



## Duron UV Stable Polyurethane

Duron Hazard Alert Code: 2

Duron: 5217-66

Version No: 4.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Issue Date: 23/12/2022

S.GHS.AUS.EN

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

#### Product Identifier

<b>Product name</b>	Duron UV Stable Polyurethane
<b>Chemical Name</b>	Not Applicable
<b>Synonyms</b>	(Non-Yellowing High Build PU) (Non-Yellowing Gloss PU) (Non-Yellowing Satin PU)
<b>Proper shipping name</b>	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
<b>Chemical formula</b>	Not Applicable
<b>Other means of identification</b>	Not Available

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

<b>Relevant identified uses</b>	Clear PU Floor Finish. Application by roller or brush.
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#### Details of the manufacturer or supplier of the safety data sheet

<b>Registered company name</b>	Duron
<b>Address</b>	4 Progress Street Yatala QLD 4207 Australia
<b>Telephone</b>	+61 1300 033530
<b>Fax</b>	Not available
<b>Website</b>	<a href="http://www.duron.com.au">www.duron.com.au</a>
<b>Email</b>	Not Available

#### Emergency telephone number

<b>Association / Organisation</b>	DURON EMERGENCY RESPONSE
<b>Emergency telephone numbers</b>	0414 392 991
<b>Other emergency telephone numbers</b>	Not Available

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

### SECTION 2 Hazards identification

#### Classification of the substance or mixture

##### Chemwatch Hazard Ratings

	Min	Max	
Flammability	2		
Toxicity	2		
Body Contact	2		
Reactivity	1		
Chronic	2		

0 = Minimum  
1 = Low  
2 = Moderate  
3 = High  
4 = Extreme

<b>Poisons Schedule</b>	S5
<b>Classification [1]</b>	Flammable Liquids Category 3, Acute Toxicity (Dermal) Category 4, Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category 2
<b>Legend:</b>	1. Classified by Duron; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

#### Label elements

Duron UV Stable Polyurethane

Hazard pictogram(s)	
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Signal word	<b>Warning</b>
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**Hazard statement(s)**

H226	Flammable liquid and vapour.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

**Precautionary statement(s) Prevention**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271	Use only outdoors or in a well-ventilated area.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.

**Precautionary statement(s) Response**

P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
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.
P391	Collect spillage.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.

**Precautionary statement(s) Storage**

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

**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
Not Available	30-60	isocyanate prepolymer
64742-95-6.	10-29	<u>naphtha petroleum, light aromatic solvent</u>
54839-24-6	1-9	<u>propylene glycol monoethyl ether acetate - alpha isomer</u>
4098-71-9	<1	<u>isophorone diisocyanate</u>

**Legend:** 1. Classified by Duron; 2. Classification drawn from HCIS; 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**

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ 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.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>

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<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</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>▶ Apply artificial respiration if not breathing, 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> <p>Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted.</p>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ If swallowed do <b>NOT</b> induce vomiting.</li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> <li>▶ Avoid giving milk or oils.</li> <li>▶ Avoid giving alcohol.</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**

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

- ▶ Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- ▶ Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO<sub>2</sub> 50 mm Hg) should be intubated.
- ▶ Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- ▶ A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- ▶ Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- ▶ Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

**SECTION 5 Firefighting measures****Extinguishing media**

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

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

<b>Fire Incompatibility</b>	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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**Advice for firefighters**

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <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 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> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▶ Liquid and vapour are flammable.</li> <li>▶ Moderate fire hazard when exposed to heat or flame.</li> <li>▶ Vapour forms an explosive mixture with air.</li> <li>▶ Moderate explosion hazard when exposed to heat or flame.</li> <li>▶ Vapour may travel a considerable distance to source of ignition.</li> <li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> </ul> <p>Combustion products include: carbon dioxide (CO<sub>2</sub>) isocyanates and minor amounts of hydrogen cyanide nitrogen oxides (NO<sub>x</sub>) other pyrolysis products typical of burning organic material.</p>
<b>HAZCHEM</b>	-3Y

