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

1.1. Product identification

Product Description: Isopropyl Alcohol

Synonyms: 2-Propanol; IPA; Isopropyl alcohol; Propan-2-ol; Isopropanol

CAS-No: 67-63-0

EC-No.: 200-661-7

Molecular Formula: C3 H8 O

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

Recommended Use: Laboratory chemicals / Cleaning agent

Product category: Laboratory chemicals / Cleaning agent

Category Uses advised against: No Information available

1.3. Details of the supplier of the safety data sheet

Company: Deen Products Ltd, 60 Thorneywood Mount, Nottingham, NG3 2PZ, UK

E-mail address: Info@deenproducts.co.uk

1.4. Emergency telephone number

Tel: 01159 199108

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Flammable liquids Category 2 (H225)
Health hazards

Serious Eye Damage / Eye Irritation  Category 2 (H319)
Specific target organ toxicity - (single exposure)  Category 3 (H336)

Environmental hazards
Based on available data, the classification criteria are not met

2.2. Label elements

Signal Word  Danger

Hazard Statements

H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Precautionary Statements

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P240 - Ground/bond container and receiving equipment
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EC-No.</th>
<th>Weight %</th>
<th>CLP Classification - Regulation (EC) No 1272/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td>&gt;95</td>
<td>Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H336)</td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Ingestion
Do not induce vomiting. Obtain medical attention.

Inhalation
Move to fresh air. Obtain medical attention. If not breathing, give artificial respiration.

Self-Protection of the First Aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

Breathing difficulties. May cause central nervous system depression: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically. Symptoms may be delayed.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
CO₂, dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.

Extinguishing media which must not be used for safety reasons
Do not use water jet. Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO₂), peroxides.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing.
6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional ecological information.

6.3. Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Remove all sources of ignition. Soak up with inert absorbent material. Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Flammables area. Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

Use in laboratories
Monitoring methods
BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
MDHS70 General methods for sampling airborne gases and vapours
MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography
MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Derived No Effect Level (DNEL) See table for values

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Acute effects (local)</th>
<th>Acute effects (systemic)</th>
<th>Chronic effects (local)</th>
<th>Chronic effects (systemic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td></td>
<td>888 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
<td></td>
<td>500 mg/m³</td>
</tr>
<tr>
<td>Inhalation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predicted No Effect Concentration (PNEC)
According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified. See values below.

- Fresh water: 140.9 mg/l
- Fresh water sediment: 552 mg/kg
- Marine water: 140.9 mg/l
- Water Intermittent: 140.9 mg/l
- Food chain: 160 mg/kg
- Microorganisms in sewage treatment: 2251 mg/l
- Soil (Agriculture): 28 mg/kg

8.2. Exposure controls

Engineering Measures
Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection
Goggles (European standard - EN 166)

Hand Protection
Protective gloves

<table>
<thead>
<tr>
<th>Glove material</th>
<th>Breakthrough time</th>
<th>Glove thickness</th>
<th>EU standard</th>
<th>Glove comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl rubber</td>
<td>&gt; 480 minutes</td>
<td>0.5 mm</td>
<td>EN 374</td>
<td>Permeation rate &lt; 0.9 µg/cm²/min</td>
</tr>
<tr>
<td>Nitrile rubber</td>
<td>&gt; 360 - 480 minutes</td>
<td>0.35 - 0.55 mm</td>
<td></td>
<td>As tested under EN374-3 Determination of Resistance to Permeation by Chemicals</td>
</tr>
<tr>
<td>Viton (R)</td>
<td>&gt; 480 minutes</td>
<td>0.4 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neoprene</td>
<td>&lt; 40 minutes</td>
<td>0.7 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.
(Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

Respiratory Protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
SAFETY DATA SHEET

Propan-2-ol

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387

Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Valve filtering: EN405; Half mask: EN140; plus filter, EN 141

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol-like</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>7</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-89.5 °C / -129.1 °F</td>
</tr>
<tr>
<td>Softening Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>81 - 83 °C / 177.8 - 181.4 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>12 °C / 53.6 °F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>1.7</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>Lower 2 Vol%</td>
</tr>
<tr>
<td></td>
<td>Upper 12 Vol%</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>43 mmHg @ 20 °C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>2.1 @ 20 °C / 68 °F</td>
</tr>
<tr>
<td>Specific Gravity / Density</td>
<td>0.785</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Miscible</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>1.0</td>
</tr>
<tr>
<td>Component</td>
<td>log Pow</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>0.05</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>425 °C / 797 °F</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>2.27 mPa.s at 20 °C</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>

9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Formula</td>
<td>C3 H8 O</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>60.1</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>100% (Organic Carbon (by mass) = 59.9 %) (EC/1999/13)</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.377 at 20 °C / 68 °F (ASTM D-1218)</td>
</tr>
<tr>
<td>Surface tension</td>
<td>22.7 mN/m at 20 °C / 68 °F</td>
</tr>
<tr>
<td>Coefficient of expansion</td>
<td>0.0009 / °C</td>
</tr>
<tr>
<td>Dielectric constant</td>
<td>18.6 at 20 °C / 68 °F</td>
</tr>
<tr>
<td>Heat of vapourisation</td>
<td>665 J/g</td>
</tr>
</tbody>
</table>

Page 6 / 11
SAFETY DATA SHEET

Propan-2-ol

Revision Date 30 Mar 2020

Specific heat capacity 3 kJ/kg °C at 20 °C / 68 °F
Thermal conductivity 0.137 W/m °C at 20 °C / 68 °F

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
None known, based on information available

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

10.4. Conditions to avoid
Heat, flames and sparks. Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

10.6. Hazardous decomposition products

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

(a) acute toxicity;
Oral Based on available data, the classification criteria are not met
Dermal Based on available data, the classification criteria are not met
Inhalation Based on available data, the classification criteria are not met

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>5840 mg/kg (Rat)</td>
<td>13900 mg/kg (Rat) 12870 mg/kg (Rabbit)</td>
<td>72.6 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>

(b) skin corrosion/irritation;
Based on available data, the classification criteria are not met

(c) serious eye damage/irritation;
Category 2

(d) respiratory or skin sensitization;
Respiratory Based on available data, the classification criteria are not met
Skin Based on available data, the classification criteria are not met

(e) germ cell mutagenicity;
Based on available data, the classification criteria are not met

(f) carcinogenicity;
Based on available data, the classification criteria are not met
There are no known carcinogenic chemicals in this product
(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Category 3
   Results / Target organs Central nervous system (CNS).

