



Reviewed on 02/08/2007
1 Identification
Product identifier Product name: Benzyltrimethylammonium tribromide
Stock number: B24470
CAS Number: 111865-47-5
Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development
Details of the supplier of the safety data sheet
Manufacturer/Supplier: Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc. 30 Bond Street
Ward Hill, MA 01835-8099 Tel: 800-343-0660_
Fax: 800-322-4757 Email: tech@alfa.com
www.alfa.com Information Department: Health, Safety and Environmental Department
Emergency telephone number: During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.
2 Hazard(s) identification
Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
GHS07
Skin Irrit. 2 H315 Causes skin irritation.
Eve Irrit, 2A H319 Causes serious eve irritation.
STOT SE 3 H335 May cause respiratory irritation. Hazards not otherwise classified No information known.
Label elements GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms
GHS07
Signal word Warning
Hazard statements H315 Causes skin irritation.
H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vanours/sprav
P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED; Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification
D2B - Toxic material causing other toxic effects
(\underline{T})
Classification system
HMIS ratings (scale 0-4) (Hazardous Materials Identification System)
HEALTH II Health (acute effects) = 1
Fire I REACTIVITY Physical Hazard = 1
Other hazards Results of PBT and vPvB assessment
PBT: Not applicable. vPvB: Not applicable.
3 Composition/information on ingredients Chemical characterization: Substances
CAS# Description: 111865-47-5 Benzyltrimethylammonium tribromide
4 First-aid measures
Description of first aid measures
After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact
Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.
After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Seek medical treatment.
(Contd. on page 2) USA

Information for doctor

Product name: Benzyltrimethylammonium tribromide

Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available. (Contd. of page 1)

5 Fire-fighting measures Extinguishing media Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Hydrogen bromide (HBr) Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit. 6 Accidental release measures Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information. 7 Handling and storage Handling Precautions for safe handling Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Information about protection against explosions and fires: No information known. Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents. Store in the dark Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Protect from exposure to light. Specific end use(s) No further relevant information available. 8 Exposure controls/personal protection Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Control parameters Components with limit values that require monitoring at the workplace: Not required. Additional information: No data Exposure controls Personal protective equipment The usual protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. Eye protection: Safety glasses Body protection: Protective work clothing. 9 Physical and chemical properties Information on basic physical and chemical properties General Information Appearance: Form: Powder Odor: Not determined Odor threshold: Not determined. pH-value: Not applicable. Change in condition Melting point/Melting range: Boiling point/Boiling range: 99-101 °C (210-214 °F) Not determined Sublimation temperature / start: Not determined Not applicable Not determined. Flash point: Flammability (solid, gaseous) Ignition temperature: Not determined (Contd. on page 3)

Product name: Benzyltrimethylammonium tribromide

Page 3/4 Printing date 11/24/2015 Reviewed on 02/06/2007

Control of page Control of page Control of page Control of the con	Product name: Benzyltrimethylamm	nonium tribromide
Auto tigning: Not determined Design of or explosion: Product does not present an explosion hazard. Lower: Not determined Upper: Not determined Upper: Not determined Design: Not determined Design: Not determined Design: Not determined Design: Not determined Partition contribution (incomation leader distribution) Not applicable. Design: Not determined Partition contribution (incomation leader distribution) Not applicable. Offer information Not determined Partition contribution (incomation leader distribution available. Not distribution available. Of stability and reactivity Not distribution available. Partition contribution available on table distribution available. Not distribution available. Of stability and reactivity Not distribution available. Partition contribution available available distribution. Not distribution available. Product distribution available available distribution. Not distribution available. Product distribution available available from the cacutify available. Not		(Contd. of page
Explosion limits: Net determined type: Variation limits: Not determined type: Variation: Not determined type: Variation: </th <th></th> <th></th>		
Lower: Mod determined Webpic pression Construction: Mod determined Webpic version Construction: Mod determined Webpic version Construction: Mod determined Webpic version Construction: Mod determined Webpic version Construction: Mod applicable. Mod applicable. Mod applicable. Construction: Mod applicable. Mod applicable. Mod applicable. Mod applicable. Mod applicable. Mod applicable. Mod applica	Danger of explosion:	Product does not present an explosion hazard.
