

## Material safety data sheet

**Product**

**ISOBUTANE**

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Version : 3

Date : 11/03/2003

Supersedes : 28/08/2000

### 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION (\*)

PRODUCT NAME : ISOBUTANE  
Recommended uses : Aerosol jet / Blowing agent / Condenser / Lighter fuel  
Name : AVANTEC SA  
Address : 20, Rue de bourgogne  
BP 211  
69802 SAINT-PRIEST cedex  
Telephone number : 04 72 28 13 00  
Telefax number : 04 72 28 13 41  
Department to contact : Department Material Safety Data Sheets - TEL : 01 49 83 53 00  
EMERGENCY TELEPHONE  
NUMBER : INRS/ORFILA (France) : 33 1 45 42 59 59

### 02 COMPOSITION / INFORMATION ON INGREDIENTS (\*)

SUBSTANCE :  
Common chemical name : ISOBUTANE  
CAS : 75-28-5  
EINECS : 200-857-2

### 03 HAZARDS IDENTIFICATION

MOST IMPORTANT HAZARDS :  
Adverse human health effects : To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice  
Physical and chemical hazards :  
- Fire or explosion : Extremely flammable liquefied gas.  
This gas is denser than air and may travel along the ground. Distance ignition possible.  
Risk of explosion if heated in a confined system  
Classification of the product : According to european regulations, this product is classified as :  
- EXTREMELY FLAMMABLE

### 04 FIRST AID MEASURES

Inhalation : Move the affected person away from the contaminated area and into the fresh air  
If the person feels unwell :  
Call a doctor immediately  
Skin contact : In the event of contact with the liquid: treat resulting frostbite as a burn  
Immediately remove contaminated clothing or footwear

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Eye contact : Immediately rinse with plenty of water  
If skin burns appear, call a doctor immediately  
Rinse immediately and thoroughly, pulling the eyelids well away from the eye  
(15 minutes minimum)  
Consult an eye specialist immediately, even if there are no immediate symptoms.

Ingestion : Not specifically applicable (gas).

Protection of first-aiders : Do not enter without an appropriate protective equipment  
- self-contained breathing apparatus  
- protective clothing

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## 05 FIRE FIGHTING MEASURES

Suitable extinguishing media : For a minor fire :  
Carbon dioxide (CO2)  
Powders  
For a significant fire :  
Water spray

Specific hazards : Gas/air mixtures are explosive  
The vapours are denser than air and may travel along the ground. Distance ignition possible.

Specific fire fighting methods : Close the valve if possible  
Cool down the containers exposed to heat with a water spray  
Do not attempt to fight the fire without suitable protective equipment

Protection of fire-fighters : Self-contained breathing apparatus  
Impermeable protective equipment

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## 06 ACCIDENTAL RELEASE MEASURES

Personal precautions : Stop the leak.  
Evacuate the danger area.  
Only qualified personnel equipped with suitable protective equipment may intervene.  
Remove all sources of ignition  
Prevent the product from entering cellars, basements or pits.  
Prevent the product from entering drains (risk of explosion)  
Mechanically ventilate the spillage area.

Environmental precautions : Control the vapours with a fine water spray

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## 07 HANDLING AND STORAGE

HANDLING

Technical measures : Ventilation  
Material and equipment suitable for use under explosive conditions.  
Use non-sparking tools

Precautions : Smoking is forbidden  
Avoid the build-up of electrostatic charge  
Work in a well-ventilated area

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## STORAGE

Storage conditions :

- Recommended :
- |  |                                    |
|--|------------------------------------|
|  | Store :                            |
|  | - in a cool, well-ventilated area  |
|  | - away from any source of ignition |

Incompatible products :

Halogens  
Strong oxidizing agents  
Oxidizing materials

## 08 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures :

Ensure good ventilation of the work station

Personal protective equipment :

- Respiratory protection :
- |  |   |
|--|---|
|  | In the event of insufficient ventilation: |
|  | Self-contained breathing apparatus.       |
- Hand protection :
- |  |                    |
|--|--------------------|
|  | Antistatic gloves. |
|--|--------------------|
- Eye protection :
- |  |                   |
|--|-------------------|
|  | Safety spectacles |
|--|-------------------|
- Skin and body protection :
- |  |                      |
|--|----------------------|
|  | Antistatic clothing. |
|--|----------------------|

## 09 PHYSICAL AND CHEMICAL PROPERTIES

Physical state :

Liquefied gas

Colour :

colourless

Odour :

none to slight

pH :

Not applicable

Specific temperatures :

- Melting : - 160 °C  
- Boiling : - 11.7 °C

Flammability characteristics :

- Flash point : - 82.8 °C  
- Auto-ignition temperature : > 420 °C

Explosion properties :

- Lower : 1.8 % (volume)  
- Upper : 8.4 % (volume)  
Vapour pressure : 220 kPa, at 20°C.  
Vapour density (air = 1) : 2.

