



## ***TAG SOLVENT PRODUCTS (PTY)LTD.***

### ***MATERIAL SAFETY DATA SHEET ISOPROPANOL 'S'***

#### **1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Common name** : ISOPROPANOL 'S'

**Supplier** : TAG Solvent Products  
Mallet Road/Weg  
Knights  
Germiston  
1401  
Republic of South Africa  
  
TEL: +27 11 822-1600

**Synonym** : Not available

**Trade name** : Isopropanol 'S'

**Material uses** : A solvent for fats, oils, waxes and resins

#### **2 COMPOSITION / INFORMATION ON INGREDIENTS**

| <b>Chemical Name</b> | <b>CAS#</b> | <b>% By Weight</b> | <b>EINECS/ELINCS</b> | <b>Exposure Limits</b>   |
|----------------------|-------------|--------------------|----------------------|--|
| Isopropanol 'S'      | 67-63-0     | 100%               | 200-661-7            | <b>EH40-OES (UK, 2000)</b><br>STEL:<br>1250mg/m <sup>3</sup><br>STEL: 500ppm<br>TWA: 999mg/m <sup>3</sup><br>TWA: 400ppm |

#### **3 HAZARDS IDENTIFICATION**

|                                       |   |
|---------------------------------------|---|
| <b>Physical state and appearance</b>  | : Liquid.   |
| <b>Emergency overview</b>             | : WARNING!<br>HIGHLY FLAMMABLE LIQUID AND VAPOUR.<br>VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.<br>IRRITATING TO EYES  |
| <b>Routes of entry</b>                | : Eye contact. Ingestion. Inhalation. Skin contact.   |
| <b>Potential acute health effects</b> |   |
| <b>Eyes</b>                           | : Hazardous in case of eye contact (irritant).  |
| <b>Skin</b>                           | : Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.  |
| <b>Inhalation</b>                     | : Hazardous in case of inhalation. Inhalation causes headaches, dizziness, drowsiness and nausea, and may lead to unconsciousness. Can irritate eyes, nose, mouth and throat. |
| <b>Ingestion</b>                      | : Hazardous in case of ingestion. Ingestion may cause, nausea, weakness and central nervous system effects, and symptoms similar to alcohol intoxication.                     |

#### 4 *FIRST AID MEASURES*

|                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Check for and remove any contact lenses. Immediately flush the eyes with running water for at least 15 minutes, keep eyelids open. Get medical attention.   |
| <b>Skin contact</b> | : In the case of repeated or prolonged contact, flush the skin with plenty of water. Wash clothes before reuse. Thoroughly clean shoes before reuse. If irritation develops seek medical attention. |
| <b>Inhalation</b>   | : If inhaled, remove victim to a safe area as soon as possible. If breathing is laboured, give oxygen. If not breathing administer artificial respiration. Get medical attention.                   |
| <b>Ingestion</b>    | : DO NOT induce vomiting unless directed to do so by medical personnel. Never give any thing by mouth to an unconscious person. Get medical attention.  |

#### 5 *FIRE FIGHTING MEASURES*

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|---|--|
| <b>Flammability of the product</b>                          | : Flammable  |
| <b>Autoignition temperature</b>                             | : >400°C   |
| <b>Flash points</b>   | : 14°C (CLOSED CUP) Pensky-Martena   |
| <b>Explosion limits</b>                                     | : LOWER – 2%, UPPER – 12%  |
| <b>Products of combustion</b>                               | : These products are carbon oxides (CO, CO <sub>2</sub> )  |
| <b>Fire fighting (extinguishing) media and instructions</b> | : Use DRY chemical powder, CO <sub>2</sub> , alcohol foam, water spray. Do not use water jets.   |
| <b>Unusual fire/explosion hazards</b>                       | : Highly flammable liquid and vapour. Vapour may cause flash fire. Vapours may accumulate in low or confined areas, travel considerable distance to a source of ignition and flash back. Vapours may form explosive mixtures with air. Container explosion may occur under fire conditions or when heated. Runoff to sewer may create fire or explosion hazard |
| <b>Protective clothing (fire)</b>                           | : Wear self-contained positive pressure breathing apparatus (SCBA) and full protective gear.   |
| <b>Special fire-fighting procedure</b>                      | : DO NOT FIGHT FIRE WHEN IT REACHES MATERIAL. With draw from fore and let burn. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of the line-of-sight of the scene and away from windows. Use water spray to keep fire-exposed containers cool.                                  |

