

# Material Safety Data Sheet

## According to 91/155 EC

Reviewed on 31.01.2003

### 1 Identification of substance

- **Product details**
  - **Trade name: ISOPROPANOL (IPA)**
  - **Product-No:** BRSO49001-49022
  - **Application of the substance / the preparation** Additive for use in the printing industry
  - **Manufacturer/Supplier:**  
Boss Graphic Supplies\*,  
TP2 Taylor Road,  
Urmston,  
Manchester,  
M41 7SW
- \*Boss Graphic Supplies is a division of Sun Chemical Corp.
- **Informing department:** Product Safety Department
  - **Emergency information:**  
Tel: 0161 746 7840  
OUT OF OFFICE 24 HOUR EMERGENCY TEL:- 01706 368201/0777 1806741

### 2 Composition/Data on components:

- **Chemical characterization:**
- **CAS No. Designation:**  
67-63-0 propan-2-ol
- **Identification number(s):**
- **EINECS Number:** 200-661-7
- **EC Number:** 603-117-00-0

### 3 Hazards identification

- **Hazard designation:**



Xi Irritant  
F Highly flammable

- **Information pertaining to particular dangers for man and environment**  
Has a narcotizing effect.  
R 11 Highly flammable.  
R 36 Irritating to eyes.  
R 67 Vapours may cause drowsiness and dizziness.

### 4 First aid measures

- **General information**  
When symptoms persist or in all cases of doubt seek medical advice. Never give anything by mouth to an unconscious person.
- **After inhalation**  
Remove to fresh air.  
Keep patient warm and at rest.  
If breathing is irregular or stopped, administer artificial respiration.  
If unconscious place in recovery position and seek medical advice.
- **After skin contact**  
Remove contaminated clothing immediately.  
Do NOT use solvents or thinners.  
Wash skin thoroughly with soap and water or use recognised skin cleanser.

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- **After eye contact**  
Remove contact lenses.  
Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart.  
Seek medical advice.
- **After swallowing**  
If accidentally swallowed obtain immediate medical attention!  
Keep at rest.  
Do NOT induce vomiting.

### 5 Fire fighting measures

- **Suitable extinguishing agents**  
Alcohol resistant foam, CO<sub>2</sub>, powders, water spray, if applied under high pressure.
- **For safety reasons unsuitable extinguishing agents** Water jet.
- **Special hazards caused by the material, its products of combustion or flue gases:**  
Fire will produce dense black smoke.  
Exposure to hazardous decomposition products may cause a health hazard.  
Appropriate breathing apparatus may be required.  
Cool closed containers exposed to fire with water spray.  
Avoid spraying water directly into storage containers due to danger of boil over.
- **Protective equipment:** Wear self-contained respiratory protective device
- **Additional information** Collect run-off from fire fighting.

### 6 Accidental release measures

- **Person-related safety precautions:**  
Exclude sources of ignition.  
Ventilate the area.  
Avoid breathing vapours.  
Refer to protective measures listed in section 7 and 8.
- **Measures for environmental protection:**  
Do not allow to enter drains.  
If the product contaminates rivers and lakes or sewages inform respective authorities.
- **Measures for cleaning/collecting:**  
Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local regulations.  
Clean preferably with a detergent. Avoid the use of solvents.

### 7 Handling and storage

- **Handling**
- **Information for safe handling:**  
Prevent the creation of flammable or explosive concentrations of vapour and avoid vapour concentrations higher than the occupational exposure limits.  
The product should only be used in areas from which all naked lights and other sources of ignition have been excluded.  
When transferring from one container to another apply earthing measures and use conductive hose material.  
Preparation may charge electrostatically.  
Non sparking tools should be used.  
Avoid skin and eye contact.