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met
   Target Organs None known.

(j) aspiration hazard; Based on available data, the classification criteria are not met

Symptoms / effects, both acute and delayed May cause central nervous system depression: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

---

**SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity

Ecotoxicity effects . Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Fish</th>
<th>Water Flea</th>
<th>Freshwater Algae</th>
<th>Microtox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>LC50: = 11130 mg/L, 96h static (Pimephales promelas) LC50: &gt; 1400000 µg/L, 96h (Lepomis macrochirus) LC50: = 9640 mg/L, 96h flow-through (Pimephales promelas)</td>
<td>13299 mg/L EC50 = 48 h 9714 mg/L EC50 = 24 h</td>
<td>EC50: &gt; 1000 mg/L, 72h (Desmodesmus subspicatus) EC50: &gt; 1000 mg/L, 96h (Desmodesmus subspicatus)</td>
<td>= 35390 mg/L EC50 Photobacterium phosphoreum 5 min</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Persistence Expected to be biodegradable
   Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
<th>Bioconcentration factor (BCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>0.05</td>
<td>No data available</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air
   Surface tension 22.7 mN/m at 20 °C / 68 °F

12.5. Results of PBT and vPvB assessment Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6. Other adverse effects

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors
   Persistent Organic Pollutant This product does not contain any known or suspected substance
   Ozone Depletion Potential This product does not contain any known or suspected substance

---

**SECTION 13: DISPOSAL CONSIDERATIONS**
13.1. Waste treatment methods

Waste from Residues / Unused Products
Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging
Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

European Waste Catalogue (EWC)
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

Other Information
Waste codes should be assigned by the user based on the application for which the product was used. Do not dispose of waste into sewer. Can be incinerated, when in compliance with local regulations.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number
UN1219

14.2. UN proper shipping name
Isopropanol (Isopropyl alcohol)

14.3. Transport hazard class(es)
3

14.4. Packing group
II

ADR

14.1. UN number
UN1219

14.2. UN proper shipping name
Isopropanol (Isopropyl alcohol)

14.3. Transport hazard class(es)
3

14.4. Packing group
II

IATA

14.1. UN number
UN1219

14.2. UN proper shipping name
Isopropanol

14.3. Transport hazard class(es)
3

14.4. Packing group
II

14.5. Environmental hazards
No hazards identified

14.6. Special precautions for user
No special precautions required

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories

X = listed.

<table>
<thead>
<tr>
<th>Component</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>PICCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>AICS</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>200-661-7</td>
<td>-</td>
<td></td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-2936-3</td>
</tr>
</tbody>
</table>

FSUP7507
SAFETY DATA SHEET

National Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Germany - Water Classification (VwVwS)</th>
<th>Germany - TA-Luft Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>WGK 1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>France - INRS (Tables of occupational diseases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>Tableaux des maladies professionnelles (TMP) - RG 84</td>
</tr>
</tbody>
</table>

Take note of Control of Substances Hazardous to Health Regulations (COSHh) 2002 and 2005 Amendment.

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Legend

<table>
<thead>
<tr>
<th>CAS</th>
<th>Chemical Abstracts Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS/ELINCS</td>
<td>European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippines Inventory of Chemicals and Chemical Substances</td>
</tr>
<tr>
<td>IECSC</td>
<td>Chinese Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>KECL</td>
<td>Korean Existing and Evaluated Chemical Substances</td>
</tr>
<tr>
<td>WEL</td>
<td>Workplace Exposure Limit</td>
</tr>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No Effect Level</td>
</tr>
<tr>
<td>RPE</td>
<td>Respiratory Protective Equipment</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative, Toxic</td>
</tr>
<tr>
<td>ADR</td>
<td>European Agreement Concerning the International Carriage of Dangerous Goods by Road</td>
</tr>
<tr>
<td>IMO/IMDG</td>
<td>International Maritime Organization/International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration factor</td>
</tr>
</tbody>
</table>

| TSCA         | United States Toxic Substances Control Act Section 8(b) Inventory |
| DSL/NDSL     | Canadian Domestic Substances List/Non-Domestic Substances List |
| ENCS         | Japanese Existing and New Chemical Substances |
| AICS         | Australian Inventory of Chemical Substances |
| NZIoC        | New Zealand Inventory of Chemicals |
| WEL          | Workplace Exposure Limit                   |
| TWA          | Time Weighted Average                      |
| IARC         | International Agency for Research on Cancer |
| PNEC         | Predicted No Effect Concentration          |
| LD50         | Lethal Dose 50%                            |
| ECS50        | Effective Concentration 50%                |
| POW          | Partition coefficient Octanol:Water        |
| vPvB         | very Persistent, very Bioaccumulative      |

Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
First aid for chemical exposure, including the use of eye wash and safety showers.
Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Creation Date 15-Feb-2019
Revision Date 30 Mar 2020
Revision Summary Not applicable.
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer
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End of Safety Data Sheet