## 6 ACCIDENTAL RELEASE MEASURES

|   |  |
|---|--|
| <b>Personal precautions</b>                         | : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fighting procedures (Section 5). Do not touch or walk through spilled material.  |
| <b>Small spill or leak</b>                          | : Add absorbent (soil may be used in the absent of other suitable material) and use a non-sparking or explosive proof means to transfer material to a sealed, appropriate container for disposal.  |
| <b>Large spill or leak</b>                          | : Dike spilled material or otherwise contain material to ensure run-off does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent run-off to surface waterways. See section 13 for Waste Disposal Information |
| <b>Personal protection in case of a large spill</b> | : Splash goggles. Full suit. Chemical resistant boots. Chemical resistant gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.  |

## 7 HANDLING AND STORAGE

|                 |  |
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| <b>Handling</b> | : Do not get in eyes. Keep container closed. Use only with adequate ventilation. Avoid prolonged or repeated contact with skin. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling. |
| <b>Storage</b>  | : Keep container tightly closed and sealed until ready for use. Keep container cool and in a well-ventilated area. Store in a segregated and approved area. Avoid all possible sources of ignition (spark or flame).   |

## 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

|                            |   |             |                   |             |  |                    |   |              |   |             |                             |
|----------------------------|---|-------------|-------------------|-------------|--|--------------------|---|--------------|---|-------------|-----------------------------|
| <b>Control measures</b>    | : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapour below their respective threshold limit values. Ensure that eyewash stations and safety showers are proximal to the workstation location.  |             |                   |             |  |                    |   |              |   |             |                             |
| <b>Hygienic measures</b>   | : Wash hands, forearm, and face thoroughly after compounds and before eating, smoking, using the lavatory, and at the end of the day.   |             |                   |             |  |                    |   |              |   |             |                             |
| <b>Personal protection</b> | <table border="0"> <tr> <td><b>Eyes</b></td> <td>: Splash goggles.</td> </tr> <tr> <td><b>Body</b></td> <td>: Chemical resistant protective suite.</td> </tr> <tr> <td><b>Respiratory</b></td> <td>: Vapour respirator. If ventilation is inadequate, use certified respirator that will protect against organic vapour.</td> </tr> <tr> <td><b>Hands</b></td> <td>: Butyl rubber gloves (gloves that cannot be penetrated by chemicals)</td> </tr> <tr> <td><b>Feet</b></td> <td>: Chemical resistant boots.</td> </tr> </table> | <b>Eyes</b> | : Splash goggles. | <b>Body</b> | : Chemical resistant protective suite. | <b>Respiratory</b> | : Vapour respirator. If ventilation is inadequate, use certified respirator that will protect against organic vapour. | <b>Hands</b> | : Butyl rubber gloves (gloves that cannot be penetrated by chemicals) | <b>Feet</b> | : Chemical resistant boots. |
| <b>Eyes</b>                | : Splash goggles.   |             |                   |             |  |                    |   |              |   |             |                             |
| <b>Body</b>                | : Chemical resistant protective suite.  |             |                   |             |  |                    |   |              |   |             |                             |
| <b>Respiratory</b>         | : Vapour respirator. If ventilation is inadequate, use certified respirator that will protect against organic vapour.   |             |                   |             |  |                    |   |              |   |             |                             |
| <b>Hands</b>               | : Butyl rubber gloves (gloves that cannot be penetrated by chemicals)   |             |                   |             |  |                    |   |              |   |             |                             |
| <b>Feet</b>                | : Chemical resistant boots.   |             |                   |             |  |                    |   |              |   |             |                             |
| <b>Protective clothing</b> | : Splash goggles. Full chemical resistant protective suit. Vapour respirator. Butyl gloves. Chemical resistant boots.   |             |                   |             |  |                    |   |              |   |             |                             |

|  |   |
|--|---|
| <b>Personal protection in case of large spills</b> | : Splash goggles. Full suit. Vapour respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling the product. |
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(EXPOSURE CONTROLS, PERSONAL PROTECTION CONTINUED...)