**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**

<b>Minor Spills</b>	▶ Remove all ignition sources.
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	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb small quantities with vermiculite or other absorbent material.</li> <li>▶ Wipe up.</li> </ul>
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>▶ Avoid contamination with water, alkalies and detergent solutions.</li> <li>▶ Material reacts with water and generates gas, pressurises containers with even drum rupture resulting.</li> <li>▶ <b>DO NOT reseal container if contamination is suspected.</b></li> <li>▶ Open all containers with care.</li> <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 course.</li> <li>▶ Consider evacuation (or protect in place).</li> </ul>

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

**SECTION 7 Handling and storage**

**Precautions for safe handling**

<b>Safe handling</b>	<p>The conductivity of this material may make it a static accumulator. A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m. Whether a liquid is nonconductive or semi-conductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid.</p> <p>Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.</p> <ul style="list-style-type: none"> <li>▶ Containers, even those that have been emptied, may contain explosive vapours.</li> <li>▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers.</li> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> </ul> <p>Electrostatic discharge may be generated during pumping - this may result in fire.</p> <ul style="list-style-type: none"> <li>· Ensure electrical continuity by bonding and grounding (earthing) all equipment.</li> <li>· Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (&lt;=1 m/sec until fill pipe submerged to twice its diameter, then &lt;= 7 m/sec).</li> <li>· Avoid splash filling.</li> <li>· Do NOT use compressed air for filling discharging or handling operations.</li> <li>· Wait 2 minutes after tank filling (for tanks such as those on road tanker vehicles) before opening hatches or manholes.</li> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of overexposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ Avoid smoking, naked lights or ignition sources.</li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store in original containers in approved flammable liquid storage area.</li> <li>▶ Store away from incompatible materials in a cool, dry, well-ventilated area.</li> <li>▶ <b>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</b></li> <li>▶ No smoking, naked lights, heat or ignition sources.</li> <li>▶ Storage areas should be clearly identified, well illuminated, clear of obstruction and accessible only to trained and authorised personnel - adequate security must be provided so that unauthorised personnel do not have access.</li> <li>▶ Store according to applicable regulations for flammable materials for storage tanks, containers, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances.</li> </ul>

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

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Packing as supplied by manufacturer.</li> <li>▶ Plastic containers may only be used if approved for flammable liquid.</li> <li>▶ Check that containers are clearly labelled and free from leaks.</li> <li>▶ For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.</li> <li>▶ For materials with a viscosity of at least 2680 cSt. (23 deg. C)</li> <li>▶ For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)</li> <li>▶ Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C): (i) Removable head packaging; (ii) Cans with friction closures and (iii) low pressure tubes and cartridges may be used.</li> <li>▶ Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages</li> <li>▶ In addition, where inner packagings are glass and contain liquids of packing group I there must be sufficient inert absorbent to absorb any spillage, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.</li> </ul>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> </ul>

**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	isophorone diisocyanate	Isophorone diisocyanate	0.02 mg/m3	0.07 mg/m3	Not Available	Not Available

**Emergency Limits**


Ingredient	TEEL-1	TEEL-2	TEEL-3

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Ingredient	TEEL-1	TEEL-2	TEEL-3
naphtha petroleum, light aromatic solvent	1,200 mg/m3	6,700 mg/m3	40,000 mg/m3
isophorone diisocyanate	0.02 ppm	0.14 ppm	0.6 ppm

Ingredient	Original IDLH	Revised IDLH
naphtha petroleum, light aromatic solvent	Not Available	Not Available
propylene glycol monoethyl ether acetate - alpha isomer	Not Available	Not Available
isophorone diisocyanate	Not Available	Not Available

Exposure controls

<b>Appropriate engineering controls</b>	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p>
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>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.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> </ul> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.</p>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>Overalls.</li> <li>PVC Apron.</li> <li>PVC protective suit may be required if exposure severe.</li> <li>Eyewash unit.</li> <li>Ensure there is ready access to a safety shower.</li> <li>Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.</li> <li>For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).</li> <li>Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot and shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn.</li> </ul>

