Safety Data Sheet

Halotron® BrX (2-BTP)

Section 1. Identification

GHS product identifier : Halotron® BrX (2-BTP)

Synonyms : 1-propene, 2-bromo-3,3,3-trifluoro-; propene, 2-bromo-3,3,3-trifluoro-; 2- bromo-3,3,3-trifluoropropene; 2-bromo-3,3,3-trifluoroprop-1-ene; 3,3,3- trifluoro-2-bromopropene; R-1233B1

Restrictions on use : None known.

In case of emergency - Chemical

Hours of operation : 24 hours a day, 7 days a week

CHEMTREC Customer Number : CCN721187

Telephone number : +1 703 741 5970 (International)
+1 800 424 9300 (US & Canada)

Manufacturer / Supplier

American Pacific
10622 West 6400 North
Cedar City, UT 84721

Telephone: +1 (435) 865-5000
Fax: +1 (435) 865-5005

Use of substance/ preparation : Halotron BrX is used and marketed as a Fire Extinguishing Agent

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : TOXIC TO REPRODUCTION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
AQUATIC HAZARD (ACUTE) - Category 2

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : May cause respiratory irritation.
May cause drowsiness or dizziness.
May damage fertility or the unborn child.
Toxic to aquatic life.

Precautionary statements

Prevention : Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Obtain, read and follow all safety instructions before use. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.

Section 2. Hazards identification

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned, get medical advice. Get medical help if you feel unwell.

Storage : Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Hazards identified when used : Based on known or expected use, no additional hazards are expected.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Synonyms : 1-propene, 2-bromo-3,3,3-trifluoro-; propene, 2-bromo-3,3,3-trifluoro-

Ingredient name	Identifiers	Conc. (% w/w)	GHS Classification
2-bromo-3,3,3-trifluoroprop-1-ene	CAS: 1514-82-5 EC: 627-872-0	≥99	TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 AQUATIC HAZARD (ACUTE) - Category 2

Note: This material will contain proprietary stabilizer additives when in use in fire extinguisher hardware.

Any concentration shown as a range is to protect confidentiality or is due to batch variation. If specific chemical identify is withheld, it is to protect confidentiality.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse. Continue to rinse for at least 15 minutes.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. Gross overexposure may cause central nervous system effects such as dizziness,confusion, physical incoordination, drowsiness, anesthesia, or unconsciousness. At concentrations of 1.0% (v/v) or higher, may cause increased sensitivity of the heart to adrenaline, which might cause irregular heartbeats and possibly ventricular fibrillation or death.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Not likely to occur during professional use

Ingestion : Not likely to occur during professional use

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Section 5. Fire-fighting measures

Extinguishing media : The properties of this chemical make it an ideal extinguishing media itself

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. The concentrated agent when applied to fire can produce toxic by-products specifically hydrogen halides, which can cause damage. Avoid inhalation of these materials by evacuating and ventilating the area.

This material in air at both elevated pressure and temperature levels not commonly encountered may become combustible. Whether a mixture containing this material and air, or an oxygen enriched environment, becomes combustible depends on the inter-relationship of 1) the temperature, 2) the pressure, and 3) the proportion of oxygen. Weak combustion of vapors has been witnessed in air mixtures at pressures of 4.3 psig (19.0 psia) and 302°F (150°C) using a fuse wire ignition source. This agent is extremely effective as a fire extinguishing agent where it is applied to a fire as a spray or stream. This material should not, however, be used in firefighting applications or other applications where mixtures in air exceeding a few psig would be expected

Hazardous thermal decomposition products : Decomposition products may include the following materials:
halogenated compounds
Hydrogen halides

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. In the case of a fire involving a bulk tank of the material, ensure that the area where the fire occurred is well ventilated before re-entering. Wear protective clothing, including a Self Contained Breathing Apparatus (SCBA), if large amounts are present. Use water spray or fog to cool storage containers to help prevent an uncontrolled pressure release of bulk tanks, if applicable.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : In the event of a large spill, allow for adequate ventilation, and do not re-enter an area without an SCBA until adequate ventilation is accomplished. Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Containers should be maintained in good condition. Do not allow material to remain in deteriorating containers. Because this product can volatilize, special care should be taken for over

Section 7. Handling and storage

pressurization hazards if the containers are overheated or near a radiant heat source.

