



SAFETY DATA SHEET

99%

ISOPROPYL ALCOHOL

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

1.1. PRODUCT IDENTIFIER

Product name: Isopropyl Alcohol
Product No.: IPA99
CAS-No.: 67-63-0
EC No.: 200-661-7
REACH: 01-2119457558-25
Synonym: 2-Propanol, Isopropanol, 2-Hydroxypropane, Dimethyl carbinol, IPA
Chemical Formula: C_3H_8O

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Recommended use: A Disinfectant for surfaces, utensils and equipment,
Skin cleaner, Antiseptic and antibacterial agent,
Hand & Surface sanitiser,
Deicer - removes frost from windscreens and frees up frozen locks,
Great glass and mirror cleaner when mixed with water,
Can remove hair spray from mirrors and tiles,
Removes many ink and permanent marker stains (but not all),
Removes the glue/sticky residues left on surfaces after removing labels, price tags and stickers,
Metal cleaner - removes fingerprints, water spots and light soiling from chrome, stainless steel, brass etc. Cleans and shines,
Odour eliminator for shoes and footwear,
In the laboratory - is often used in DNA extraction,
Antifreeze,
A fuel additive for dissolving water or ice in fuel lines.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

HD Chemicals LTD
UNIT 9 Scott Business Park
PL2 2PB Plymouth UK

Contact Person responsible for SDS: Mr Peter Konefal, e-mail: contact@hdchemicals.co.uk

SECTION 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification 67/548/EEC: F; R11, Xi; R36, R67

Classification – EC 1272/2008: Flammable liquids; Category 2 (H225)

Serious Eye Damage/Irritation; Category 2A (H319)

Specific target organ toxicity, single exposure; Narcotic effects;
Category 3 (H336)

2.2. LABEL ELEMENTS



SIGNAL WORDS

Danger

RISK PHRASES

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

HAZARD PHRASES

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

**PROTECTION PHRASES**

| | |
|----------------|---|
| P102 | Keep out of reach of children |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection |
| P303+P361+P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing |
| 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 or doctor/physician if you feel unwell |
| P370+P378 | In case of fire: Use alcohol resistant foam, dry powder, carbon dioxide or water spray for extinction |

SAFETY PHRASES

| | |
|--------|--|
| S9 | Keep container in a well-ventilated place |
| S16 | Keep away from sources of ignition - No smoking |
| S24/25 | Avoid contact with skin and eyes |
| S26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice |
| S51 | Use only in well-ventilated areas |
| S60 | This material and its container must be disposed of as hazardous waste |

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

67/548/EEC/1999/45/EC

Composition information – main constituents

| Substance name | Mol. Formula | REACH | Typical conc. (%w/w) | EINECS No. | CAS-No. | Classification |
|-------------------|---------------------------------|------------------|----------------------|------------|---------|----------------------|
| Isopropyl Alcohol | C ₃ H ₈ O | 01-2119457558-25 | 99% | 200-661-7 | 67-63-0 | F; R11, Xi; R36, R67 |



EC 1272/2008

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| Isopropyl Alcohol | C ₃ H ₈ O | 01-2119457558-25 | 99% | 200-661-7 | 67-63-0 | H225, H319, H336 |

SECTION 4: FIRST AID MEASURES**4.1. DESCRIPTION OF FIRST AID MEASURES**

First-aid measures general: Consult a physician when you feel unwell. Show this safety data sheet to the doctor in attendance.

Inhalation: Remove victim to fresh air immediately and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Have victim drink 240-300ml of water to dilute stomach contents. Do not induce vomiting. Get medical attention if any discomfort continues.

Skin contact: Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Inhalation: May cause transient irritation to the respiratory system. Headache, dizziness, tiredness, nausea and vomiting

Ingestion: May cause headache, dizziness, nausea, vomiting and central nervous system depression

Skin contact: Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis. May cause cracking of skin, and eczema

Eye contact: May cause transient eye irritation or damage

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.



SECTION 5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Adjust extinguishing media to the surrounding fire. Use alcohol resistant foam, dry powder, carbon dioxide (CO₂) or water spray.

Unsuitable extinguishing media: Do not use water jet.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

The product is flammable. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapours: carbon monoxide (CO), carbon dioxide (CO₂).