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- Smoking, eating and drinking should be prohibited in application area.  
 For personal protection see section 8  
 Comply with health and safety at work laws.  
 Avoid breathing vapours.  
 The Manual Handling Operations Regulations may apply to the handling of containers/packages of this product.  
 Refer to the guide weight indicated on the container when carrying out assessments.
- **Information about protection against explosions and fires:**  
 Solvent vapours are heavier than air and may spread along floors.  
 Vapours may form explosive mixtures with air.
  - **Storage**
  - **Requirements to be met by storerooms and containers:**  
 Electrical installations/working materials must comply with the technological safety standards.  
 Storage rooms in which filling operations take place must have a conducting floor.  
 Keep container tightly closed.  
 Never use pressure to empty: container is not a pressure vessel.  
 No smoking.  
 Prevent unauthorized access.  
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
  - **Information about storage in one common storage facility:**  
 Keep well away from oxidising agents and strongly alkaline or strongly acid materials.
  - **Further information about storage conditions:**  
 Always keep in containers of the same material as the original one.  
 Store in a dry, well ventilated place.  
 Keep away from heat and direct sunlight.  
 Exclude sources of ignition.  
 Observe label precautions.  
 Store in accordance with the particular national regulations concerning storage of combustible liquids.  
 Store in accordance with the particular national regulations concerning water pollution.  
 The principles contained in the HSE guidance note Storage of Packaged Dangerous Substances, should be observed when storing this product.  
 The storage and use of this product is subject to the requirements of the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations. Up to 50 litres of such highly flammable liquids may be kept in a work room provided they are kept in a fire-proof cupboard or bin.  
 Larger quantities must be kept in a separate storeroom conforming to the structural requirements of the regulations. Further guidance is contained in the HSE guidance note Storage of Flammable Liquids in Containers.

## 8 Exposure controls and personal protection

- **Additional information about design of technical systems:**  
 If relevant apply technical measures to comply with the occupational exposure limits.  
 This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.
  - **Components with critical values that require monitoring at the workplace:**  
 Numerical data - if specified - are taken from the valid national lists.
- 67-63-0 propan-2-ol**
- OES Short-term value: 1250 mg/m<sup>3</sup>, 500 ppm  
 Long-term value: 999 mg/m<sup>3</sup>, 400 ppm
- **Personal protective equipment**
  - **General protective and hygienic measures**  
 ALWAYS WASH YOUR HANDS BEFORE EATING, SMOKING OR USING THE TOILET.

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Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Avoid contact with the eyes and skin.

All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

- **Breathing equipment:**

If the occupational exposure limits can't be met, in exceptional cases suitable respiratory protection should be worn only for a short period of time.

- **Protection of hands:**

When skin exposure may occur, advice should be sought from glove suppliers on appropriate types and usage times for this product.

The instructions and information provided by the glove supplier on use, storage, maintenance and replacement must be followed.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

The glove material has to be impermeable and resistant to the product.

- **Material of gloves**

The selection of suitable gloves depends not only on the material, but also on manufacturing quality, which varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be obtained from the glove manufacturer. Manufacturer guidelines must always be followed.

- **Eye protection:** Use safety eyewear to protect against splash of liquids.

- **Body protection:**

Personel should wear antistatic footwear.

Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner.

**DO NOT USE SOLVENTS OR THINNERS AS SKIN CLEANING AGENTS**

- **Limitation and supervision of exposure into the environment**

See Section 12 for detailed information.

## 9 Physical and chemical properties:

- **General Information**

<b>Form:</b>	liquid
<b>Colour:</b>	colourless
<b>Smell:</b>	like alcohol

- **Change in condition**

**Melting point/Melting range:** -89.5°C

**Boiling point/Boiling range:** 82°C

- **Flash point:** 12°C

- **Ignition temperature:** 425°C

- **Critical values for explosion:**

**Lower:** 2 Vol %

**Upper:** 12 Vol %

- **Vapour pressure at 20°C:** 4.16 kPa

- **Density at 20°C** 0.785 g/cm<sup>3</sup>

- **Vapour density at 20°C** > 1 g/cm<sup>3</sup> (air=1)

- **Evaporation rate at 20°C** 2.5  
(n butyl acetate = 1)

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- **Solubility in / Miscibility with**
  - Water:** completely miscible with water
- **Viscosity at 20°C:** 2.65 cSt
- **Organic solvents:** 80-100 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
Stable under recommended storage and handling conditions (see section 7).
- **Materials to be avoided:** Keep away from strong oxidising agents
- **Dangerous reactions** Flammable
- **Dangerous products of decomposition:**  
Carbon monoxide and carbon dioxide  
Smoke

### 11 Toxicological information

Product has irritant properties.  
Liquid splashes in the eye may cause irritant symptoms.  
Exposure to component solvent vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as: mucous membrane irritation, respiratory system irritation, adverse effects on kidney, liver and central nervous system.  
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the product may cause removal of natural fats from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.  
Symptoms and signs: headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

#### 67-63-0 propan-2-ol

Oral	LD50	4570 mg/kg (rat)
Dermal	LD50	13400 mg/kg (rab)
Inhalative	LC50/4 h	30 mg/l (rat)

### 12 Ecological information:

The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters.