Variation pressure: Model applicable. Vector density Model applicable. Vector density Model applicable. Solubility in Maschilly with Water coefficient (n-octanol/water. Mod determined Water coefficient (n-octanol/water. No determined water coefficient (n-octanol/water (n-octanol/water) water coefficient (n-octanol/water) wa	Lower:	
Relative density Not applicable, strapportation, with applicable, strapportation, strapport, strapport, strapport, strapport, strapport, strapport, strapport, strapport, strapport, strapport, strapport, strapport,	Vapor pressure:	
Vapor density - Mon applicable. Solution in finitesimal representation of the categories of the information in function of the categories. Mon applicable. Mon	Density:	Not determined
Evigence of the information of the second se	Vapor density	Not applicable.
Water: Control of the second sec	Evaporation rate	Not applicable.
Viscosity: ' ' A particular information valuable.'' Provide in	Water:	
dynamic: Ditre riformation Mit applicable Mit luthur nervani information available. 9 Stability and reactivity Rescutivity No information known. The stability Solabe under recommended storage conditions. The stability of heardroux reactions No tangerous reactions from information available. To stability of heardroux reactions No tangerous reactions No information available. To stability of heardroux reactions No tangerous reactions No information available. To stability of heardroux reactions No tangerous reactions No information available. To stability of heardroux reactions No information available. To stability of heardroux reactions No information available. To stability of heardroux reactions No information available. The stability of heardroux reactions No information available. The stability of heardroux reactions in the stability of heardroux reactions No information on toxicological effects Acute coxicity. No effects known: Carcinogeneiclity. No effects known: Stability information on correspondence in the stability of heardroux reacting of information. Stability information on correspondence intervention of the carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGH. Carcinogeneiclity. No effects known: Subactive to chronic toxicity - Single exposure: No a facts known. Subactive to chronic toxicity - Single exposure: No a facts known. Subactive to chronic toxicity - Single exposure: No a facts known. Subactive to chronic toxicity: No effects known: Subactive to chronic toxicity: No effects known: Subactive to chronic toxicity - Single exposure: No a facts exploration instability and the savelable form the toxicity of the savelable. Subactive to chronic toxicity: Single exploration available. Ferritions of exploration available. Ferritions of exploration available. Ferritions of exploration available. Ferritions of exploration available. Ferestable affects known: The mean available. Ferestabl): Not determined.
Other Information No further relevant information available. 51 Stability and reactivity Stability and reactivity Reactivity No information forom. The method is for a production on the production of the available. Dossibility of the information forom. The method is the information available. Conditions to avoid to under relevant information available. The information is a products: Carbon monocols and carbon is observed. Conditions to avoid to under relevant information available. Conditions to avoid to under relevant information available. Conditions to avoid to under relevant information available. If oxicological information Information on toxicological effects Acute Exciting: No effects known. Stability in the information on correspoin: Causes served apposence in the EPA, MAC, NTP, OSHA or ACGH. Egendence in the concised shown. Security is effects known. Event relation or correspoin: Causes and apposence in the first in the information. Stability is effect when the exciting or concises and apposence in the exciting in the excitence	dynamic:	Not applicable.
Reacting Notion Information Information Information Information available. Thermical sector position Information Information available. The sector of the se		Not applicable. No further relevant information available.
Reactivity No information known. Thermical setup recommended sorage conditions. Thermical sector recommended sorage conditions. Sector re) Stability and reactivity	
Chemical stability Stabile under recommended storage conditions. Thermal Recomparison is considered. Decomparison will not occur if used and stored according to specifications. Thermal Recomparison is considered. The comparison will not occur if used and stored according to specifications. Thermal Recomparison is considered according to specifications. Thermal Recomparison is a specification of the recommendation of the recomparison is a specification of the recomparison is a specification of the recomparison of the recomparison is a specification of the recomparison is a specific target organ system toxicity - spe	Reactivity No information known.	