5.3. ADVICE FOR FIRE-FIGHTERS

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear suitable protective equipment (splash goggles, protective suit, boots, gloves and self-contained breathing apparatus) to prevent any contamination of skin, eyes and personal clothing. Ensure adequate ventilation of the working area. Avoid contact with skin and eyes. Remove all sources of ignition. Avoid breathing vapours, mist or gas. Avoid formation of dust. Keep unprotected persons away. Evacuate personnel to a safe area. Take precautionary measures against static discharges.

For personal protection see section 8.1.

6.2. ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment. Do not allow to enter sewers/ surface or ground water. Do not allow to enter into soil/subsoil. Prevent further leakage or spillage if safe to do so. Use appropriate container to avoid environmental contamination.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Take-up spillage with absorbent, inert material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in a suitable and closable labelled container for recovery or disposal for disposal according to local/national regulations. Wash the area clean with water and detergent, observing environmental requirements. Absorb small quantities with paper towels or other inert material and allow to evaporate in safe place (fume hood/cupboard). Wash clothing and equipment after handling.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Handle in accordance with good industrial hygiene and safety practice. Avoid formation of dust and spilling. Do not inhale dust/smoke/mist. Ensure adequate ventilation of the working area. Wear personal protective equipment. Avoid contact with eyes and skin. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products. Remove contaminated clothing and shoes. Wash clothing before re-using. Avoid the formation or spread of mists in the air.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep in a cool, dry, well ventilated area. Keep in original tightly closed containers. Keep away from food, drink and animal feeding stuffs. Keep out of reach of children. Avoid direct sunlight, heat and other sources of ignition. Do not store near heat sources or expose to high temperatures. Keep away from strong oxidizing agents and acids.

7.3. SPECIFIC END USE(S)

See section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS/EXPOSURE GUIDELINES

Occupational Exposure Limit Values (Isopropyl Alcohol):

| CAS NO | Exposure limit | Value | Name of Agent |
|---------|----------------|-------------------------|---------------|
| 67-63-0 | TWA – 8 Hrs | 999 mg/m ³ | inhalation |
| 67-63-0 | STEL – 15 Min | 1,250 mg/m ³ | inhalation |

Engineering controls: Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and at the end of the working day. Maintain air concentrations below occupational exposure standards.



EYE PROTECTION



FACE SHIELD



RESPIRATOR



PROTECTION WEAR



HAND PROTECTION

- Protective equipment:** Use protective tightly fitting safety goggle (European standard - EN 166), face shield, gloves (European standard - EN 374), long sleeved clothing to prevent skin, body and eyes exposure.
- Respiratory equipment:** Respiratory protection not required in normal conditions, but when workers are facing concentrations above the exposure limit they must use appropriate certified respirators, which are NIOSH/MSHA or European Standard EN 149 approved respirator.
- Skin and body protection:** Wear appropriate protective gloves and clothing to prevent skin exposure. Wear impervious protective clothing (long sleeved clothing, chemical resistant apron, anti static boots). Wear appropriate protective work gloves when handling material to prevent skin contact. The glove material has to be impermeable and resistant to the product: PVC or rubber gloves. Protective gloves should be replaced at first signs of wear. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact. Wash and dry hands.
- Eye/Face protection:** Approved chemical safety goggles or face protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------|-------------------------|
| Appearance: | Liquid |
| Colour: | Colourless |
| Odour: | Odour of alcohol |
| Initial boiling point (°C): | No data available |
| Melting point (°C): | -89 °C |
| Freezing point: | No data available |
| Relative density: | 0.785 g/cm ³ |
| Specific gravity / density: | Not available |
| Vapour density: | Not available |
| Vapour pressure: | Not available |
| Flash point (°C): | Not available |



| | |
|----------------------------|---------------------------------|
| Molecular mass: | 60.096 g/mol |
| Auto-ignition temperature: | Not applicable |
| Oxidizing properties: | Not available |
| Decomposition temperature: | Not available |
| Molecular formula: | C ₃ H ₈ O |

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

Isopropyl Alcohol is stable under normal conditions of use, storage and transport.

