**Paslode - STOCKade Fuel Cells**

**Chemwatch Hazard Alert Code:** 4

**Paslode - STOCKade Fuel Cells**

**Chemwatch:** 4919-89

**Version No:** 13.1.1.1

**Safety Data Sheet according to HSNO Regulations**

**Issue Date:** 25/05/2017

**Print Date:** 25/05/2017

**S.GHS.NZL.EN**

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

**Product Identifier**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Paslode - STOCKade Fuel Cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>Part numbers B20540A, B20544S, A12900, B20543F</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing liquefied flammable gas</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

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

| Relevant identified uses | Fuel supply for Paslode and STOCKade tools. |

**Details of the supplier of the safety data sheet**

<table>
<thead>
<tr>
<th>Registered company name</th>
<th>Paslode - STOCKade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>8 Orbit Drive Auckland Rosedale New Zealand</td>
</tr>
<tr>
<td>Telephone</td>
<td>+64 9 477 3000</td>
</tr>
<tr>
<td>Fax</td>
<td>+64 9 477 3001</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.paslode.co.nz">www.paslode.co.nz</a></td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:tech@paslode.co.nz">tech@paslode.co.nz</a></td>
</tr>
</tbody>
</table>

**Emergency telephone number**

<table>
<thead>
<tr>
<th>Association / Organisation</th>
<th>NZ Poisons Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency telephone numbers</td>
<td>0800 POISON</td>
</tr>
<tr>
<td>Other emergency telephone numbers</td>
<td>0800 764 766</td>
</tr>
</tbody>
</table>

---

### SECTION 2 HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Flammable Gas Category 1, Gas under Pressure (Liquefied gas)</th>
</tr>
</thead>
</table>

**Legend:**


| Determined by Chemwatch using GHS/HSNO criteria | 2.1.1A, Liquefied gas |

**Label elements**
Hazard pictogram(s)

SIGNAL WORD DANGER

Hazard statement(s)

H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.

Precautionary statement(s) Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Precautionary statement(s) Response

P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 Eliminate all ignition sources if safe to do so.

Precautionary statement(s) Storage

P410+P403 Protect from sunlight. Store in a well-ventilated place.

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

<table>
<thead>
<tr>
<th>CAS No</th>
<th>%[weight]</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>&gt;60</td>
<td>fuel nonhazardous proprietary</td>
</tr>
<tr>
<td>115-07-1</td>
<td>1-10</td>
<td>propellant, as</td>
</tr>
</tbody>
</table>

SECTION 4 FIRST AID MEASURES

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Description of first aid measures

**Eye Contact**

If this product comes in contact with the eyes:

- Wash out immediately 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.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Skin Contact**

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

**Inhalation**

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- 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.
- Transport to hospital, or doctor.

**Ingestion**

Not considered a normal route of entry.

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

Continued...
Observe the patient carefully.
Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
Seek medical advice.

Indication of any immediate medical attention and special treatment needed
For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen.
- Patients with inadequate tidal volumes or poor arterial blood gases (pO2 50 mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media
- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

Special hazards arising from the substrate or mixture

| Fire Incompatibility | Avoid contamination with strong oxidising agents as ignition may result |

Advice for firefighters

Fire Fighting
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard
- HIGHLY FLAMMABLE: will be easily ignited by heat, sparks or flames.
- Will form explosive mixtures with air.
- Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/or vapour concentration.
- Vapours may travel to source of ignition and flash back.
- Containers may explode when heated - Ruptured cylinders may rocket.
- Fire may produce irritating, poisonous or corrosive gases.
- Runoff may create fire or explosion hazard.
- May decompose explosively when heated or involved in fire.
- High concentration of gas may cause asphyxiation without warning.
- Contact with gas may cause burns, severe injury and/or frostbite.
Other combustion products include:
carbon dioxide (CO2)

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

Continued...
Minor Spills

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Wear protective clothing, impervious gloves and safety glasses.
- Shut off all possible sources of ignition and increase ventilation.
- Wipe up.
- If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stowed safely.

Major Spills

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Water spray or fog may be used to disperse / absorb vapour.
- Absorb or cover spill with sand, earth, inert materials or vermiculite.
- If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated.
- Undamaged cans should be gathered and stowed safely.
- Collect residues and seal in labelled drums for disposal.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- Remove all ignition sources.
- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- When handling DO NOT eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Avoid physical damage to containers.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.

