



AGA GAS, INC. (216) 642-6600
6055 ROCKSIDE WOODS BLVD
P.O. BOX 94737
CLEVELAND, OH 44101-4737

MATERIAL
SAFETY
DATA SHEET

No. 66

PRODUCT NAME Vinyl Bromide	CAS # 593-60-2
TRADE NAME AND SYNONYMS Vinyl bromide, inhibited (D.O.T.)	DOT I.D. No.: UN 1085;RQ 100 (45.4)
CHEMICAL NAME AND SYNONYMS Vinyl Bromide; Bromoethylene	DOT Hazard Class: Division 2.1
ISSUE DATES AND REVISIONS Revised May 1998	Formula C ₂ H ₃ Br
	Chemical Family: Halogenated Alkene

HEALTH HAZARD DATA

TIME WEIGHTED AVERAGE EXPOSURE LIMIT

5 Molar PPM with an A2 carcinogen rating.(ACGIH 1997). An A2 rating refers to a suspected human carcinogen. OSHA 1995 PEL (8 Hr. TWA) = None listed.

SYMPTOMS OF EXPOSURE

Inhalation of the gas can cause dizziness, sleepiness, narcosis, nausea or vomiting.
If the liquid is splattered on the skin or in the eyes, it may cause irritation.

TOXICOLOGICAL PROPERTIES

IARC Cancer Review showed sufficient animal evidence for vinyl bromide as a carcinogen (1986). NTP or OSHA do not list vinyl bromide as a carcinogen or potential carcinogen.

Little is known of the toxicological properties of vinyl bromide.

Persons in ill health where such illness would be aggravated by exposure to vinyl bromide should not be allowed to work with or handle this product.

RECOMMENDED FIRST AID TREATMENT

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO VINYL BROMIDE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS AND BE COGNIZANT OF FIRE OR EXPLOSION HAZARD.

Inhalation: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, given assisted respiration and supplemental oxygen. Further treatment should be symptomatic and supportive.

Eye Contact: PERSONS WITH POTENTIAL EXPOSURE TO VINYL BROMIDE SHOULD NOT WEAR CONTACT LENSES. (Continued on Page 4)

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Since the Company shall have no control of the use of the product described herein, the Company assumes no liability for loss or damage incurred from the proper or improper use of such product.

VINYL BROMIDE

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES

It polymerizes immediately on exposure to sunlight or if continually in contact with oxygen or air. The addition of phenol prevents this polymerization. It is very weakly flammable.

PHYSICAL DATA

BOILING POINT 60.3°F (15.7°C)	LIQUID DENSITY AT BOILING POINT 95.2 lb/ft ³ (1525 kg/m ³)
VAPOR PRESSURE 20.3 psia (140 kPa)	GAS DENSITY AT 70°F, 1 atm @ 77°F (25°C) = .280 lb/ft ³ (4.49 kg/m ³)
SOLUBILITY IN WATER Slightly soluble	FREEZING POINT -216°F (-138°C)
EVAPORATION RATE Unknown	SPECIFIC GRAVITY (AIR=1) @ 77°F (25°C) = 3.79
APPEARANCE AND ODOR Colorless gas with a pleasant odor	

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Unknown	AUTO IGNITION TEMPERATURE Unknown	FLAMMABLE LIMITS % BY VOLUME (See Page 4) LEL 9 UEL 15
EXTINGUISHING MEDIA Water dry chemical. carbon dioxide		ELECTRICAL CLASSIFICATION Class 1, Group not specified
SPECIAL FIRE FIGHTING PROCEDURES Attempt to stop the flow of vinyl bromide. Use water spray to cool surrounding containers.		
UNUSUAL FIRE AND EXPLOSION HAZARDS Vinyl bromide vapors are heavier than air and may travel a considerable distance to a source of ignition. Should fire be extinguished and flow of gas continue, increase ventilation to prevent formation of flammable mixtures in low areas or pockets.		