Possibility of nazardous reactions in ordinations known Conditions to yord No. Uniter relevant information available. Conditions of a word No. Uniter relevant information available. To action menoxede and carbon dioxide Nutrogen outces Hydrogen bronide Torcicological information Information on toxicological effects Autoe toxicity. No effects known. LDLCSD values that are relevant for classification: No data Strin Interior or corrosion: Classification classification: No data Strin Interior or corrosion: Classification: No data Strin Interior or corrosion: Classification classification: No data Strin Interior or corrosion: Classification classification: No data Strin Interior or corrosion: Classification classification: No effects known. Carcinogenicity: No classification class on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Specific target organ system toxicity - regeted exposure: No effects known. Specific target organ system toxicity - regeted exposure: No effects known. Specific target organ system toxicity - regeted exposure: No effects known. Specific target organ system toxicity - regeted exposure: May cause respiratory irritation. Aspiration flashaden: To the bast of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological Information: To the bast of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological Information: To the bast of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological Information: To the bast of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological Information: To the bast of our knowledge the acute and chronic toxi	Chemical stability Stable under recom	imended storage conditions.
Incompatible materials: Cardion monouse and carbo dioxide Carbon monouse and carbon dioxide Carbon monouse and carbon dioxide Advint out of the context	Possibility of hazardous reactions No	o dangerous reactions known
Dividing agents United agents United agents Dividing Dividing Agents Dividing Divi	Conditions to avoid No further relevant	
Hazardous decomposition products: Garbon monoxima di caboli locade Hydrogen bronnike 1 Toxicological information Information on toxicological effects Acute toxicity: No effects known. Eye infration or corrosion: Causes serious eye infration. Sensitization: No sensitizage effects known. Germ cell mutagenicity: No effects known. Germ cell mutagenicity: No effects known. Germ cell mutagenicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Subacte to chronic toxicity: Inorganic bronic toxicity: Inorganic bronic boxicity: Subacte to chronic toxicity: Additional toxicological information. Toxicity Additional toxicological information: Toxicity Additional toxicological information: Toxicity: Additional exclogical information: Do not allow material to a realwalle information available. Additional exclogical information: Toxicity: Additional exclogical information: Toxicity: Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to the environment. Results of PAT and VYB assessment PAT: Not applicable. Consideration: Not a hazardous material for transportation. Not a hazardous material for transportati	Oxidizing agents	
Carbon monovide and carbon dioxide Nydrogen outside Nydrogen bronnide I Porticological information Information on toxicological affects Acute toxicity: No effects known. LDALCSO values that are relevant for classification: No data Skin irritation or corrosion: Causes skin irritation. Ger Cell mutigenticity: No effects known. Carcinogenicity: No effects known. Carcinogenicity: No effects known. Subacute toxicity: Causes skin irritation and in severe cause, spychosis and mental deterioration. Bromoderma, a bromide rash, often occurs wh Subacute to chronic toxicity: No effects known. Additional toxicity: No effects	Hazardous decomposition products:	
Hydrogen bromide 1 Toxicological information Information on toxicological effects Acture toxicity: No effects known. Eye Initiation or correstion: Causes serious eye initiation. Sensitization: No dessification: No data Skin Initiation or correstion: Causes serious eye initiation. Garcinogenicity: No effects known. Sensitization: Sensizizizi: Sensitizizizii: Sensitizizi: Sensitizi: Sensitizizi: Sen	Carbon monoxide and carbon dioxide	
Information on toxicological effects Acute toxicity: No effects known. LDL CS0 values that are relevant for classification: No data Skin irritation or corrosion: Causes serious eye irritation. Eye irritation or corrosion: Causes serious eye irritation. Eye irritation or corrosion: Causes serious eye irritation. Germ cell mutgenicity: No classification date on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Spirition harder: No effects known. Subacute to chronic toxicity: Inorganic bronides may produce depression, enaciation and in severe cases, psychosis and mental deterioration. Bromoderma, a bromide rash, often occurs who bromide inhabiton or administration is prolonged. This rash is usually found on the face and resembles acrea and furunculosis. Additional toxicological information Torkity Additional cocincity in the relevant information available. Prevalutive potential information Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow	Nitrogen oxides Hydrogen bromide	
Information on toxicological effects Actuet toxicity: No effects known. LDL 250 values that are relevant for classification: No data Skin Irritation or corrosion: Causes serious eye irritation. Eye irritation or corrosion: Causes serious eye irritation. Eye irritation or corrosion: Causes serious eye irritation. Eye irritation or corrosion: Causes serious eye irritation. Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No classification data on carcinogenic properties No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity: Inorganic brondes may produce depression, emaciation and in severe cases, psychosis and mental deterioration. Bromoderma, a bromide rash, often occurs wh bromides inhalation or administration is prolonged. This rash is usually found on the face and resembles acre and trunuculosis. Additional toxicological information. Toricity Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological Information Toricity Additional cociego and formation available. Persistence and degradability No turther relevant information available. Persistence and degradability No turther relevant information available. Additional cociego and formation: Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper disposal. Mobility in soil No further relevant information available. 4 Dotta adverse effects No further relevant information availab	1 Toxicological information	