The product is not classified as dangerous for the environment.

**ENVIRONMENTAL MOBILITY:** The product is volatile and will evaporate to the air if released into the environment. The product is water soluble and is expected to remain primarily in water.

**ENVIRONMENTAL BIODEGRADABILITY:** It is expected that, according to OECD guidelines, this product would be classed as 'readily' biodegradable. The product can degrade rapidly in air. It is expected to be removed in wastewater treatment facility.

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### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Do not allow into drains or water courses or dispose of where ground or surface waters may be affected.  
Wastes, including emptied containers are controlled wastes and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act.  
Using information provided in this safety data sheet, advice should be obtained from the relevant environment agency whether the Special Waste Regulations apply.
- **Uncleaned packagings:**
- **Recommendation:**  
Emptied containers should be supplied to scrap utilisation resp. recycling.  
Not emptied containers are hazardous waste.

### 14 Transport information

Transport only in accordance with ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport.

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

- **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**



- **ADR/RID-GGVS/E Class:** 3
- **Kemler Number:** 33
- **UN-Number:** 1219
- **Packaging group:** II
- **Label:** 3
- **Designation of goods:** 1219 ISOPROPANOL (ISOPROPYLALCOHOL)
- **Maritime transport IMDG/GGVSea:**



- **IMDG/GGVSea Class:** 3
- **UN Number:** 1219
- **Label:** 3
- **Packaging group:** II
- **EMS Number:** 3-06
- **Correct technical name:** ISOPROPANOL (ISOPROPYL ALCOHOL)
- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1219
- **Label:** 3
- **Packaging group:** II

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· **Correct technical name:** ISOPROPANOL (ISOPROPYL ALCOHOL)

### 15 Regulatory information

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.

The provisions of the Health and Safety at work etc. Act (and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

- **Designation according to EC guidelines:**
- **Code letter and hazard designation of product:**
  - Xi Irritant
  - F Highly flammable
- **Risk phrases:**
  - 11 Highly flammable.
  - 36 Irritating to eyes.
  - 67 Vapours may cause drowsiness and dizziness.
- **Safety phrases:**
  - 7 Keep container tightly closed.
  - 16 Keep away from sources of ignition - No smoking.
  - 24/25 Avoid contact with skin and eyes.
  - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### 16 Other information:

The information in this safety data sheet is provided in accordance with the requirements of the CHIP Regulations and EC Directive 91/155/EEC.

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 instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

The information contained in this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

- **Department issuing data specification sheet:** Product Safety Department
- **Contact:** Dr Jackie Morgan
- **Sources**
  - Further information and advice can be found in:

The Control of Substances Hazardous to Health Regulations 1999 [SI 1999:437], The Stationary Office.

COSHH Essentials: easy steps to control chemicals [HSG 193], HSE Books. Details of Control Guidance Sheets, which may be relevant to the particular conditions of use, can also be found in this publication.

The Manual Handling Operations Regulations 1992 [SI 1972:917], The Stationary Office.

The Petroleum (Consolidation) Act 1928, The Stationary Office.

The Highly Flammable and Liquefied Petroleum Gases Regulations 1972 [SI 1972:917], The Stationary Office.

Chemical Warehousing: Storage of Flammable Liquids in Containers [HSG51], HSE Books.

The Environmental Protection (Duty of Care) Regulations 1992 [SI 1992:2839], The Stationary

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Office.

A Guide to Working with Solvents [INDG 272], HSE Books.

Storage of Packaged Dangerous Substances [HSG71], HSE Books.

Exclusion List for Printing Inks and Related Products 1999, CEPE (from BCF tel: 01372 360660).

· \* **Data compared to the previous version altered.**

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