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

**"Forsberg Clothing Performance Index".**

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

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Material	CPI
BUTYL	A
PVA	A
VITON	A

\* CPI - Duron 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 A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- 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

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

**SECTION 9 Physical and chemical properties**

**Information on basic physical and chemical properties**

<b>Appearance</b>	Slightly viscous clear, flammable liquid with characteristic aromatic odour, does not mix with water.		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	0.95
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature (°C)</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	>170	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	>44 (PMCC)	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Flammable.	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	7	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	1	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water</b>	Immiscible	<b>pH as a solution (1%)</b>	Not Available
<b>Vapour density (Air = 1)</b>	>1	<b>VOC g/L</b>	Not Available

**SECTION 10 Stability and reactivity**

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

**SECTION 11 Toxicological information**

**Information on toxicological effects**

<b>Inhaled</b>	<p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.</p> <p>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.</p> <p>Inhalation hazard is increased at higher temperatures.</p> <p>Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.</p>				
<b>Ingestion</b>	<p>Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)</p> <p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Ingestion may result in nausea, abdominal irritation, pain and vomiting</p>				
<b>Skin Contact</b>	<p>Skin contact with the material may be harmful; systemic effects may result following absorption.</p> <p>There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>				
<b>Eye</b>	There is some evidence to suggest that this material can cause eye irritation and damage in some persons.				
<b>Chronic</b>	<p>Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.</p> <p>Prolonged or continuous skin contact with the liquid may cause defatting with drying, cracking, irritation and dermatitis following.</p>				
<b>Duron UV Stable Polyurethane</b>	<table border="1" style="width: 100%;"> <tr> <td><b>TOXICITY</b></td> <td><b>IRRITATION</b></td> </tr> <tr> <td>Oral (None) LD50: &gt;4300 mg/kg<sup>[2]</sup></td> <td>Not Available</td> </tr> </table>	<b>TOXICITY</b>	<b>IRRITATION</b>	Oral (None) LD50: >4300 mg/kg <sup>[2]</sup>	Not Available
<b>TOXICITY</b>	<b>IRRITATION</b>				
Oral (None) LD50: >4300 mg/kg <sup>[2]</sup>	Not Available				

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naphtha petroleum, light aromatic solvent	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
	Inhalation(Rat) LC50: >4.42 mg/L4h <sup>[1]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>
	Oral (Rat) LD50: >4500 mg/kg <sup>[1]</sup>	
propylene glycol monoethyl ether acetate - alpha isomer	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: 12628.22 mg/kg <sup>[1]</sup>	Eye: Slight
	Inhalation(Rat) LC50: >6.99 mg/4h <sup>[1]</sup>	Skin: Slight [BP Chemicals]*
	Oral (Rat) LD50: >5000 mg/kg <sup>[2]</sup>	
isophorone diisocyanate	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: >=2000 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
	Inhalation(Rat) LC50: 0.031 mg/L4h <sup>[1]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>
	Oral (Rat) LD50: >=2000 mg/kg <sup>[1]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

NAPHTHA PETROLEUM, LIGHT AROMATIC SOLVENT	<p>Inhalation (rat) TCLo: 1320 ppm/6h/90D-I * [Devoe] For Low Boiling Point Naphthas (LBPNS):</p> <p><b>Acute toxicity:</b> LBPNS generally have low acute toxicity by the oral (median lethal dose [LD50] in rats &gt; 2000 mg/kg-bw), inhalation (LD50 in rats &gt; 5000 mg/m3) and dermal (LD50 in rabbits &gt; 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.</p> <p><b>Sensitisation:</b> LBPNS do not appear to be skin sensitizers, but a poor response in the positive control was also noted in these studies</p> <p><b>Repeat dose toxicity:</b> 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 LBPNS 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. 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. 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 cyclo-paraffins. 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. 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. 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 be seen at concentrations that are toxic to the mother. 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 (&gt;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.</p>
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## Duron UV Stable Polyurethane

<p><b>PROPYLENE GLYCOL MONOETHYL ETHER ACETATE - ALPHA ISOMER</b></p>	<p>For propylene glycol ethers (PGEs):  Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA) and tripropylene glycol methyl ether (TPM).  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).</p>
<p><b>ISOPHORONE DIISOCYANATE</b></p>	<p>The following information refers to contact allergens as a group and may not be specific to this product.  Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact.  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.  Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins.  Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema.  Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.  Aromatic and aliphatic diisocyanates may cause airway toxicity and skin sensitization. Monomers and prepolymers exhibit similar respiratory effect. Of the several members of diisocyanates tested on experimental animals by inhalation and oral exposure, some caused cancer while others produced a harmless outcome. This group of compounds has therefore been classified as cancer-causing.  Isocyanate vapours are irritating to the airways and can cause their inflammation, with wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, inco-ordination, anxiety, depression and paranoia.</p>

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

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

## SECTION 12 Ecological information

## Toxicity

Duron UV Stable Polyurethane	Endpoint	Test Duration (hr)	Species	Value	Source
naphtha petroleum, light aromatic solvent	Not Available	Not Available	Not Available	Not Available	Not Available
	NOEC(ECx)	72h	Algae or other aquatic plants	1mg/l	1
	EC50	72h	Algae or other aquatic plants	19mg/l	1
	EC50	96h	Algae or other aquatic plants	64mg/l	2
	EC50	48h	Crustacea	6.14mg/l	1
propylene glycol monoethyl ether acetate - alpha isomer	NOEC(ECx)	48h	Crustacea	32mg/l	1
	EC50	72h	Algae or other aquatic plants	>100mg/l	2
	LC50	96h	Fish	140mg/l	2
	EC50	48h	Crustacea	96130mg/l	1
isophorone diisocyanate	ErC50	72h	Algae or other aquatic plants	>70mg/l	2
	NOEC(ECx)	96h	Crustacea	0.56mg/l	1
	LC50	96h	Fish	>72mg/l	2
	EC50	72h	Algae or other aquatic plants	>70mg/l	2
	EC50	48h	Crustacea	27mg/l	2



Duron UV Stable Polyurethane

**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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
**DO NOT discharge into sewer or waterways.**

**Persistence and degradability**

Ingredient	Persistence: Water/Soil	Persistence: Air
propylene glycol monoethyl ether acetate - alpha isomer	LOW	LOW
isophorone diisocyanate	HIGH	HIGH

**Bioaccumulative potential**

Ingredient	Bioaccumulation
propylene glycol monoethyl ether acetate - alpha isomer	LOW (LogKOW = 1.0074)
isophorone diisocyanate	HIGH (LogKOW = 4.7519)

**Mobility in soil**

Ingredient	Mobility
propylene glycol monoethyl ether acetate - alpha isomer	LOW (KOC = 10)
isophorone diisocyanate	LOW (KOC = 36450)



**SECTION 13 Disposal considerations**

**Waste treatment methods**

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▶ Containers may still present a chemical hazard/ danger when empty.</li> <li>▶ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> </ul> <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>▶ Reduction</li> <li>▶ Reuse</li> <li>▶ Recycling</li> <li>▶ Disposal (if all else fails)</li> </ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type.</p> <ul style="list-style-type: none"> <li>▶ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li> <li>▶ It may be necessary to collect all wash water for treatment before disposal.</li> <li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li> <li>▶ Where in doubt contact the responsible authority.</li> <li>▶ Recycle wherever possible.</li> <li>▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.</li> <li>▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).</li> <li>▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.</li> </ul>
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**SECTION 14 Transport information**

**Labels Required**

	
<b>Marine Pollutant</b>	
<b>HAZCHEM</b>	-3Y

**Land transport (ADG)**

<b>UN number</b>	1263
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Duron UV Stable Polyurethane

