



MATERIAL SAFETY DATA SHEET BROMINE TRIFLUORIDE 5.1

PRODUCT IDENTIFICATION	
PRODUCT NAME	BROMINE TRIFLUORIDE
TRADE NAMES AND SYNONYMS	CHEMICAL CYLINDER , CHEMICAL MODULE, FOR USE WITH CHEMICAL CUTTERS
MANUFACTURER	DIAMONDBACK INDUSTRIES, INC., AIRGAS
TRANSPORTATION EMERGENCY	1-800-424-9331 (24 HRS – CHEMTREC) CCN62142

PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES

THE PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES IS A RESULT OF CAREFUL PLANNING AND OBSERVANCE OF THE BEST KNOWN PRACTICES. THE EXPLOSIVES USER MUST REMEMBER THAT HE IS DEALING WITH A POWERFUL FORCE AND THAT VARIOUS DEVICES AND METHODS HAVE BEEN DEVELOPED TO ASSIST HIM IN DIRECTING THIS FORCE. HE SHOULD REALIZE THAT THIS FORCE, IF MISDIRECTED, MAY EITHER KILL OR INJURE BOTH HIM AND HIS FELLOW WORKERS.

WARNING

ALL EXPLOSIVES ARE DANGEROUS AND MUST BE CAREFULLY HANDLED AND USED FOLLOWING APPROVED SAFETY PROCEDURES EITHER BY OR UNDER THE DIRECTION OF COMPETENT, EXPERIENCED PERSONS IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, OR ORDINANCES. IF YOU HAVE ANY QUESTIONS OR DOUBTS AS HOW TO USE ANY EXPLOSIVE PRODUCT, **DO NOT USE IT** BEFORE CONSULTING WITH YOUR SUPERVISOR , OR THE MANUFACTURER, IF YOU DO NOT HAVE A SUPERVISOR. IF YOUR SUPERVISOR HAS ANY QUESTIONS OR DOUBTS, HE SHOULD CONSULT WITH THE MANUFACTURER BEFORE USING THE EXPLOSIVE RELATED PRODUCT.

HAZARDOUS COMPONENTS

MATERIAL OR COMPONENT	CAS No.	TLV	PEL
BROMINE TRIFLOURIDE	07787-71-5	NE	NE
N/A = NOT ASSIGNED NE = NOT ESTABLISHED			

PHYSICAL DATA

4130 SEAMLESS COLD DRAWN AIRCRAFT ALLOY CYLINDERS FILLED TO 75% CAPACITY WITH BROMINE TRIFLOURIDE, A COLORLESS, FUMING LIQUID WITH A CHOKING, PUNGENT ODOR.

HAZARDOUS REACTIVITY	
INSTABILITY	STABLE COMPOUND. REACTS VIOLENTLY OR EXPLODES ON CONTACT WITH WATER AND MOST ORGANIC MATERIALS.
INCOMPATIBILITY	WATER, PLASTICS, HYDROCARBONS, AND MOST OTHER ORGANIC MATERIALS.
HAZARDOUS DECOMPOSITION	BROMINE, FLUORINE, BROMINE MONOFLUORIDE ARE NORMAL HAZARDOUS DECOMPOSITION PRODUCTS. REACTIONS CAN PRODUCE HYDROGEN FLUORIDE.
POLYMERIZATION	POLYMERIZATION WILL NOT OCCUR.

FIRE AND EXPLOSION DATA	
FLASHPOINT	NOT APPLICABLE
EXTINGUISHING MEDIA	NONFLAMMABLE
SPECIAL FIRE FIGHTING PROCEDURES	FIRES WITH BROMINE TRIFLUORIDE AS THE OXIDIZER CAN ONLY BE EXTINGUISHED BY SHUTTING OFF THE SOURCE OF BROMINE TRIFLUORIDE. DO NOT USE WATER, CHEMICALS, CARBON DIOXIDE, OR OTHER EXTINGUISHING MEDIA AS THESE WILL ONLY ADD MORE FUEL TO THE FIRE.
UNUSUAL FIRE AND EXPLOSION HAZARDS	REACTS VIOLENTLY OR EXPLODES ON CONTACT WITH WATER OR ORGANIC MATERIALS. COMBUSTION PRODUCTS, INCLUDING HYDROGEN FLUORIDE, ARE TOXIC AND REACTIVE.