Other information

- Store in original containers in approved flame-proof 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 in an upright position. Avoid storage at temperatures higher than 49 deg C. Protect containers against physical damage and check regularly for leaks. Observe manufacturers storing and handling recommendations.

Conditions for safe storage, including any incompatibilities

Suitable container

- Fuel cell cartridge.

Storage incompatibility

- Avoid storage with oxidisers

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

<table>
<thead>
<tr>
<th>Source</th>
<th>Ingredient</th>
<th>Material name</th>
<th>TWA</th>
<th>STEL</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand Workplace Exposure Standards (WES)</td>
<td>propylene</td>
<td>Propylene</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Simple asphyxiant - may present an explosion hazard</td>
</tr>
</tbody>
</table>

EMERGENCY LIMITS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Material name</th>
<th>TEEL-1</th>
<th>TEEL-2</th>
<th>TEEL-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>propylene</td>
<td>Propylene; (1-Propene)</td>
<td>1,500 ppm</td>
<td>2800 ppm</td>
<td>17000 ppm</td>
</tr>
</tbody>
</table>

Ingredient | Original IDLH | Revised IDLH |
|-----------|---------------|--------------|

Continued...
Exposure controls

Appropriate engineering controls
Use in a well-ventilated area
General exhaust is adequate under normal operating conditions.

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

Eye and face protection
Safety glasses with side shields.
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. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection
See Hand protection below

Hands/feet protection
No special equipment needed when handling small quantities.

OTHERWISE:
Wear general protective gloves, e.g. light weight rubber gloves. Or as required: Wear chemical protective gloves, e.g. PVC. Wear safety footwear.

Body protection
See Other protection below

Other protection
No special equipment needed when handling small quantities.

OTHERWISE:
Overalls.
Barrier cream.
Eyewash unit.

Thermal hazards
Not Available

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Compressed highly flammable liquified gas.</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquified Gas</td>
</tr>
<tr>
<td>Odour</td>
<td>Not Available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH (as supplied)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>Not Available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range (°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>-108</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Available</td>
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<tr>
<td>Flammability</td>
<td>HIGHLY FLAMMABLE.</td>
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<tr>
<td>Upper Explosive Limit (%)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Lower Explosive Limit (%)</td>
<td>Not Available</td>
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<tr>
<td>Vapour pressure (kPa)</td>
<td>Not Available</td>
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<tr>
<td>Relative density (Water = 1)</td>
<td>0.7</td>
</tr>
<tr>
<td>Partition coefficient n-octanol / water</td>
<td>Not Available</td>
</tr>
<tr>
<td>Auto-ignition temperature (°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not Available</td>
</tr>
<tr>
<td>Molecular weight (g/mol)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Surface Tension (dyn/cm or mN/m)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not Available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not Available</td>
</tr>
<tr>
<td>Volatile Component (%vol)</td>
<td>100</td>
</tr>
<tr>
<td>Gas group</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Continued...
SECTION 10 STABILITY AND REACTIVITY

Reactivity
See section 7

Chemical stability
- Elevated temperatures.
- Presence of open flame.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Possibility of hazardous reactions
See section 7

Conditions to avoid
See section 7

Incompatible materials
See section 7

Hazardous decomposition products
See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled
Acute effects from inhalation of high concentrations of gas/vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination.

WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.
Not considered an irritant through normal use. Inhalation may cause cardiac sensitisation.

Ingestion
Considered an unlikely route of entry in commercial/industrial environments. Not normally a risk due to extreme volatility of liquid.

Skin Contact
The liquid may be able to be mixed with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives.

Eye
Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

Chronic
Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

Paslode - STOCKade Fuel Cells

<table>
<thead>
<tr>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Propylene

<table>
<thead>
<tr>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (rat) LC50: &gt;50000 ppm 15 min(^1)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Inhalation (rat) LC50: 35625 ppm 15 min(^1)</td>
<td></td>
</tr>
<tr>
<td>Inhalation (rat) LC50: 84.6875 mg/l 15 min(^1)</td>
<td></td>
</tr>
<tr>
<td>Inhalation (rat) LC50: 90.1875 mg/l 15 min(^1)</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
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

PROPYLENE
No significant acute toxicological data identified in literature search.
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.

Acute Toxicity

Carcinogenicity

Skin Irritation/Corrosion

Reproductivity

Serious Eye Damage/Irritation

STOT - Single Exposure

Continued...
**SECTION 12 ECOLOGICAL INFORMATION**

**Toxicity**

<table>
<thead>
<tr>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paslode - STOCKade Fuel Cells</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>propylene</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**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

DO NOT discharge into sewer or waterways.