<b>UN proper shipping name</b>	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)	
<b>Transport hazard class(es)</b>	Class	3
	Subrisk	Not Applicable
<b>Packing group</b>	III	
<b>Environmental hazard</b>	Environmentally hazardous	
<b>Special precautions for user</b>	Special provisions	163 223 367
	Limited quantity	5 L

**Air transport (ICAO-IATA / DGR)**

<b>UN number</b>	1263	
<b>UN proper shipping name</b>	Paint related material (including paint thinning or reducing compounds); Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)	
<b>Transport hazard class(es)</b>	ICAO/IATA Class	3
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	3L
<b>Packing group</b>	III	
<b>Environmental hazard</b>	Environmentally hazardous	
<b>Special precautions for user</b>	Special provisions	A3 A72 A192
	Cargo Only Packing Instructions	366
	Cargo Only Maximum Qty / Pack	220 L
	Passenger and Cargo Packing Instructions	355
	Passenger and Cargo Maximum Qty / Pack	60 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y344
	Passenger and Cargo Limited Maximum Qty / Pack	10 L

**Sea transport (IMDG-Code / GGVSee)**

<b>UN number</b>	1263	
<b>UN proper shipping name</b>	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)	
<b>Transport hazard class(es)</b>	IMDG Class	3
	IMDG Subrisk	Not Applicable
<b>Packing group</b>	III	
<b>Environmental hazard</b>	Marine Pollutant	
<b>Special precautions for user</b>	EMS Number	F-E, S-E
	Special provisions	163 223 367 955
	Limited Quantities	5 L

**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
naphtha petroleum, light aromatic solvent	Not Available
propylene glycol monoethyl ether acetate - alpha isomer	Not Available
isophorone diisocyanate	Not Available

**Transport in bulk in accordance with the ICG Code**

Product name	Ship Type
naphtha petroleum, light aromatic solvent	Not Available
propylene glycol monoethyl ether acetate - alpha isomer	Not Available
isophorone diisocyanate	Not Available

**SECTION 15 Regulatory information**

Duron UV Stable Polyurethane

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

**naphtha petroleum, light aromatic solvent is found on the following regulatory lists**

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	Chemical Footprint Project - Chemicals of High Concern List
Australian Inventory of Industrial Chemicals (AIIC)	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

**propylene glycol monoethyl 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)
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**isophorone diisocyanate 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 6
Australia Model Work Health and Safety Regulations - Hazardous chemicals (other than lead) requiring health monitoring	Australian Inventory of Industrial Chemicals (AIIC)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5	

**National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	No (propylene glycol monoethyl ether acetate - alpha isomer)
Canada - NDSL	No (naphtha petroleum, light aromatic solvent; propylene glycol monoethyl ether acetate - alpha isomer; isophorone diisocyanate)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (propylene glycol monoethyl ether acetate - alpha isomer)
Taiwan - TCSI	Yes
Mexico - INSQ	No (propylene glycol monoethyl ether acetate - alpha isomer)
Vietnam - NCI	Yes
Russia - FBEPH	Yes
<b>Legend:</b>	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**

<b>Revision Date</b>	23/12/2022
<b>Initial Date</b>	10/10/2016

**SDS Version Summary**

Version	Date of Update	Sections Updated
3.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
4.1	23/12/2022	Classification review due to GHS Revision change.

**Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Duron 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  
 ES: Exposure Standard  
 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  
 AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List  
NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China  
EINECS: European INventory of Existing Commercial chemical Substances  
ELINCS: European List of Notified Chemical Substances  
NLP: No-Longer Polymers  
ENCS: Existing and New Chemical Substances Inventory  
KECI: Korea Existing Chemicals Inventory  
NZIoC: New Zealand Inventory of Chemicals  
PICCS: Philippine Inventory of Chemicals and Chemical Substances  
TSCA: Toxic Substances Control Act  
TCSI: Taiwan Chemical Substance Inventory  
INSQ: Inventario Nacional de Sustancias Químicas  
NCI: National Chemical Inventory  
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances