the nervous system. This product contains toluene, and animal studies suggest high concentrations of toluene lead to hearing loss. This product contains ethyl benzene and naphthalene, from which animal testing shows evidence of tumour formation.

Cancer-causing potential: Animal testing shows inhaling petroleum causes tumours of the liver and kidney; these are however not considered to be relevant in humans.

Mutation-causing potential: Most studies involving gasoline have returned negative results regarding the potential to cause mutations, including all recent studies in living human subjects (such as in petrol service station attendants).

Reproductive toxicity: Animal studies show that high concentrations of toluene (>0.1%) can cause developmental effects such as lower birth weight and developmental toxicity to the nervous system of the foetus. Other studies show no adverse effects on the foetus

Human effects: Prolonged or repeated contact may cause defatting of the skin which can lead to skin inflammation and may make the skin more susceptible to irritation and penetration by other materials.

Animal testing shows that exposure to gasoline over a lifetime can cause kidney cancer, but the relevance in humans is questionable.

# 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.

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#### Theo Forch Paint Black High Temperature 650 C 400 ml

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For trimethylbenzenes:

Absorption of 1,2,4-trimethylbenzene occurs after exposure by swallowing, inhalation, or skin contact. In the workplace, inhalation and skin contact are the most important routes of absorption; whole-body toxic effects from skin absorption are unlikely to occur as the skin irritation caused by the chemical generally leads to quick removal. The substance is fat-soluble and may accumulate in fatty tissues. It is also bound to red blood cells in the bloodstream. It is excreted from the body both by exhalation and in the urine

Acute toxicity: Direct contact with liquid 1,2,4-trimethylbenzene is irritating to the skin, and breathing the vapour is irritating to the airway, causing lung inflammation. Breathing high concentrations of the chemical vapour causes headache, fatigue and drowsiness. In humans, liquid 1,2,4-trimethylbenzene is irritating to the skin and inhalation of the vapour causes chemical pneumonitis.

NAPHTHA PETROLEUM, LIGHT AROMATIC SOLVENT

Version No: 4.1.1.1

For C9 aromatics (typically trimethylbenzenes - TMBs)

Acute toxicity: Animal testing shows that semi-lethal concentrations and doses vary amongst this group. The semilethal concentrations for inhalation range from 6000 to 10000 mg/cubic metre for C9 aromatic naphtha and 18000-24000 mg/cubic metre for 1.2.4- and 1.3.5-TMB, respectively.

Irritation and sensitization: Results from animal testing indicate that C9 aromatic hydrocarbon solvents are mildly to moderately irritating to the skin, minimally irritating to the eye, and have the potential to irritate the airway and cause depression of breathing rate. There is no evidence that it sensitizes skin.

Repeated dose toxicity: Animal studies show that chronic inhalation toxicity for C9 aromatic hydrocarbon solvents is slight. Similarly, oral exposure does not appear to pose a high toxicity hazard for pure trimethylbenzene isomers.

Mutation-causing ability: No evidence of mutation-causing ability and genetic toxicity was found in animal and laboratory testing. Reproductive and developmental toxicity: No definitive effects on reproduction were seen, although reduction in weight in developing animals may been seen at concentrations that are toxic to the mother.

\* [Devoe] .

PROPYLENE GLYCOL MONOMETHYL ETHER -MIXTURE OF ISOMERS

NOTE: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm. Fetotoxic effects were seen in rats but not in rabbits at this concentration; maternal toxicity was noted in both species.

Theo Forch Paint Black
High Temperature 650 C
400 ml & NAPHTHA,
PETROLEUM,
HYDRODESULFURISED
HEAVY & NAPHTHA
PETROLEUM, LIGHT,
HYDROTREATED. &
PROPYLENE GLYCOL
MONOMETHYL ETHERMIXTURE OF ISOMERS

Theo Forch Paint Black

High Temperature 650 C

**GLYCOL MONOMETHYL** 

ISOMER & PROPYLENE

GLYCOL MONOMETHYL

**ETHER - MIXTURE OF** 

**ISOMERS** 

ETHER ACETATE, ALPHA-

400 ml & PROPYLENE

No significant acute toxicological data identified in literature search.