| <u>PRODUCT NAME</u> | <u>EXPOSURE LIMITS</u>  |
|---------------------|---|
| ISOPROPANOL 'S'     | <b>EH40-OES (UK, 2000)</b><br>STEL: 1250mg/m <sup>3</sup><br>STEL: 500ppm<br>TWA: 999mg/m <sup>3</sup><br>TWA: 400ppm |

## 9 PHYSICAL AND CHEMICAL PROPERTIES

|                                      |                                    |
|--------------------------------------|------------------------------------|
| <b>Physical state and appearance</b> | : Liquid.                          |
| <b>Colour</b>                        | : Colourless. Clear.               |
| <b>Odor</b>                          | : Alcohol-like.                    |
| <b>Taste</b>                         | : Not available.                   |
| <b>Molecular weight</b>              | : Not applicable.                  |
| <b>Molecular formula</b>             | : Not applicable.                  |
| <b>pH (1% soln/water)</b>            | : Not available.                   |
| <b>Boiling/condensation point</b>    | : 82.3°C                           |
| <b>Melting/freezing point</b>        | : -88.5°C                          |
| <b>Density</b>                       | : 0.785g/cm <sup>3</sup>           |
| <b>Vapour pressure</b>               | : 49.5mmHg                         |
| <b>Vapor density</b>                 | : 2.08 (Air=1)                     |
| <b>Odor threshold</b>                | : Not available.                   |
| <b>Evaporation rate</b>              | : 1.9compared to (n-Butyl acetate) |
| <b>Viscosity</b>                     | : kinematic <4cSt (@20°C)          |
| <b>LogK<sub>ow</sub></b>             | : <1 @ 25°C                        |
| <b>Dispersion properties</b>         | : See solubility in water.         |
| <b>Solubility</b>                    | : Easily soluble in cold water.    |

## 10 STABILITY AND REACTIVITY

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| <b>Conditions to avoid</b>                     | : Avoid all possible sources of ignition (spark or flame).                   |
| <b>Incompatibility with various substances</b> | : Reactive with oxidizing agents. Hygroscopic; keep container tightly closed |
| <b>Hazardous polymerization</b>                | : Will not occur.  |

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|-----------|----------------------------------|
| <b>11</b> | <b>TOXICOLOGICAL INFORMATION</b> |
|-----------|----------------------------------|

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|----------------------------------|--|
| <b>Toxicity to animals</b>       | : Acute oral toxicity (LD50): >2000mg/kg [Rat]<br>Acute toxicity of the Vapour (inhalation) (LC50): >20mg/l [Rat]<br>Acute dermal toxicity (LD50): >2000mg/kg [Rabbit].  |
| <b>Chronic effects on humans</b> | : <b>CARCINOGENIC EFFECTS:</b> No component of this product at levels greater than 0.1% IS identified as a carcinogen by ACGIH, the International Agency for Research on Cancer (IARC) or the European Commission (EC)<br>Classified 3 (Not classifiable for human) by ACGIH [Isopropanol 'S'].<br><br><b>MUTAGENIC EFFECTS:</b> No components of this product at levels greater than 0.1% is classified by establishes regulatory criteria as a mutagen.<br><br><b>REPRODUCTIVE EFFECTS:</b> No components of this product at levels greater than 0.1% is classified by establishes regulatory criteria as a reproductive toxin.<br><br><b>TERATOGENIC &amp; DEVELOPMENTAL EFFECTS:</b> No components of this product at levels greater than 0.1% is classified by establishes regulatory criteria as teratogenic or embryotoxic. |

|           |                               |
|-----------|-------------------------------|
| <b>12</b> | <b>ECOLOGICAL INFORMATION</b> |
|-----------|-------------------------------|

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|--------------------------------------|--|
| <b>Ecotoxicity (Isopropanol 'S')</b> | : Tests on the following species gave 96h LC50 of 9600 mg/L (fish).<br>Tests on the following species gave 24h LC50 of 4600 mg/L (daphnia).  |
| <b>Persistence/degradability</b>     | : Readily biodegradable.   |
| <b>Mobility</b>                      | : This product may move with surface or groundwater flows because its water solubility is: Easily soluble in water.<br>This product is likely to volatilise rapidly into the air because of its high vapour pressure.<br>This product is poorly absorbed onto soil or sediments. |
| <b>Bioaccumulation potential</b>     | : This product shows a low bioaccumulation potential.  |
| <b>Environmental hazards</b>         | : Not classified as dangerous.   |

**13 DISPOSAL CONSIDERATIONS**

**Disposal consideration/Waste information** : Avoid contact of spilled material and runoff with soil surface waterways. Consult an environmental professional to determine if state or federal regulations would classify spilled or contaminated materials as hazardous waste. Use only approved transporters, recyclers, treatment, and storage or disposal facilities. Waste must be disposed of in accordance with local, regional or national regulations.