REACTIVITY DATA

STABILITY Unstable		CONDITIONS TO AVOID None
Stable	X	
INCOMPATIBILITY (Materials to avoid) Oxidizers		
HAZARDOUS DECOMPOSITION PRODUCTS Unknown		
HAZARDOUS POLYMERIZATION May Occur		CONDITIONS TO AVOID
Will Not Occur	X	None

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is in container or container valve, contact your closest supplier location or call the emergency telephone number listed herein.
WASTE DISPOSAL METHOD Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labeled, with any valve outlet glued or caps secured and valve protection cap in place to your supplier. For emergency disposal assistance, contact your closest supplier location or call the emergency telephone number listed herein.

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)	Positive pressure air line with mask or self-contained breathing apparatus should be available for emergency use.	
VENTILATION Hood with forced ventilation	LOCAL EXHAUST To prevent accumulation above the TWA	SPECIAL N/A
	MECHANICAL (Gen.) In accordance with electrical codes	OTHER N/A
PROTECTIVE GLOVES Most materials except natural rubber		
EYE PROTECTION Safety goggles or glasses		
OTHER PROTECTIVE EQUIPMENT Safety shoes, safety shower, eyewash "fountain," transparent face shield		

SPECIAL PRECAUTIONS*

SPECIAL LABELING INFORMATION DOT Shipping Name: Vinyl bromide, inhibited DOT Shipping Label: Flammable Gas	DOT Hazard Class: Division 2.1 I.D. No.: UN 1085 RQ 100 (45.4)
SPECIAL HANDLING RECOMMENDATIONS Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. For additional handling recommendations, consult Compressed Gas Association's Pamphlet P-1.	
SPECIAL STORAGE RECOMMENDATIONS Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of noncombustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125F (52C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - first out" inventory system to prevent full cylinders being stored for excessive periods of time. Post "No Smoking or Open Flames" signs in the storage or use area. There should be no sources of ignition in the storage or use area. For additional storage recommendations, consult Compressed Gas Association's Pamphlet P-1.	
SPECIAL PACKAGING RECOMMENDATIONS Most metals except copper and its alloys may be used with vinyl bromide. Copper and its alloys could form explosive acetylides by reacting with the acetylene impurity in the product. Teflon® is the preferred gasketing material.	
OTHER RECOMMENDATIONS OR PRECAUTIONS Earth-ground and bond all lines and equipment associated with the vinyl bromide system. Electrical equipment should be non-sparking or explosion proof. Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipment of a compressed gas cylinder which has not been filled by the owner or with his (written) consent is a violation of Federal Law (49CFR). (Continued on Page 4)	

*Various Government Agencies (i.e. Department of Transportation, Occupational Safety and Health Administration, Food and Drug Administration and others) may have specific regulations concerning the transportation, handling, storage or use of this product which will not be reflected in this data sheet. The customer should review these regulations to ensure that he is in full compliance.

VINYL BROMIDE

RECOMMENDED FIRST AID TREATMENT: (Continued)

Flush contaminated eye(s) with copious quantities of water. Part eyelids with fingers to assure complete flushing. Continue for minimum of 15 minutes. An eye specialist should be called promptly.

Skin Contact: Flush affected areas with copious quantities of water. Remove affected clothing as rapidly as possible. Follow the water flush with a soap and water wash.

SPECIAL PRECAUTIONS

OTHER RECOMMENDATIONS OR PRECAUTIONS: (Continued)

Always secure cylinders in an upright position before transporting them. NEVER transport cylinders in trunks of vehicles, enclosed vans, truck cabs or in passenger compartments. Transport cylinders secured in open flatbed or in open pick-up type vehicles.

Vinyl Bromide is considered a toxic chemical and is subject to the reporting requirements of SARA, Title III, Section 313.

NFPA 704 NO. for vinyl bromide = 2 1 1 None