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.

Theo Forch Paint Black
High Temperature 650 C
400 ml & NAPHTHA
PETROLEUM, LIGHT
AROMATIC SOLVENT &
PROPYLENE GLYCOL
MONOMETHYL ETHER MIXTURE OF ISOMERS &
ISOBUTANOL

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.

Theo Forch Paint Black High Temperature 650 C 400 ml & PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER

Animal testing shows that high concentrations (for example, 0.5%) are associated with birth defects but lower exposures have not been shown to cause 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.

Theo Forch Paint Black High Temperature 650 C 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

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#### Theo Forch Paint Black High Temperature 650 C 400 ml

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400 ml & ACETONE

the eye. Animal testing shows acetone may cause macrocytic anaemia. Studies in humans have shown that exposure to acetone at a level of 2375 mg/cubic metre has not caused neurobehavioural deficits.

ACETONE & XYLENE & PROPYLENE GLYCOL MONOMETHYL ETHER - MIXTURE OF ISOMERS & ISOBUTANOL

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.

NAPHTHA, PETROLEUM, HYDRODESULFURISED HEAVY & NAPHTHA PETROLEUM, LIGHT, HYDROTREATED. Animal studies indicate that normal, branched and cyclic paraffins are absorbed from the gastrointestinal tract and that the absorption of n-paraffins is inversely proportional to the carbon chain length, with little absorption above C30. With respect to the carbon chain lengths likely to be present in mineral oil, n-paraffins may be absorbed to a greater extent than iso- or cycloparaffins.

The major classes of hydrocarbons are well absorbed into the gastrointestinal tract in various species. In many cases, the hydrophobic hydrocarbons are ingested in association with fats in the diet. Some hydrocarbons may appear unchanged as in the lipoprotein particles in the gut lymph, but most hydrocarbons partly separate from fats and undergo metabolism in the gut cell. The gut cell may play a major role in determining the proportion of hydrocarbon that becomes available to be deposited unchanged in peripheral tissues such as in the body fat stores or the liver.

NAPHTHA PETROLEUM, LIGHT, HYDROTREATED. & PROPYLENE GLYCOL MONOMETHYL ETHER -MIXTURE OF ISOMERS

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

**XYLENE & ISOBUTANOL** 

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	<b>✓</b>
Serious Eye Damage/Irritation	<b>~</b>	STOT - Single Exposure	<b>✓</b>
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	~

Legend:

★ – Data either not available or does not fill the criteria for classification

✓ – Data available to make classification

## **SECTION 12 Ecological information**

# Toxicity

Theo Forch Paint Black	Endpoint	Test Duration (hr)	Species		Value	Source
High Temperature 650 C 400 ml	Not Available	Not Available	Not Available		Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Valu	e	Source
	LC50	96	Fish	>100	)mg/L	4
acetone	EC50	48	Crustacea	6098	3.4mg/L	5
accione	EC50	96	Algae or other aquatic plants	-9.87	73-27.684mg/L	4
	NOEC	96	Not Available	<0.0 =mg	00000005- /L	4
	Endpoint	Test Duration (hr)	Species		Value	Source
propylene glycol	LC50	96	Fish		>100mg/L	2
nonomethyl ether acetate,	EC50	48	Crustacea		373mg/L	2
alpha-isomer	EC50	72	Algae or other aquatic pl	ants	>1000mg/L	2
	NOEC	336	Fish		47.5mg/L	2
	Endpoint	Test Duration (hr)	Species		Value	Source
	EC50	72	Algae or other aquatic p	lants	=13mg/L	1
naphtha, petroleum,	NOEC	72	Algae or other aquatic p	lants	=0.1mg/L	1
hydrodesulfurised heavy	LC50	96	Fish		4.1mg/L	2
	EC50	48	Crustacea		4.5mg/L	2
	EC50	72	Algae or other aquatic p	lants	3.1mg/L	2

LC50

EC50

EC50

96

48

72

naphtha petroleum, light,

naphtha petroleum, light

aromatic solvent

propylene glycol monomethyl ether -

mixture of isomers

isobutanol

hydrotreated.

xylene

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Т	heo Forch Paint Black Hig	gh Tempera	ture 650 C 400 ml		PIIIILL	Date: <b>22/02/</b> 2
NOEL	72		Algae or other aquatic plants		0.1mg/L	2
LC50	96		Fish		4.1mg/L	2
EC50	48		Crustacea		4.5mg/L	2
EC50	72		Algae or other aquatic plants		0.53mg/L	2
NOEC	504		Crustacea		0.097mg/L	2
LC50	96		Fish		18mg/L	2
EC50	48		Crustacea		1.4mg/L	2
EC50	72		Algae or other aquatic plants		3.7mg/L	2
NOEL	96		Algae or other aquatic plants		0.2mg/L	2
LC50	96		Fish		4.1mg/L	2
EC50	48		Crustacea		4.5mg/L	2
EC50	72		Algae or other aquatic plants		3.1mg/L	2
NOEC	72		Algae or other aquatic plants		<0.1mg/L	1
NOEC	192		Crustacea		=5mg/L	1
_C50	96		Fish		4.1mg/L	2
EC50	48		Crustacea		4.5mg/L	2
EC50	72		Algae or other aquatic plants		3.1mg/L	2
NOEC	72		Algae or other aquatic plants		<0.1mg/L	1
_C50	96		Fish		4.1mg/L	2
EC50	48		Crustacea		4.5mg/L	2
EC50	72		Algae or other aquatic plants		3.1mg/L	2
NOEC	72		Algae or other aquatic plants		<0.1mg/L	1
_C50	96		Fish		0.14mg/L	2
EC50	96		Algae or other aquatic plants		0.277mg/L	2
NOEC	720		Fish		0.02mg/L	2
Endpoint	Test Duration (hr)		Species		Value	Source
 _C50	96		Fish		4.1mg/L	2
EC50	48		Crustacea		0.64mg/L	2
EC50	72		Algae or other aquatic plants		3.1mg/L	2
NOEL	72		Algae or other aquatic plants		0.1mg/L	2
					·	
Endpoint	Test Duration (hr)		pecies	Val		Source
LC50	96		sh		013404-mg/L	4
EC50	48		rustacea		mg/L	2
EC50	72		gae or other aquatic plants		mg/L	2
NOEL	72	IN	ot Available	0.0	1-mg/L	4
Endpoint	Test Duration (hr)		Species		Value	Source
LC50	96		Fish		4.1mg/L	2
EC50	48		Crustacea		3.2mg/L	2
EC50	72		Algae or other aquatic plants		3.1mg/L	2
NOEL	72		Algae or other aquatic plants		0.1mg/L	2
Endpoint	Test Duration (hr)		Species		Value	Source
LC50	96		Fish		>100mg/L	2
EC50	48		Crustacea		373mg/L	2
EC50	72		Algae or other aquatic plants		>1000mg/L	2
NOEC	336		Fish		47.5mg/L	2
			pecies	Ve	alua.	C
Endpoint	Test Duration (hr)		becies	V-	alue	Source

Fish

Crustacea

Algae or other aquatic plants

-901-1000mg/L

ca.600mg/L

593mg/L

4

1

2

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Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

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

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

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

DO NOT discharge into sewer or waterways.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)
propylene glycol monomethyl ether acetate, alpha-isomer	LOW	LOW
xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.83 days)
propylene glycol monomethyl ether - mixture of isomers	LOW (Half-life = 56 days)	LOW (Half-life = 1.7 days)
isobutanol	LOW (Half-life = 14.42 days)	LOW (Half-life = 4.15 days)

