SAFETY DATA SHEET
ISOPROANOL

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME Isopropanol
CHEMICAL NAME Propan-2-ol
PRODUCT NO. ISOPBUL
APPLICATION Industrial solvent.
SUPPLIER
   SHL Manufacturing Limited
   Unit 1B Old Street
   Wimborne
   BH21 4DB
   info@shluk.biz

EMERGENCY TELEPHONE 01258 858130

2 HAZARDS IDENTIFICATION

CLASSIFICATION (EC 1272/2008)
Physical Flam. Liq. 2 - H225
Health Eye Irrit. 2 - H319; STOT Single 3 - H336
Environmental Not classified.

LABEL IN ACCORDANCE WITH (EC) NO. 1272/2008

SIGNAL WORD Danger

HAZARD STATEMENTS
H225 Highly flammable liquid and vapour.
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.
P260e Do not breathe vapours.
P280a Wear protective gloves.
P305/351/338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370 In case of fire: Use alcohol resistant foam or dry powder for extinction.
P501D Empty containers may contain residual product and vapours.
   Do not cut or weld on or near empty containers.
   Disposal should only be by means of a licensed waste disposal contractor.

SUPPLEMENTARY PRECAUTIONARY STATEMENTS
P264a Wash skin thoroughly after handling.
P303/361/353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Isopropanol

P304/340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

3 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>PROPAN-2-OL</th>
<th>&gt;98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS-No.: 67-63-0</td>
<td>EC No.: 200-661-7</td>
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</table>

<table>
<thead>
<tr>
<th>CLASSIFICATION (EC 1272/2008)</th>
<th>CLASSIFICATION (67/548)</th>
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<tbody>
<tr>
<td>Flam. Liq. 2 - H225</td>
<td>F;R11</td>
</tr>
<tr>
<td>Eye Irrit. 2 - H319</td>
<td>X;R36</td>
</tr>
<tr>
<td>STOT Single 3 - H336</td>
<td>R67</td>
</tr>
</tbody>
</table>

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16

4 FIRST-AID MEASURES

GENERAL INFORMATION
Remove affected person from source of exposure. Provide fresh air, first-aid, warmth and rest.
Do not give victim anything to drink if they are unconscious. Get medical attention if any discomfort continues.

INHALATION
If unconscious place patient on their side in the recovery position and ensure they are breathing. Clean nose and mouth with water.
Artificial respiration may be administered by suitably qualified first-aiders.
Get medical attention if symptoms persist.

INGESTION
If swallowed do NOT induce vomiting.
Never give anything by mouth to an unconscious person. Rinse mouth thoroughly and seek medical attention if discomfort persists. Keep patient under observation.

SKIN CONTACT
Remove contaminated clothing and shoes. Wash skin thoroughly with soap and running water. Take especial care to clean folds, crevices, creases and groin.
Get medical attention if irritation persists or develops.
Laundry clothing and clean shoes thoroughly before re-use.

EYE CONTACT
Check for contact lenses which must be removed from the eyes before rinsing.
Promptly rinse eyes with plenty of clean water while lifting the eyelids.
Continue to rinse for at least 15 minutes. Continue until the eyes are free of all traces of contamination.
Get medical attention if any discomfort or irritation persists.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
Use CO₂, dry powder, foam, or water fog, mist or spray. Do not use high pressure water jet as this may spread burning material.

UNUSUAL FIRE & EXPLOSION HAZARDS
Fire causes formation of toxic gases.

SPECIFIC HAZARDS
The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures.

PROTECTIVE MEASURES IN FIRE
Wear self-contained breathing apparatus and full protective clothing. Keep all unnecessary people away. Fire water run-off must not be allowed to contaminate ground or enter drains, sewers or water courses. Provide bunding against fire water run-off.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Ventilate to dispel residual vapour. Clean-up personnel should use respiratory protection, gloves, goggles and protective clothing and footwear. (see section 8)
ENVIRONMENTAL PRECAUTIONS
Do not allow spilled material to enter drains or water courses.
Cover all drains and sewers. Avoid spreading spilled material. Contain spillages with sand, earth or suitable absorbent material. Prevent further spillage if safe to do so.
In the event of contamination of watercourses or sewers advise the Environment Agency, fire brigade and police.

SPILL CLEAN UP METHODS
Absorb in vermiculite, sand, diatomaceous earth or other absorbent inert material. Place into clearly labelled container for recovery or disposal (see section 13). Rinse site with copious amounts of water, which should not be allowed into drains, sewers or water courses.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS
Eye wash facilities and emergency shower must be available when handling this product. Use only in well ventilated areas.
Avoid spilling, skin and eye contact. Do not breathe vapour or fumes.
Use suitable protective clothing. (see section 8). Wash thoroughly after handling.

STORAGE PRECAUTIONS
Keep away from all possible sources of ignition.
Store in tightly closed containers in segregated, cool, dry, ventilated storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Name</th>
<th>Std</th>
<th>TWA - 8 hrs</th>
<th>STEL - 15 min</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPN-2-OL</td>
<td>WEL</td>
<td>400 ppm</td>
<td>999 mg/m³</td>
<td>500 ppm</td>
</tr>
</tbody>
</table>

WEL = Workplace Exposure Limit.