Solubility :

- in water : Insoluble  
- in organic solvents : Soluble in :  
- alcohols  
- ethers.  
- chloroform.

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Octanol/water partition coefficient : 2.7 (log POW).

## 10 STABILITY AND REACTIVITY

Stability : Stable at ambient temperature and under normal conditions of use

Hazardous reactions :

- Conditions to avoid : May explode or ignite :  
- on heating

- Materials to avoid : - strong bases  
- strong oxidizing agents

- Hazardous decomposition products : On thermal decomposition (pyrolysis), releases :  
Carbon oxides (CO, CO2)

## 11 TOXICOLOGICAL INFORMATION

Acute toxicity : Asphyxiating  
LC 50 inhalation (Mouse) / 1h : 52 mg/l

Acute symptoms : Headaches  
Nausea  
Vomiting  
Convulsions.  
Central Nervous System depressant  
Coma

Local effects : May be irritating to the respiratory system  
Contact with liquefied gas causes frostbite.  
Contact with liquefied gas may cause severe ocular lesions

## 12 ECOLOGICAL INFORMATION

MOBILITY :

Persistence : Half-life in air : 6.9 d

BIOACCUMULATION:

Octanol/water partition coefficient : 2.7  
Not potentially bioaccumulable.

## 13 DISPOSAL CONSIDERATIONS

CONTAMINATED PACKAGING :

Destruction/Disposal : Dispose of at an licensed site

NOTE : The user's attention is drawn to the possible existence of specific european, national or local regulations regarding disposal

## 14 TRANSPORT INFORMATION (\*)

INTERNATIONAL REGULATIONS :

UN number : 1969 - ISOBUTANE

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Land :

- Rail/road (RID/ADR) :

Class : 2  
Classification code : 2F  
Packaging group : -  
Labelling : 2.1  
Hazard identification number : 23

Sea (IMO/IMDG) :

Class : 2.1  
Packaging group : -  
Labelling : 2.1

Air (ICAO-IATA) :

Class : 2.1  
Packing group : -  
Labelling : 2.1  
Passenger aircraft : FORBIDDEN

NOTE :

The above regulatory prescriptions are those valid on the date of publication of this sheet  
However, given the possible evolution of transport regulations for hazardous materials, in case the present sheet is dating back to more than 12 months ago, it would be advisable to check their validity with your commercial agency

## 15 REGULATORY INFORMATION

EC LABELLING :

Mandatory labelling (self-classification) of hazardous substances : applicable

Identification of the hazardous product :

Appears on the EC hazardous substances list (Annex 1 of the modified EEC directive 67/548/EEC). EC N° : 200-857-2  
Isobutane

- Symbols and danger information :

- EXTREMELY FLAMMABLE (F+)

- R phrases :

R 12: Extremely flammable.

- S phrases :

S 9 : Keep container in a well-ventilated place.  
S 16 : Keep away from sources of ignition - No smoking  
S 33: Take precautionary measures against static discharges.

NOTE :

The regulatory information given in this part only indicate the principal regulations specifically applicable to the product described in the Safety Data Sheet.  
The cited basic Community texts are being updated and transcribed in national law.  
Refer to all applicable national, international and local regulations or provisions.  
The user's attention is drawn to the possible existence of additional provisions which complete these regulations.

## 16 OTHER INFORMATION (\*)

Further information:

Product for industrial use only  
For more information regarding the use of this product, please refer to our technical information or contact the sales department in your region.

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\* Update :

This sheet was updated (refer to the date at the top of this page)  
The amended headings are indicated by an asterisk (\*)

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This sheet complements the technical sheets but does not replace them. The information given is based on our knowledge of the product, at the time of publication. It is given in good faith.

Besides, the attention of the user is drawn to the possible risks incurred by using the product for any other use than that for which it was intended.

In no way does this exempt the user from knowing and applying all the regulations controlling his activity. He alone will take on the responsibility for taking the precautions involved by the use of the product.

The aim of all the mandatory regulations mentioned is just to help the user to fulfil his obligations regarding the use of hazardous products.

This information must not be considered exhaustive. It does not exempt the user from ensuring that other obligations than those mentioned could apply, related to the storage and use of the product, this being his sole responsibility.

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**End of document.**

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