Section 8. Exposure controls/personal protection

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Control parameters

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Halotron® BrX is a clear and colorless, or clear with a light yellow tint, volatile liquid with a slight ether-like (unstabilized), or a soured fruit (when stabilized) odor. As with any chemical, dose and exposure are critically important variables to understand any potential treatment. Gross overexposure may cause central nervous system effects such as dizziness, confusion, physical incoordination, drowsiness, anaesthesia, or unconsciousness. At concentrations of 1.0% (v/v) or higher, may cause increased sensitivity of the heart to adrenaline, which might cause irregular heartbeats and possibly ventricular fibrillation or death.
Health Hazards: Time Weighted Exposure Limits (For persons regularly exposed to material):
DNEL, 8-hr = 11 ppm
US EPA TSCA, 8-hr = 1 ppm (See Section 15 for additional US regulatory information)

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. If handled in enclosed spaces where applicable exposure limits might be exceeded, a Self Contained Breathing Apparatus (SCBA) should be used. When performing filling or servicing operations: Perform These Activities In A Well-Ventilated Area.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Volatile]

Color : Colorless to light yellow.

Odor : Solvent, ether-like(unstabilized), or a soured fruit odor (when stabilized)

Odor threshold : Not available.

pH : Not applicable.

Melting point : -131.2 to -111.2°C (-204.2 to -168.2°F)

Boiling point : 34°C (93.2°F)

Flash point : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not applicable

Lower and upper explosive (flammable) limits : Not applicable

Vapor pressure : 82.0 kPa at 25°C (11.9 psia @ 77°F)

Vapor density : 7.27 g/l at 20°C (0.45 lbs/ft3 at 68°F)

Relative density : 1.65 g/cm3 at 20°C (103 lbs/ft3 at 68°F)

Molecular weight : 174.95

Solubility(ies) : Not available.

Solubility in water : 1 g/l

Partition coefficient: n-octanol/water : 2.7

Auto-ignition temperature : None determined, tested to 400° C (752°F).

Decomposition temperature : 600°C (1112°F)

Viscosity : 2.4 x 10 -7 m 2/s at 25°C

Explosive properties : Not applicable

Oxidizing properties : Not applicable

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : Normally stable when stored in a closed system free of moisture or other contamination. This material will decompose if exposed to a high radiant heat source, such as fire. This compound will slowly react with oxygen and water contamination in storage containers. Stabilizing additives are added to this material prior to final installation inequipment in order to protect the material against minor amounts of air and moisture contamination that may occur when transferring material into or between containers.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Not available

Incompatible materials : Incompatible with alkali or alkaline earth metals, and powdered metals Al, Zn, Be, etc.
Avoid contact with oxidizers

Hazardous decomposition products : hydrogen fluoride
Hydrogen bromide
carbonyl halides

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Result	Dose	Remarks
2-bromo-3,3,3-trifluoroprop-1-ene	OECD 403 [Acute Inhalation Toxicity]	Rat - Inhalation - LC50 Vapor	83.9 mg/l [4 hours]	

Section 11. Toxicological information

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Test	Result	Remarks
2-bromo-3,3,3-trifluoroprop-1-ene	OECD 404 [Acute Dermal Irritation/Corrosion] OECD 405 [Acute Eye Irritation/ Corrosion]	Rabbit - Skin - Not irritant Rabbit - Eyes - Not irritant	

Conclusion/Summary

Skin : Not available.

Eyes : Not available.

Respiratory : May cause respiratory irritation.

Respiratory or skin sensitization

Conclusion/Summary

Skin : Not available.

Respiratory : Not available.

Germ cell mutagenicity

Product/ingredient name	Test	Result	Remarks
2-bromo-3,3,3-trifluoroprop-1-ene	OECD 471 [Bacterial Reverse Mutation Test] OECD 473 [In vitro Mammalian Chromosomal Aberration Test] OECD 476 [In vitro Mammalian Cell Gene Mutation Test]	In vitro - Bacteria Negative In vitro - Mammalian-Human Negative In vitro - Mammalian-Animal Negative	

Conclusion/Summary : Not available.

Carcinogenicity

Product/ingredient name	Test	Result	Remarks
Not available.			