10.2. CHEMICAL STABILITY

This product is stable under normal conditions and under recommended usage and storage.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

When heated can decompose. May liberate toxic gases.

10.4. CONDITIONS TO AVOID

Keep away from food, drink and animal feeding stuffs. Keep out of reach of children. Avoid direct sunlight, heat and other sources of ignition. Do not store near heat sources or expose to high temperatures.

10.5. INCOMPATIBLE MATERIALS

May liberate toxic gases. Keep away from incompatibles such as strong oxidizing agents and acids.

10.6. HAZARDOUS DECOMPOSITION

Thermal decomposition can lead to release of irritating gases and vapours: carbon monoxide (CO), carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

| | |
|-------------------|---|
| TOXIC DOSE | LD50 Oral – Rat – 5840 mg/kg |
| | LD50 Dermal – Rabbit – 12800 mg/kg |

Inhalation: May cause transient irritation to the respiratory system. Headache, dizziness, tiredness, nausea and vomiting



| | |
|----------------------|--|
| Ingestion: | May cause headache, dizziness, nausea, vomiting and central nervous system depression |
| Skin contact: | Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis. May cause cracking of skin, and eczema |
| Eye contact: | May cause transient eye irritation or damage |

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Aquatic Toxicity:

Toxicity to freshwater fish: LC50: 9640 mg/l, 96h (Pimephales promelas)

Toxicity to water flea: EC50: 13299 mg/l, 48h (Daphnia magna)

Toxicity to freshwater algae: EC50: > 1000 mg/l, 96h (Desmodesmus subspicatus)

12.2. PERSISTENCE AND DEGRADABILITY

Readily biodegradable.

12.3. BIOACCUMULATIVE POTENTIAL

This product shows a low bioaccumulation potential.

12.4. MOBILITY

Will likely be mobile in the environment. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. If released to soil it will evaporate at a rapid rate. Disperses rapidly in air.

12.5. RESULTS OF PBT AND vPvB ASSESSMENT

No data available.

12.6. OTHER ADVERSE EFFECTS

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Disposal of Isopropyl Alcohol should be in accordance with local and national legislation. Processing, use or contamination of this product may change the waste management options. Should not be released into the environment. Do not discharge into waterways or sewer systems. Mixing with other materials or other alterations to pure product may significantly change the characteristics of the material. Empty packaging can have residues and are subject to proper



waste disposal. Do not re-use empty containers. Keep product and empty container away from heat and sources of ignition. Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

Uncleaned packaging: Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

IMDG

| | |
|----------------------------|----------------------------------|
| UN number | 1219 |
| UN proper shipping name | Isopropanol or isopropyl alcohol |
| Transport hazard class(es) | 3 |
| Packing group | II |

ADR/RID

| | |
|----------------------------|----------------------------------|
| UN number | 1219 |
| UN proper shipping name | Isopropanol or isopropyl alcohol |
| Transport hazard class(es) | 3 |
| Packing group | II |

IATA

| | |
|----------------------------|----------------------------------|
| UN number | 1219 |
| UN proper shipping name | Isopropanol or isopropyl alcohol |
| Transport hazard class(es) | 3 |
| Packing group | II |

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2 CHEMICAL SAFETY ASSESSMENT

This product contains substances for which Chemical Safety Assessments are still required.



SECTION 16: OTHER INFORMATION

General information

The information contained in this safety data sheet is provided in accordance with the requirements of the regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instruction. As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

Revision Comments

This information is provided in a revised format to that previously produced.

Revision Date: 01/10/2018

Revision: 01

Safety Data Sheet Status Approved.

Date printed 01/10/2018

Signature Initials P.K.

DISCLAIMER:

If this product is re-distributed and re-formulated for sale, details of its hazards and recommended methods for safe handling must be passed to customers. Customers are urged to ensure that the product is entirely suitable for their own purpose. It is the customer's responsibility to ensure that a suitable and sufficient assessment of the risks created by a work activity using this product is undertaken before this product is used.

NOTE:

The information contained in this Safety Data Sheet does not constitute the users own assessment of workplace risk as required by other Health & Safety Legislation (e.g. the Health and Safety at Work Act,1974;the control of Substances Hazardous to Health Regulations,1988). The data given here is based on current knowledge and experience. The purpose of this data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.