INGREDIENT COMMENTS
WEL = Workplace Exposure Limits

PROCESS CONDITIONS
Provide eyewash station.

ENGINEERING MEASURES
Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

RESPIRATORY EQUIPMENT
If ventilation is insufficient suitable respiratory protection must be provided.
Seek recommendations and advice from equipment manufacturer or supplier.

HAND PROTECTION
Wear suitable protective gloves conforming to EN 374. Seek recommendations from manufacturer or supplier. After using gloves the hands should be washed and dried thoroughly and a suitable moisturiser applied.

EYE PROTECTION
Contact lenses should not be worn when working with this chemical! Wear approved safety goggles.

OTHER PROTECTION
Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower. Minimise all forms of skin contact. Overalls and footwear with oil and chemical resistant soles should be worn. Launder overalls and undergarments regularly.

HYGIENE MEASURES
Wash promptly if skin becomes contaminated. Promptly remove non-impervious clothing that becomes contaminated. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Liquid
COLOUR Colourless
ODOUR Alcoholic
SOLUBILITY Completely miscible with water.

BOILING POINT (°C) 82-83°C
RELATIVE DENSITY 0.785 @ 20°C
VAPOUR PRESSURE 43.3 hPa 20°C
FLASH POINT (°C) 12°C CC (Closed cup).

MELTING POINT (°C) -90°C
VAPOUR DENSITY (air=1) 2.1
VISCOSITY 3 mPas 20°C
AUTO IGNITION 399°C
TEMPERATURE (°C)
10 STABILITY AND REACTIVITY

STABILITY
Stable under normal conditions of storage and use. See section 7.

CONDITIONS TO AVOID
Avoid heat, flames and other sources of ignition.

HAZARDOUS POLYMERISATION
Will not polymerise.

MATERIALS TO AVOID
Strong oxidising substances. Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 4700-5800 mg/kg (oral rat)
TOXIC DOSE 2 - LD 50 13000 mg/kg (dermal-rbt)
TOXIC CONC. - LC 50 19000 ppm/8hr (inh-rat)

INHALATION
In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea.

INGESTION
Gastrointestinal symptoms, including upset stomach.

SKIN CONTACT
Repeated exposure may cause skin dryness or cracking. Absorption of organic solvents through the skin can cause the same effects as inhalation.

EYE CONTACT
Irritating to eyes.

12 ECOLOGICAL INFORMATION

ECOTOXICITY
This preparation is readily biodegradable and is not expected to be hazardous to the environment.
LC 50, 96 Hrs, FISH mg/l 9640-10400
EC 50, 48 Hrs, DAPHNIA, mg/l 7550-13299
IC 50, 72 Hrs, ALGAE, mg/l >1000

BIOACCUMULATION
Will not bio-accumulate.

13 DISPOSAL CONSIDERATIONS

GENERAL INFORMATION
Empty containers may contain residual flammable vapours and product residue. Keep away from sparks, heat and sources of ignition. Labels should not be removed. Product is hazardous waste. Do not allow into drains, sewers or water courses. Disposal must be by means of a licensed waste contractor.

14 TRANSPORT INFORMATION
| UN NO. ROAD | 1219 | UK ROAD PACK GR. | II |
| ADR CLASS NO. | 3 | ADR CLASS | Class 3: Flammable liquids. |
| ADR PACK GROUP | II | TUNNEL RESTRICTION CODE | (D/E) |
| HAZARD No. (ADR) | 33 | ADR LABEL NO. | 3 |
| HAZCHEM CODE | *2YE | CEFIC TEC(R) NO. | 30GF1-I+II |
| RID CLASS NO. | 3 | RID PACK GROUP | II |
| UN NO. SEA | 1219 | IMDG CLASS | 3 |
| IMDG PAGE NO. | 3 | IMDG PACK GR. | II |
| EMS | F-E, S-D | MARINE POLLUTANT | No. |
| UN NO. AIR | 1219 | AIR CLASS | 3 |
| AIR PACK GR. | II |

## 15 REGULATORY INFORMATION

### EU DIRECTIVES
Regulation (EC) No 1272/2008: CLP (Classification, labelling and packaging of substances and mixtures).

### STATUTORY INSTRUMENTS
Control of Substances Hazardous to Health Regulations (as amended). (COSHH)
Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007. (CDG 2009)

### GUIDANCE NOTES
Environmental Protection (Duty of Care) Regulations.

### WORKPLACE EXPOSURE LIMITS
EH40.

Introduction to Local Exhaust Ventilation HS(G)37.
CHIP for everyone HSG(108).

## 16 OTHER INFORMATION

### REVISION COMMENTS
GHS information added.

### RISK PHRASES IN FULL

- **R11** Highly flammable.
- **R36** Irritating to eyes.
- **R67** Vapours may cause drowsiness and dizziness.

### HAZARD STATEMENTS IN FULL

- **H319** Causes serious eye irritation.
- **H25** Highly flammable liquid and vapour.
- **H336** May cause drowsiness or dizziness.

### DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.