Conclusion/Summary : Not available.

Reproductive toxicity

Product/ingredient name	Test	Species	Result	Remarks
2-bromo-3,3,3-trifluoroprop-1-ene	OECD 421 [Reproduction/ Developmental Toxicity Screening Test] OECD 421 [Reproduction/ Developmental Toxicity Screening Test]	Rat - Inhalation Rat - Inhalation	Maternal toxicity: Positive Fertility effects: Positive Developmental: Positive Maternal toxicity: Positive Fertility effects: Positive Developmental: Positive	Repeated or prolonged exposure to the substance can produce reproductive system damage.

Conclusion/Summary : May damage fertility or the unborn child.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
2-bromo-3,3,3-trifluoroprop-1-ene	Category 3		Respiratory tract irritation
-	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Section 11. Toxicological information

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Inhalation.
Routes of entry not anticipated: Oral, Dermal, Eyes.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. Gross overexposure may cause central nervous system effects such as dizziness,confusion, physical incoordination, drowsiness, anesthesia, or unconsciousness. At concentrations of 1.0% (v/v) or higher, may cause increased sensitivity of the heart to adrenaline, which might cause irregular heartbeats and possibly ventricular fibrillation or death.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Not likely to occur during professional use

Ingestion : Not likely to occur during professional use

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Test	Result	Remarks
2-bromo-3,3,3-trifluoroprop-1-ene	OECD 413 [Subchronic Inhalation Toxicity: 90-day Study]	Sub-chronic - Rat - Inhalation - NOAEL Vapor 1424.9 mg/m³ [6 hours per day] [13 weeks]	

Conclusion/Summary : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Result	Species	Remarks
2-bromo-3,3,3-trifluoroprop-1-ene	OECD 203 [Fish, Acute Toxicity Test]	Acute - LC50 4.3 mg/l [96 hours]	Fish - *Oncorhynchus mykiss*	
	OECD 202 [Daphnia sp. Acute Immobilization Test and Reproduction Test]	Acute - EC50 11.1 mg/l [48 hours]	Crustaceans - *Daphnia magna*	
	OECD 201 [Alga, Growth Inhibition Test]	Acute - EC50 >22.1 mg/l [72 hours]	Algae - *Raphidocelis subcapitata*	
	OECD 201 [Alga, Growth Inhibition Test]	Chronic - NOEC 22.1 mg/l [72 hours]	Algae - *Raphidocelis subcapitata*	

Conclusion/Summary : Toxic to aquatic life.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not Regulated for Transport.	Not Regulated for Transport.	Not Regulated for Transport.	Not Regulated for Transport.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not applicable.

Notice to reader : The above transport information is provided to assist in the proper classification of this product and may not be suitable for all shipping conditions.

Section 15. Regulatory information

United States

TSCA 5(a)2 final significant new use rules

1-Propene, 2-bromo-3,3,3-trifluoro-	P-14-0260

TSCA 5(a)2 proposed significant new use rules

None of the components are listed.

TSCA 5(e) substance consent order

1-Propene, 2-bromo-3,3,3-trifluoro-	-	-

TSCA 6 final risk management

None of the components are listed.

TSCA 12(b) - Chemical export notification

Name on list	Status	Ref. number
1-Propene, 2-bromo-3,3,3-trifluoro-	One time notification [Section 5]	P-14-0260

SARA 302/304

None of the components are listed.

SARA 304 RQ : Not applicable.

Canada

Canada Significant New Activity Notice : None of the components are listed.

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Singapore

Singapore - hazardous chemicals under government control

None.

Korea

K-REACH/CCA - Banned : None of the components are listed.

K-REACH/Article 39 (Accident Precaution Chemicals) : None of the components are listed.

Dangerous Materials Safety Management Act : Not applicable.

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

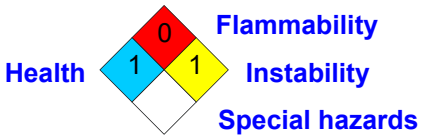
Not listed.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		0
Reactivity		1
PPE		X

National Fire Protection Association (U.S.A.)



Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations
WOE = Weight of Evidence

Indicates information that has changed from previously issued version.

Notice to reader

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