#### **Bioaccumulative potential**

Ingredient	Bioaccumulation
acetone	LOW (BCF = 0.69)
propylene glycol monomethyl ether acetate, alpha-isomer	LOW (LogKOW = 0.56)
xylene	MEDIUM (BCF = 740)
propylene glycol monomethyl ether - mixture of isomers	LOW (BCF = 2)
isobutanol	LOW (LogKOW = 0.76)

# Mobility in soil

Ingredient	Mobility
acetone	HIGH (KOC = 1.981)
propylene glycol monomethyl ether acetate, alpha-isomer	HIGH (KOC = 1.838)
propylene glycol monomethyl ether - mixture of isomers	HIGH (KOC = 1)
isobutanol	MEDIUM (KOC = 2.048)

## **SECTION 13 Disposal considerations**

# Waste treatment methods

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- 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.

# **SECTION 14 Transport information**

Product / Packaging

disposal

# Labels Required

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# 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 provisions   63 190 277 327 344 381

# Air transport (ICAO-IATA / DGR)

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

# Sea transport (IMDG-Code / GGVSee)

UN number	1950	
UN proper shipping name	AEROSOLS	
Transport hazard class(es)		2.1Not 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	

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Product name	Group
acetone	Not Available
propylene glycol monomethyl ether acetate, alpha-isomer	Not Available
naphtha, petroleum, hydrodesulfurised heavy	Not Available
naphtha petroleum, light, hydrotreated.	Not Available
xylene	Not Available
naphtha petroleum, light aromatic solvent	Not Available
propylene glycol monomethyl ether - mixture of isomers	Not Available
isobutanol	Not Available

## Transport in bulk in accordance with the ICG Code

Product name	Ship Type
acetone	Not Available
propylene glycol monomethyl ether acetate, alpha-isomer	Not Available
naphtha, petroleum, hydrodesulfurised heavy	Not Available
naphtha petroleum, light, hydrotreated.	Not Available
xylene	Not Available
naphtha petroleum, light aromatic solvent	Not Available
propylene glycol monomethyl ether - mixture of isomers	Not Available
isobutanol	Not Available

# **SECTION 15 Regulatory information**

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

# acetone 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

Australian Inventory of Industrial Chemicals (AIIC)

# 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)

## naphtha, petroleum, hydrodesulfurised heavy 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

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

#### naphtha petroleum, light, hydrotreated. 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

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

## 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 6

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Australian Inventory of Industrial Chemicals (AIIC)

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

#### naphtha petroleum, light aromatic solvent 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

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

#### propylene glycol monomethyl ether - mixture of isomers 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

#### isobutanol is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

# **National Inventory Status**

National Inventory	Status		
Australia - AIIC / Australia Non-Industrial Use	Yes		
Canada - DSL	Yes		
Canada - NDSL	No (acetone; propylene glycol monomethyl ether acetate, alpha-isomer; naphtha, petroleum, hydrodesulfurised heavy; naphtha petroleum, light, hydrotreated.; xylene; naphtha petroleum, light aromatic solvent; isobutanol)		
China - IECSC	Yes		
Europe - EINEC / ELINCS / NLP	Yes		
Japan - ENCS	No (naphtha petroleum, light, hydrotreated.)		
Korea - KECI	Yes		
New Zealand - NZIoC	Yes		
Philippines - PICCS	Yes		
USA - TSCA	Yes		
Taiwan - TCSI	Yes		
Mexico - INSQ	Yes		
Vietnam - NCI	Yes		
Russia - ARIPS	Yes		
Legend:	Yes = All CAS declared ingredients are on the inventory  No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)		

# **SECTION 16 Other information**

Revision Date	05/02/2020
Initial Date	06/05/2010

# **SDS Version Summary**

Version	Issue Date	Sections Updated
3.1.1.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
4.1.1.1	05/02/2020	Ingredients, Physical Properties

#### Other information

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

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

# **Definitions and abbreviations**

PC-TWA: Permissible Concentration-Time Weighted Average PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

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

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

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