Acute toxicity: No effects known. UDL CSV duales that are relevant for classification: No data Skin irritation or corrosion: Causes skin irritation. Sensitization: No sensitization effects known. Germ cell mutagenicity: No effects known. Sensitization: No sensitization: No effects known. Sensitization: No effects known. Subacute toxicity: No effects known. Subacute to chronic toxicity: Sensitization: No effects known. Subacute to chronic toxicity: Sensitization: No effects known. Subacute to chronic toxicity: No effects known. Subacute toxicity: No further relevant information available. Fersistence and degradability No Lurther relevant information available. Subacute toxicity: No further relevant information available. Subacute toxicity: No further relevant information available. Subacute toxicity: No further relevant	Information on toxicological effects	
Skin irritation or corrosion: Causes skin irritation. Sensitization: No sensitizing effects known. Garcinogenicity: No clessification data or carcinogonic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: May cause respiratory irritation. Aspiration factors. Provide the toxicity - single exposure: May cause respiratory irritation. Specific target organ system toxicity - single exposure: May cause respiratory irritation. Specific target organ system toxicity - single exposure: May cause respiratory irritation. Provide inhibition or administration is produce depression, emaciation and in severe cases. psychosis and mental deterioration. Bromide inhibition or administration is produced. This ratio is a sualable. Vacture to chronic toxicity: No effects known. Additional ecological information Toxicity Aquatic toxicity: No further relevant information available. Arguite toxicity: No further relevant information available. Reside and working to be released to the environment without proper governmental permits. Do not allow medicit to be released to the environment without proper governmental permits. Do not allow undikited to farge quantifies to reach	Acute toxicity: No effects known.	- I 19 diama Ala Jara
Eye irritation or corrosion: Causes serious eye irritation. Sensitization: No sensitization that on eartinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Remingenity: No telestication that on eartinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Specific target organ system toxicity - repeated exposure: No effects known. Subacute to chronic toxicity: Integration fuzzard: No effects known. Subacute to chronic toxicity: Integration fuzzard: No effects known. Subacute to chronic toxicity: None Additional toxicological information: Toxicity Additional toxicological information available. Persistence and degradability. No further relevant information available. Persistence and degradability. No further relevant information available. Additional ecological information: On allow unditude product of the evont information available. Additional ecological information: On allow unditude product of the evont information available. Additional ecological information: On allow unditude product of targe quantities to reach ground water, water course or sewage system. Advoid transit in the the environment. Advoid transit in the environment.	Skin irritation or corrosion: Causes s	skin irritation.
Germ cell mutagenicity: No effects known. Carcinogenicity: No effects known. Seportic tirge to rotan system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Subacute to chronic toxicity: Inorganic bromides may produce depression, emaciation and in severe cases, psychosis and mental deterioration. Bromoderma, a bromide rash, often occurs wh bromide inhibitor or administration is protoinged. This rash is usually found on the lace and resembles acne and furunculosis. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological information Toxicity Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Additional ecological information: General notes: Do not allow unrellifued product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPVB assessment PBT: Not applicable. 3 Disposal considerations Waste treatment methods Waste treatment methods Waste treatment methods Waste treatment methods 4 Transport information. Windbe, IATA None UN proper shipping name bof, AURS, IATA None Class None	Eye irritation or corrosion: Causes se	erious eye irritation.
Garcinogenicity: No classification date on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Subacute to chronic toxicity: Inorganic Drankes may produce depression, emaciation and in severe cases, psychosis and mental deterioration. Bromoderma, a bromide rash, often occurs who bromides inal produce depression, emaciation and in severe cases, psychosis and mental deterioration. Bromoderma, a bromide rash, often occurs who bromide inhalation or administration: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 22 Ecological information 7 Doxicity Additional toxicological information available. Persistence and degradability No further relevant information available. Blocacumulative potential No further relevant information available. Additional rocicolity information General notes: Do not allow undiluted product of large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Were Strick in the relevant information available. Very Were Non Specifications Wate transment methods Resonance and degradability No further relevant information available. Specific target organ system toxicity orgenovernmental permits.	Germ cell mutagenicity: No effects kn	nown.