Labels should not be removed from containers until they have been cleaned. Containers should be cleaned by appropriate methods and then re-used or disposed of by land-refill or incineration as appropriate. Do not incinerate closed containers.

Empty containers may contain harmful, flammable/combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Tests on the following species gave 96h LC50 of

Consult your local or regional authorities.

**14 TRANSPORT INFORMATION**

| Regulatory information        | UN number | Class | Packing group | Label                    | Additional information  |
|-------------------------------|-----------|-------|---------------|--------------------------|---|
| <b>ADNR Classification</b>    | UN1219    | 3     | II            | <input type="checkbox"/> | <u>Hazard Identification number: 33</u><br><u>Hazchem Code: 2(Y)E</u> |
| <b>ADR/RID Classification</b> | UN1219    | 3     | II            | <input type="checkbox"/> |   |
| <b>IMDG Classification</b>    | UN1219    | 3     | II            | <input type="checkbox"/> |   |
| <b>IATA Classification</b>    | UN1219    | 3     | II            | <input type="checkbox"/> |   |

**15 REGULATORY INFORMATION**

|                             |  |                          |
|-----------------------------|--|--------------------------|
| <b>Label requirements</b> : | <input type="checkbox"/>   | <input type="checkbox"/> |
|                             | Highly flammable   | Irritant                 |
| <b>Risk Phrases</b> :       | : R11 – Highly flammable<br>R36 – Irritating to eyes<br>R67 – Vapour may cause drowsiness and dizziness. |                          |

|                                      |  |
|--------------------------------------|--|
| <b>Safety Phrases</b>                | : S2 – Keep out of reach of children.<br>S7 – Keep container tightly closed.<br>S16 – Keep away from sources of ignition – No smoking<br>S24/25 – Avoid contact with skin and eyes.<br>S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.   |
| <b>EU Regulations</b>                | : Classification and labelling have been performed according to EU directives 1999/45/EC and 67/548/EEC as amended and adapted.  |
| <b>Other Regulations Inventories</b> | : <u>Australia inventory (AICS)</u> : Listed on inventory<br><u>Canada inventory (DSL)</u> : Listed on inventory<br><u>China inventory (IECS)</u> : Listed on inventory<br><u>EC inventory (EINECS)</u> : Listed on inventory<br><u>Japan inventory (ENCS)</u> : Listed on inventory<br><u>Korea (ECL)</u> : Listed on inventory<br><u>Philippines inventory (PICCS)</u> : Listed on inventory<br><u>US inventory (TSCA)</u> : Listed on inventory |

## 16 OTHER INFORMATION

|                         |            |
|-------------------------|------------|
| <b>Date of Printing</b> | 18-02-2004 |
| <b>Date of issue</b>    | 18-02-2004 |
| <b>Version</b>          |            |

### Notice to reader:

This MSDS summarizes at the date of issue our best knowledge of the health, safety and environmental hazard information related to the product, and in particular how to safely handle, use and transport the product in the workplace. Since TAG Solvent Products (PTY) LTD. and its subsidiaries cannot anticipate or control the conditions under which the product may be handled, used, stored or transported, each user must, prior to usage, review MSDS in the context of how the user intends to handle, use, store or transport the product in the workplace and beyond, and communicate such information to all relevant parties. If clarification or further information is required to ensure that an appropriate assessment can be made, the user should contact the company.

We shall not assume any liability for the accuracy or completeness of the information contained herein or any advice given unless there has been gross negligence on our part. In such event our liability shall be limited only to direct damages suffered. Our responsibility for the product as sold is subject to our standards terms and conditions, a copy of which is sent to our customers and is also available upon request. All risk with possession and application of the product passes on delivery.