**Persistence and degradability**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>propylene</td>
<td>LOW (Half-life = 56 days)</td>
<td>LOW (Half-life = 0.57 days)</td>
</tr>
</tbody>
</table>

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Bioaccumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>propylene</td>
<td>LOW (BCF = 31)</td>
</tr>
</tbody>
</table>

**Mobility in soil**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Data available for all ingredients</td>
</tr>
</tbody>
</table>

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

Ensure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

**SECTION 14 TRANSPORT INFORMATION**

**Labels Required**

- Marine Pollutant: NO
- HAZCHEM: Not Applicable
### Land transport (UN)

<table>
<thead>
<tr>
<th>UN number</th>
<th>3478</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing liquefied flammable gas</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Class: 2.1</td>
</tr>
<tr>
<td></td>
<td>Subrisk: Not Applicable</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Environmental hazard</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Special provisions: 328; 338</td>
</tr>
<tr>
<td></td>
<td>Limited quantity: 120 ml</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>UN number</th>
<th>3478</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT containing liquefied flammable gas</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>ICAO/IATA Class: 2.1</td>
</tr>
<tr>
<td></td>
<td>ICAO / IATA Subrisk: Not Applicable</td>
</tr>
<tr>
<td></td>
<td>ERG Code: 10L</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Environmental hazard</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Special provisions: A146A161</td>
</tr>
<tr>
<td></td>
<td>Cargo Only Packing Instructions: 216; 215; 217</td>
</tr>
<tr>
<td></td>
<td>Cargo Only Maximum Qty / Pack: 15 kg</td>
</tr>
<tr>
<td></td>
<td>Passenger and Cargo Packing Instructions: 216; 215; 217</td>
</tr>
<tr>
<td></td>
<td>Passenger and Cargo Maximum Qty / Pack: 1 kg</td>
</tr>
<tr>
<td></td>
<td>Passenger and Cargo Limited Quantity Packing Instructions: Forbidden; Y215</td>
</tr>
<tr>
<td></td>
<td>Passenger and Cargo Limited Maximum Qty / Pack: Forbidden; 0.5 kg</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>UN number</th>
<th>3478</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Fuel cell cartridges contained in equipment containing liquefied flammable gas</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>IMDG Class: 2.1</td>
</tr>
<tr>
<td></td>
<td>IMDG Subrisk: Not Applicable</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Environmental hazard</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>EMS Number: F-D, S-U</td>
</tr>
<tr>
<td></td>
<td>Special provisions: 328 338</td>
</tr>
<tr>
<td></td>
<td>Limited Quantities: 120 mL</td>
</tr>
</tbody>
</table>

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

Not Applicable

### SECTION 15 REGULATORY INFORMATION

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

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

<table>
<thead>
<tr>
<th>HSR Number</th>
<th>Group Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSR002621</td>
<td>N.O.S. (Flammable) Group Standard 2006</td>
</tr>
</tbody>
</table>
Location Test Certificate

Subject to Regulation 55 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations, a location test certificate is required when quantity greater than or equal to those indicated below are present.

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Quantity beyond which controls apply for closed containers</th>
<th>Quantity beyond which controls apply when use occurring in open containers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1A and B</td>
<td>100 kg (or 100 m³ where a permanent gas)</td>
<td>100 kg (or 100 m³ where a permanent gas)</td>
</tr>
</tbody>
</table>

Approved Handler

Subject to Regulation 56 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations and Regulation 9 of the Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations, the substance must be under the personal control of an Approved Handler when present in a quantity greater than or equal to those indicated below.

<table>
<thead>
<tr>
<th>Class of substance</th>
<th>Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1A</td>
<td>100 kg (not permanent gases)</td>
</tr>
<tr>
<td></td>
<td>100 m³ (permanent gases)</td>
</tr>
</tbody>
</table>

Refer Group Standards for further information

Tracking Requirements

Not Applicable

National Inventory | Status |
--------------------|--------|
Australia - AICS   | Y      |
Canada - DSL       | Y      |
Canada - NDSL      | N (propylene) |
China - IECSC      | Y      |
Europe - EINEC / ELINCS / NLP | Y |
Japan - ENCS      | N (propylene) |
Korea - KECI       | Y      |
New Zealand - NZIoC | Y |
Philippines - PICCS | Y |
USA - TSCA         | Y      |

Legend:

Y = All ingredients are on the inventory
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

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.

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