SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Catalog No. L16885

Product Name:	**Vinyl bromide, 97%**
Synonyms:	Bromoethylene
Manufacturer/Supplier Name:	Alfa Aesar - A Johnson Matthey Company
Address:	30 Bond St. Ward Hill, MA 01835
Business Phone:	978-521-6300
Business Fax:	978-521-6350
For information in North America, call:	978-521-6300

CHEMTREC Numbers:

For emergencies in the US, call CHEMTREC: 800-424-9300

For emergencies outside US, call INTERNATIONAL: (703)527-3887

For Nonemergency, call: (800)262-8200

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SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS

Catalog No. L16885

Chemical Name	Vinyl bromide
CAS#	593-60-2
% Weight (Typical)	97

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SECTION 3 : HAZARDS IDENTIFICATION

Catalog No. L16885

Emergency Overview: Flammable. Suspect carcinogen. Mutation data.

Vinyl bromide:

Route of Exposure:	Inhalation. Ingestion.
Potential Health Effects:	
Eye Contact:	No data
Skin Contact:	No data
Inhalation:	May be irritating to the respiratory tract. May be narcotic/anaesthetic at high concentrations.
Ingestion:	Toxic by ingestion.
Target Organs:	Respiratory system. G.I. Tract.

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SECTION 4 : FIRST AID MEASURES

Catalog No. L16885

Eye Contact:	Immediately flush eyes with plenty of water for at least 20 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention if irritation persists, or symptoms of overexposure become apparent.
Skin Contact:	Immediately wash skin with plenty of water for at least 20 minutes, while removing contaminated clothing and shoes. Get medical attention especially, if irritation develops, persists, or symptoms of overexposure become apparent.
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Keep warm. Get immediate medical attention.
Ingestion:	If swallowed, call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting unless instructed by medical personnel. Get medical attention.

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SECTION 5 : FIRE FIGHTING MEASURES

Catalog No. L16885

Fire:	Flammable.
Flash Point:	<-8°C (32°F)
Upper Flammable or Explosive Limit:	15 vol %
Lower Flammable or Explosive Limit:	9 vol %
Auto Ignition Temperature:	530°C (986°F)
Extinguishing Media:	Use dry powder or carbon dioxide when fighting a fire involving this material.
Unsuitable Media:	Water extinguishers are not recommended.
Protective Equipment:	As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

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SECTION 6 : ACCIDENTAL RELEASE MEASURES

Catalog No. L16885

Personal Precautions:	Keep upwind of leak. Evacuate area until gas has dispersed. Shut off source of leak if it is safe to do so. Eliminate all ignition sources. See also section 8.
Spill Cleanup Measures:	Shut off leak if it is safe to do so. Ventilate spill area and allow to evaporate. Evacuate area until gas has dispersed. Eliminate all sources of ignition. Refer to section 13 for disposal or reporting requirements.
Environmental Precautions:	Do not allow material to enter drains or streams.

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SECTION 7 : HANDLING and STORAGE

Catalog No. L16885

Handling:	This product should be handled only by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals, who should take into account the fire, health and chemical hazard data. It should always be handled in an efficient fume hood or equivalent system. The user should consider that the toxicological and physiological properties of many compounds are not yet well determined and that new hazardous products may arise from reactions between chemicals. Care should be taken to prevent any chemical from coming into contact with the skin or eyes and from contaminating personal clothing.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible substances. Keep container tightly closed when not in use.
Hygiene Practices:	Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

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SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION

Catalog No. L16885

Guideline Type:	NIOSH REL-STEL
Guideline Information:	Lowest feasible concentration.
Guideline Type:	ACGIH TLV-TWA
Guideline Information:	0.5 ppm 2.2 mg/m3

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Skin Protection Description:	Wear suitable protective clothing to prevent contact with skin.
Hand Protection Description:	Wear appropriate protective gloves. Consult glove manufacturers for glove permeability data.
Eye/Face Protection:	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited to airborne concentrations that are typically within 10 times the exposure limit. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHAs 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirators use.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Ingredient Guidelines

Ingredient: Vinyl bromide

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SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

