

Material Safety Data Sheet

Iso-Butanol

Version 1.04

Revision Date 20.11.2006



1. Identification of the substance/preparation and of the company/undertaking

Trade name	<i>Iso-Butanol</i>
Synonyms	<i>Iso-Butanol, 2-Methyl-propan-1-ol, 2-Methylpropyl alcohol, 1-Hydroxymethylpropane, Isopropyl Carbinol, i-Butyl alcohol</i>
Use	<i>Solvents, industrial use, raw material for washing and cleaning agents, raw material for fragrances, Paint related material</i>
Company	<i>Hitech Chemicals</i>

2. Composition/information on ingredients

2-methylpropan-1-ol; iso-butanol

content: 99.50 %W/W

CAS-No. 78-83-1

Index-No. 603-108-00-1

EG-Nr.: 201-148-0

Symbol(s) Xi

R-phrase(s) -R10 -R37/38 -R41 -R67

For the full text of the R phrases mentioned in this Section, see Section 16.

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3. Hazards identification

Identification of the risks

R10	Flammable.
R37/38	Irritating to respiratory system and skin.
R41	Risk of serious damage to eyes.
R67	Vapours may cause drowsiness and dizziness.

4. First aid measures

General advice	<i>If you feel unwell, seek medical advice (show the label where possible).</i>
Inhalation	<i>Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.</i>
Skin contact	<i>Wash off immediately with plenty of water for at least 15 minutes. Call a physician immediately.</i>
Eye contact	<i>Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Call a physician immediately.</i>
Ingestion	<i>If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.</i>

5. Fire-fighting measures

Suitable extinguishing media	<i>Water spray, Dry chemical, Alcohol-resistant foam</i>
Specific hazards during fire fighting	<i>Flash back possible over considerable distance. Do not allow run-off from fire fighting to enter drains or water courses.</i>
Special protective equipment for fire-fighters	<i>Wear self-contained breathing apparatus and protective suit.</i>
Further information	<i>Standard procedure for chemical fires. In the event of fire, cool tanks with water spray.</i>

6. Accidental release measures

Personal precautions	<i>Use personal protective equipment. Do not breathe vapours or spray mist. Ensure adequate ventilation. Keep away from sources of ignition - No smoking.</i>
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Environmental precautions

Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). The material taken up must be disposed of in accordance with regulations.

7. Handling and storage

Handling

Safe handling advice

Wear personal protective equipment. Avoid contact with skin and eyes. Keep away from sources of ignition - No smoking.

Advice on protection against fire and explosion

Use explosion-proof equipment. Provide sufficient air exchange and/or exhaust in work rooms. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers

Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking.

8. Exposure controls / personal protection

Components with workplace control parameters

NATIONAL OCCUPATIONAL EXPOSURE LIMITS

no data available

EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

no data available

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Respiratory protection

suitable respiratory equipment:

Hand protection

gloves suitable for permanent contact:

Material: butyl-rubber

Break through time: 4 h

Material thickness: 0.5 mm

unsuitable gloves

Material: leather, nitrile rubber/nitrile latex, Polyvinylchloride, natural rubber/natural latex

Eye protection

Safety glasses with side-shields

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Skin and body protection	protective suit, Safety shoes
Hygiene measures	Wash hands before breaks and immediately after handling the product.
Protective measures	Wear suitable protective equipment.

9. Physical and chemical properties

Form	liquid
Colour	colourless
Odour	sweet musty
Melting point/range	-108 °C
Boiling point/range	108 °C
Flash point	28 °C; closed cup
Autoignition temperature	428.7 °C
Vapour pressure	14 hPa; 20 °C
Density	0.801 g/cm ³ ; 20 °C
Water solubility	partly soluble, partly miscible
Solubility in other solvents	partly soluble
Viscosity, dynamic	4,703 mPa.s
Relative vapour density	2.55

10. Stability and reactivity

Materials to avoid	Oxidizing agents, Reducing agents, Acids and bases
Hazardous decomposition products	No decomposition if stored normally.

11. Toxicological information

Acute oral toxicity	LD50 rat: 2,460 mg/kg; literature value LD50 rabbit: 74.1 mg/kg; literature value
Acute inhalation toxicity	LC50 rabbit: 2,630 mg/m ³ ; ; 4 h; literature value LCLo rat: 8,000 mg/m ³ ; ; 4 h; literature value LC50 rat: 19,200 mg/m ³ ; ; 4 h; literature value
Acute dermal toxicity	LD50 rabbit: 3,400 mg/kg; literature value
Assessment of mutagenicity	Experiments showed mutagenic effects in cultured bacterial cells.

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12. Ecological information

Ecotoxicity effects

Toxicity to fish *Pimephales promelas*: 1,430 g/l; 96 h; literature value

13. Disposal considerations

Product *In accordance with local and national regulations.*

Contaminated packaging *Packaging that cannot be cleaned must be disposed of in the same way as the material itself.*

14. Transport information

ADR *UN-No.: 1212; Class: 3; Packaging group: III; F1; Description of the goods: ISOBUTANOL*

RID *UN-No.: 1212; Class: 3; Packaging group: III; F1; Description of the goods: ISOBUTANOL*

ADNR *UN-No.: 1212; Class: 3; Packaging group: III; F1; Description of the goods: ISOBUTANOL*

IMDG *UN-No.: 1212; Class: 3; EmS: F-E, S-D; Packaging group: III; Description of the goods: ISOBUTANOL*

ICAO/IATA *UN-No. : 1212; Class: 3; Packaging group: III; Description of the goods: Isobutanol*

15. Regulatory information

Labelling



Regulatory base 67/548/EEC

Symbol(s) Xi: Irritant

R-phrases(s) R10: Flammable.
R37/38: Irritating to respiratory system and skin.
R41: Risk of serious damage to eyes.
R67: Vapours may cause drowsiness and dizziness.



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S-phrase(s)

S 2: Keep out of the reach of children.
S 7/9: Keep container tightly closed and in a well-ventilated place.
S13: Keep away from food, drink and animal feedingstuffs.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39: Wear suitable gloves and eye/face protection.
S46: If swallowed, seek medical advice immediately and show this container or label.

Hazardous components which must be listed on the label

2-methylpropan-1-ol; iso-butanol

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R10 Flammable.
R37/38 Irritating to respiratory system and skin.
R41 Risk of serious damage to eyes.
R67 Vapours may cause drowsiness and dizziness.

This MSDS summarises 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, store and transport the product in the workplace. Since we cannot anticipate or control conditions under which the product may be handled, used, stored or transported, each user must, prior to usage, review this 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 needed to ensure that an appropriate assessment can be made, the user should contact this company.

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The MSDS was created by:

The MSDS was approved by: