

# Liquid Argon

PRODUCT : LIQUID ARGON MSDS NR : 300-00-0002 BOC VERSION : 1 DATE : 17/05/1994 PAGE : 1/1

## 1 IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY

**Product name** Liquid Argon  
**Chemical formula** Ar  
**Company identification** see heading and/or footer  
**Emergency phone Nos** see heading and/or footer

## 2 COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Preparation** Substance  
**Components/Impurities** Contains no other components or impurities which will influence the classification of the product.  
**CAS Nr** 07440-37-1  
**EEC Nr (from EINECS)** 2311470

## 3 HAZARDS IDENTIFICATION

**Hazards identification** Refrigerated liquefied gas. Contact with product may cause cold burns or frostbite. In high concentrations may cause asphyxiation.

## 4 FIRST AID MEASURES

**Inhalation** In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

**Skin/eye contact** Immediately flush eyes thoroughly with water for at least 15 minutes. In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.

**Ingestion** Ingestion is not considered a potential route of exposure.

## 5 FIRE FIGHTING MEASURES

**Specific hazards** Exposure to fire may cause containers to rupture/explode. Non flammable

**Hazardous combustion products** None

**Suitable extinguishing media** All known extinguishants can be used.

**Specific methods** If possible, stop flow of product. Move container away or cool with water from a protected position.

**Special protective equipment for fire fighters** In confined space use self-contained breathing apparatus.

## 6 ACCIDENTAL RELEASE MEASURES

**Personal precautions** Evacuate area. Use protective clothing. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation.

**Environmental precautions** Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

**Clean up methods** Ventilate area.

## 7 HANDLING AND STORAGE

**Handling and storage** Suck back of water into the container must be prevented. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Refer to supplier's container handling instructions. Keep container below 50°C in a well ventilated place.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Personal protection** Ensure adequate ventilation. Protect eyes, face and skin from liquid splashes.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

**Molecular weight** 40  
**Melting point** -189°C  
**Boiling point** -186°C  
**Critical temperature** -122°C  
**Relative density, gas** 1.38 (air=1)  
**Relative density, liquid** 1.4 (water=1)  
**Vapour Pressure 20°C** Not applicable  
**Solubility mg/l water** 67 mg/l  
**Appearance/Colour** Colourless liquid  
**Odour** No odour warning properties  
**Other data** Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

## 10 STABILITY AND REACTIVITY

**Stability and reactivity** Stable under normal conditions. Liquid spillages can cause embrittlement of structural materials.

## 11 TOXICOLOGICAL INFORMATION

**General** No toxicological effects from this product.

**12 ECOLOGICAL INFORMATION**

**General** Can cause frost damage to vegetation.

**13 DISPOSAL CONSIDERATIONS**

**General** Do not discharge into any place where its accumulation could be dangerous.  
Contact supplier if guidance is required.

**14 TRANSPORT INFORMATION**

**UN Nr** 1951  
**Class/Div** 2.2  
**ADR/RID Item Nr** 2,7a  
**ADR/RID Hazard Nr** 220  
**Tremcard Nr** 17  
**Groupcard Nr** 20g22  
**Labelling ADR** Label 2: non flammable non toxic gas  
**Other transport information** Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers ensure that they are firmly secured and:  
 - adequate ventilation.  
 - compliance with applicable regulations.

**15 REGULATORY INFORMATION**

**Number in Annex I of Dir 67/548** Not included in Annex 1.  
**EC Classification** Proposed by the industry  
 Not classified as dangerous substance.  
**Labelling of cylinders - Symbols** Road transport symbols are used and selected according to the most stringent product classification - EC or ADR .  
 Label 2: non flammable non toxic gas.  
**- Risk phrases** RAs Asphyxiant in high concentrations.  
 RFb May cause frostbite.  
**- Safety phrases** S9 Keep container in well ventilated place.  
 S23 Do not breathe the gas.  
 S36A Use suitable protective equipment.

**16 OTHER INFORMATION**

Ensure all national/local regulations are observed.  
 The hazard of asphyxiation is often overlooked and must be stressed during operator training.  
 Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.  
 Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

**17 PRODUCT SPECIFICATION**

	Specification	Typical Analysis
<b>Pure Liquid Argon</b>		
Argon	99.999%	99.9995%
Oxygen	<2 vpm	1 vpm
Moisture	<1 vpm	<1 vpm
Nitrogen	<6 vpm	3 vpm
Carbon Dioxide		0.5 vpm
Hydrocarbon		1 vpm
Carbon Monoxide		1 vpm
Hydrogen		1 vpm
Nitrous Oxide		0.1 vpm
Acetylene		0.05 vpm
<b>Industrial Liquid Argon</b>		
Argon	98% ± 0.4%	97.8%
Oxygen	1.6 - 2.4%	2%
Moisture	<1 vpm	<1 vpm
Nitrogen	<0.4%	<0.2%
Carbon Dioxide		1 vpm
Hydrocarbon		1 vpm
Carbon Monoxide		
Hydrogen		1 vpm
Nitrous Oxide		1 vpm
Acetylene		1 vpm



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**For product and safety enquiries please phone**

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