Specific target organ system toxicity - repeated exposure: No effects known. Aspravion fazard: No effects known. Subacute to chronic toxicity: Inorganic bronnides may production is prolonged. This rash is usually found on the face and resembles aone and furunculosis. Subacute to chronic toxicity: Additional toxicological information: Zocological information Toxicity Aquatic toxicological information: Toxicity Aquatic toxicological information available. Aquatic toxicity: No effects known. Subacute to chronic toxicity No further relevant information available. Aquatic toxicity: No further relevant information available. Aquatic toxicity: No further relevant information available. Additional ecological information: Boot allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment. Results of PET and VPVB assessment PET in the pallotexter We We With pallotexter Ont allow anditerial to load or national regulations to ensure proper disposal. Uncleanced packagings: Recommendat	Carcinogenicity: No classification data	a on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Specific target organ system toxicity - single exposure: May cause respiratory irritation. Aspiration hazard: No effects known. Subacute to chronic toxicity: Subacute to chronic toxicity: No bornide invisitation of administration is prolonged. This rash is usually found on the face and resembles acne and furunculosis. Subacute to chronic toxicity: No effects known. Additional toxicological information: Toxicity Additional toxicological information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to Port adverse effects. Were there adverse effects to further relevant information available. Bioaccumulation on adverse effects. Bioaccumulation product on the government without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to port permits. Do not allow material to port permits. Do not allow farmation	Specific target organ system toxicity	repeated exposure: No effects known.
Subacute to chronic toxicity: Inorganic bromides may produce depression, emaciation and in severe cases, psychosis and mental deterioration. Bromoderma, a bromide rash, often occurs wh bromide inhalation or administration is prolonged. This rash is usually found on the face and resembles acree and furunculosis. Subacute to chronic toxicity: No effects known. Additional toxicological information: Toxicity: Auditional toxicological information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Recological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environmation available. Matter adverse effects No further relevant information available. Ther adverse effects No further relevant information available. Other adverse effects No further relevant information available. 3 Jisposal considerations Waste treatment methods Recommendation Consult state, local or natio	Specific target organ system toxicity	- single exposure: May cause respiratory irritation.
bromide inhalation or administration is prolonged. This rash is usually found on the face and resembles ache and furunculosis. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological information Toxicity Aquetic toxicity: No further relevant information available. Aquetic toxicity: No further relevant information available. Additional ecological information Toxicity Constitution of the relevant information available. Additional ecological information available. Teresistence and fees and the relevant information available. Additional ecological information General note: Don of allow material to be released to the environment without proper governmental permits. Don of allow unditude product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. PBT: Not applicable. WPVB: Not applicable. Other adverse effects No further relevant information available. 3 Disposal considerations Waste treatment methods Recommendation Could state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation Disposal must be made according to official regulations. 4 Transport information Waste treatment methods Mone Transport hazard class(es) DOT, ADR, IMDE, IATA None	Subacute to chronic toxicity:	· · · · · · · · · · · · · · · · · · ·
Subacute to chronic toxicity: No effects known. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological information Toxicity Againstic toxicity: No further relevant information available. Presistence and degradability No further relevant information available. Mobility in soil No further relevant information available. Do not allow material to be released to the environment without proper governmental permits. Do not allow undilued product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and VPVB assessment PBT: Not applicable. Other adverse effects No further relevant information available. 3 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations. 4 Transport information Note a hazardous material for transportation. UN-Number DoT, MDG, LATA None UN proper shipping name None <th>bromide inhalation or administration is p</th> <th>prolonged. This rash is usually found on the face and resembles acne and furunculosis.</th>	bromide inhalation or administration is p	prolonged. This rash is usually found on the face and resembles acne and furunculosis.
2 Ecological information Toxicity Aquatic toxicity: No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and VPB assessment PBT: Not applicable. VPVB: Not applicable. VDVPVID Waste treatment methods Recommendation: Disposal must be made according	Subacute to chronic toxicity: No effect	cts known.