HEALTH HAZARDS	
SYMPTOMS OF EXPOSURE	CORROSIVE AND EXTREMELY IRRITATING TO THE UPPER AND LOWER RESPIRATORY TRACTS, SKIN, AND EYES. BROMINE TRIFLUORIDE HYDROLYZES TO FORM HYDROFLUORIC ACID; THEREFORE, SKIN BURNS AND MUCUS MEMBRANE IRRITATION ARE SIMILAR TO THOSE CAUSED BY THE ACID. SYMPTOMS INCLUDE TEARING OF THE EYES, COUGH, DIFFICULT BREATHING, ABNORMAL FLUID FORMATION IN THE NOSE, MOUTH, AND THROAT.
CARCINOGENICITY	NONE OF THE COMPONENTS OF BROMINE TRIFLUORIDE ARE LISTED AS A CARCINOGEN BY NTP, IARC, OR OSHA.
TOXICOLOGIC PROPERTIES	BROMINE TRIFLUORIDE IS IRRITATING AND CORROSIVE TO ALL LIVING TISSUES. TOXIC LEVEL EXPOSURE TO SKIN TISSUES CAUSES HYDROFLUORIC ACID BURNS AND SKIN LESIONS RESULTING IN TISSUE DESTRUCTION AND EVENTUAL SCARING. BURN ACTIVITY CONTINUES WHILE ANY RESIDUAL ACTIVE FLUORIDES REMAIN. CHEMICAL PNEUMONITIS AND PULMONARY EDEMA RESULT FROM EXPOSURE TO THE LOWER RESPIRATORY TRACT AND DEEP LUNG. RESIDUAL PULMONARY MALFUNCTION MIGHT ALSO OCCUR. BURNS OF THE EYE RESULT IN LESIONS AND POSSIBLE LOSS OF VISION. EXTENDED LOW LEVEL SYSTEMIC ABSORPTION OF FLUORIDES MAY CAUSE FLUOROSIS, AN ABNORMAL CALCIUM ACCUMULATION IN THE BONE STRUCTURE.

FIRST AID	
INHALATION	MOVE EXPOSED PERSONNEL TO UNCONTAMINATED AREA. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. KEEP THE VICTIM WARM AND QUIET. ASSURE THAT MUCUS OR VOMITED MATERIAL DOES NOT OBSTRUCT THE AIRWAY BY USE OF POSITIONAL DRAINAGE. PULMONARY EDEMA MAY OCCUR. KEEP VICTIM UNDER MEDICAL OBSERVATION FOR AT LEAST 24 HOURS.
EYE AND SKIN CONTACT	***FOR EYE CONTACT, FLUSH WITH LARGE QUANTITIES OF WATER. HOLD EYELIDS OPEN WITH FINGERS TO ASSURE COMPLETE FLUSHING. CONTINUE FOR A MINIMUM OF 30 MINUTES. SEEK PROMPT MEDICAL ATTENTION. ***FOR SKIN CONTACT, FLUSH AFFECTED AREA WITH WATER. REMOVE AFFECTED CLOTHING AS RAPIDLY AS POSSIBLE. SKIN BURNS MAY BE TREATED WITH CALCIUM GLUCONATE GEL OR BY MAKING A PASTE WITH SODIUM BICARBONATE (BAKING SODA) AND WATER AND COVERING AND WORKING INTO THE AFFECTED AREA. SEEK PROMPT MEDICAL ATTENTION
INGESTION	NOT A LIKELY ROUTE OF EXPOSURE
INJURY FROM DETONATION	SEEK PROMPT MEDICAL ATTENTION

SPILL OR LEAK PROCEDURES

SPILL/LEAK RESPONSE	EVACUATE ALL PERSONNEL FROM AFFECTED AREA. USE APPROPRIATE PROTECTIVE EQUIPMENT, BE CERTAIN TO PURGE PIPING WITH AN INERT GAS SUCH AS NITROGEN PRIOR TO ANY REPAIRS. IF LEAK IS IN CONTAINER OR THE CONTAINER VALVE, CALL THE EMERGENCY PHONE NUMBER PROVIDED ON PAGE ONE OF THIS DOCUMENT.
WASTE DISPOSAL	DISPOSE OF IN COMPLIANCE WITH FEDERAL REGULATIONS UNDER THE AUTHORITY OF THE RESOURCE CONSERVATION AND RECOVERY ACT.

SPECIAL PRECAUTIONS

DO NOT ALLOW CHEMICAL CYLINDERS TO BE STORED IN AREAS WHERE THE TEMPERATURE EXCEEDS 130 DEGREES F. USE A FIRST IN FIRST OUT INVENTORY SYSTEM TO PREVENT STORAGE OF PRODUCT FOR EXCESSIVE PERIODS OF TIME.

SPECIAL PROTECTION INFORMATION

VENTILATION	USE ONLY WITH ADEQUATE VENTILATION
RESPIRATORY	NIOSH APPROVED FULL FACE RESPIRATOR WITH HYDROGEN FLUORIDE FILTERS.
EYE	SAFETY GLASSES OR GOGGLES WITH FULL FACE SHIELD.
GLOVES	NEOPREME RUBBER GLOVES
OTHER	NEOPREME SUITE AND NEOPREME OVERSHOES.

STORAGE CONDITIONS

PROTECT CHEMICAL CYLINDERS FROM DAMAGE. STORE IN COOL, DRY, WELL VENTILATED AREA AWAY FROM HEAVY TRAFFIC AREAS AND EMERGENCY EXITS.

SHIPPING INFORMATION

PROPER SHIPPING NAME	BROMINE TRIFLUORIDE: SHIP UNDER PROVISION OF DOT SPECIAL PERMIT: DOT-SP 8843, AND COMPETENT AUTHORITY APPROVAL CA2002040030.	
HAZARD CLASS	5.1 (6.1) (8)	
UN NUMBER	UN1746	
DOT LABEL & PLACARD	DOT LABEL	OXIDIZER, POISON, CORROSIVE, & CARGO AIRCRAFT ONLY
	DOT PLACARD	OXIDIZER, POISON, & CORROSIVE

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