Catalog No. L16885

Physical State/Appearance:	Liquefied gas
Odor:	Characteristic
Vapor Pressure:	1359 mbar @ 25°C (77°F)
Vapor Density:	3.8 @ 15°C (59°F)
Flash Point:	<-8°C (32°F)
Auto Ignition Temperature:	530°C (986°F)
Upper Explosive Limit:	15 vol %
Lower Explosive Limit:	9 vol %
Boiling Point:	16°C (60.8°F)
Melting Point:	-139.5°C (-219.1°F)
n-Octanol/water partition coefficient:	1.57
Solubility in Water:	Insoluble
Density:	1.493
Molecular Formula:	C_2H_3Br
Molecular Weight:	106.95

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SECTION 10 : STABILITY and REACTIVITY

Catalog No. L16885

Chemical Stability:	Stabilized with 200 ppm 4-Methoxyphenol. Polymerisation can occur in the absence of stabliser, induced by heat, light or free-radical initiators.
Conditions to Avoid:	High temperatures, flames and sparks. Direct sunlight or other strong light.
Incompatibilities with Other Materials:	Strong oxidizing agents. Strong reducing agents. Peroxy compounds or other free-radical initiators. Combustible material.
Possible Decomposition Product:	Carbon monoxide. Hydrogen bromide.

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SECTION 11 : TOXICOLOGICAL INFORMATION

Catalog No. L16885

Vinyl bromide :

RTECS Number:	KU8400000
Eye Effect:	No data reported in the cited references as of the revision date.
Skin Effects:	No data reported in the cited references as of the revision date.
Ingestion Effects:	Oral - rat LD50: 500 mg/kg (RTECS)
Inhalation Effects:	Inhalation - rat LCLo: 50000 ppm/7H (RTECS)
Chronic Inhalation Effects:	Inhalation - rat TCLo: 10000 ppm/7H/4W-I Nutritional and Gross Metabolic - weight loss or decreased weight gain; Inhalation -rat TCLo: 250 ppm/6H/26W-I Cardiac - changes in heart weight Liver - changes in liver weight (RTECS)
Carcinogenicity:	NIOSH Carcinogen. IARC-2A Carcinogen - Probably Carcinogenic to Humans. ACGIH TLV-A2 - Suspected Human Carcinogen. Carcinogenic and equivocal tumorigenic agent by RTECS criteria.
Mutagenicity:	Mutation data reported. (RTECS).

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SECTION 12 : ECOLOGICAL INFORMATION

Catalog No. L16885

Ecotoxicity:	No information provided.
Bioaccumulation:	No information provided.
Biodegredation:	No information provided.
Environmental Stability:	No information provided.

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SECTION 13 : DISPOSAL CONSIDERATIONS

Catalog No. L16885

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines, by a licensed disposal company.

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SECTION 14 : TRANSPORT INFORMATION

Catalog No. L16885

DOT Shipping Name:	Vinyl bromide, stabilized
DOT Hazard Class:	2.1
DOT Identification Number:	UN1085

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SECTION 15 : REGULATORY INFORMATION

Catalog No. L16885

Vinyl bromide :

TSCA 8(b): Inventory Status:	Listed on the TSCA inventory.
Risk Phrases:	R12 Extremely flammable. R45 May cause cancer.
Safety Phrase:	S53 Avoid exposure obtain special instructions before use. S45 In case of accident or if you feel unwell, seek medical advice immediately

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SECTION 16 : ADDITIONAL INFORMATION

Catalog No. L16885

MSDS Preparation Date:	January 1, 2002, Version 1
MSDS Revision Date:	April 14, 2003.
MSDS Author:	Actio Corporation.

Disclaimer:

This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. We shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.
Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet. We welcome any additional information about our products that customers have obtained by personal experience.

References:

1. American Chemical Society, STN Easy Online Database
2. Brethericks Reactive Chemical Hazards Database. Version 2.
3. Gassarett and Doulls Toxicology, The Basic Science of Poisons.
4. Hawleys Condensed Chemical Dictionary, Thirteenth Edition
5. IARC monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, WHO International Research on Cancer.
6. Industrial Hygiene and Toxicology, by F.A. Patty.
7. National Library of Medicine, Department of Health and Human Services, Hazardous Substances Data Bank (HSDB).
8. National Toxicology Program (NTP) Eighth Report on Carcinogens, 1997.
9. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS) and Pocket Guide to Chemical Hazards.
10. OSHA Hazard Communication Standard, 1910.1200 and Z Tables.
11. Sax Dangerous Properties of Industrial Materials. Tenth Edition.
12. The Merck Index: An Encyclopedia of Chemicals and Drugs. Merck and Company. Twelfth Edition 1998.
13. Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environmental and Biological Exposure Indices. TLV Booklet, 2001.

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