Toxicity Aquatic toxicity: No further relevant information available. Bioaccumulative potential No further relevant information available. Bioaccumulative potential No further relevant information available. Bioaccumulative potential No further relevant information available. Additional ecological information: General notes: Do not allow undituited product or large quantities to reach ground water, water course or sewage system. A control to the environment. Mean the policicable. VPB: Not applicable. VPB: Not applicable. 3 Disposal considerations Recommendation: Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN-Number DOT, MDG, IATA None UN poper shipping name DOT, ADR, IMDG, IATA None Dot, ALDR, IMDG, IATA None DAT None	¥	
Aquatic toxicity: No further relevant information available. Persistence and degradability. No further relevant information available. Bioaccumulative potential No further relevant information available. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results PBT: Not applicable. Other adverse effects No further relevant information available. 3 Disposal considerations Waste treatment methods Recommendation: Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number Dor, IMDG, IATA None Transport hazard class(es) Dof, IMDG, IATA None Transport hazard class(es) DoT, IMDG, IATA	Toxicity	
Bioaccumulative potential No further relevant information available. Additional ecological information: General notes: Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. VPVB: Not applicable. Other adverse effects No further relevant information available. 3 Disposal considerations Waste treatment methods Recommendation Consult istate, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None	Aquatic toxicity: No further relevant in	formation available.
Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and VPVB assessment PBT: Not applicable. VPVB: Not applicable. VPVB: Not applicable. VPVB: Not applicable. VPUB: Not applicable. VBT: Not applicable. VB: Not applicable. VB: Networks effects No further relevant information available. 3 Disposal considerations Waste treatment methods Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None Transport hazard class(es) D	Bioaccumulative potential No further	ther relevant information available. relevant information available.
General notes: * De not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and VPVB assessment PBT: Not applicable. Other adverse effects No further relevant information available. 3 Disposal considerations Waste treatment methods Recommendation: Disposal must be made according to official regulations. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None None None	Mobility in soil No further relevant info	rmation available.
Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and VPVB assessment PBT: Not applicable. VPVB: Not applica	General notes:	
Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available. 3 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None	Do not allow material to be released to a	the environment without proper governmental permits.
PBT: Not applicable. VPVB: Not applicable. Other adverse effects No further relevant information available. 3 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None Not, ADR, IMDG, IATA None	Avoid transfer into the environment	
Other adverse effects No further relevant information available. 3 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None	Results of PBT and vPvB assessment PRT: Not applicable	nt
3 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None	vPvB: Not applicable. Other adverse affects No further relev	vent information available
Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None		
Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDE, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) OT, ADR, IMDG, IATA None None	-	
Recommendation: Disposal must be made according to official regulations. 4 Transport information Not a hazardous material for transportation. None UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) None DOT, ADR, IMDG, IATA None	Recommendation Consult state, local	or national regulations to ensure proper disposal.
4 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) None DOT, ADR, IMDG, IATA None	Uncleaned packagings: Recommendation: Disposal must be r	nade according to official regulations.
Not a hazardous material for transportation. UN-Number None DOT, IMDG, IATA None UN proper shipping name None DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA DOT, ADR, IMDG, IATA None	· · ·	
DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) None DOT, ADR, IMDG, IATA None	Not a hazardous material for transporta	tion.
Transport hazard class(es) DOT, ADR, IMDG, IATA Class None	DOT, IMDG, IATA	None
Transport hazard class(es) DOT, ADR, IMDG, IATA Class None	UN proper shipping name DOT, IMDG, IATA	None
Class None		
		Nono
	Class	

Product name: Benzyltrimethylammonium tribromide (Contd. of page 3) Packing group DOT, IMDG, IATA None Environmental hazards: Not applicable. Special precautions for user Not applicable. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. Transport/Additional information: Not dangerous according to the above specifications. DOT Marine Pollutant (DOT): No 15 Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms ! GHS07 Signal word Warning Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements Precautionary statements P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 P405 P501 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. National regulations This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes. SARA Section 313 (specific toxic chemical listings) Substance is not listed. California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity female Substance is not listed. Prop 65 - Developmen Dispose of contents/container in accordance with local/regional/national/international regulations. Information about limitation of use: For use only by technically qualified individuals. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use amount to chapter the conditional states of the second state market and use must be observed. Substance is not listed Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 16 Other information Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. Conformance with this Material Safety Data Sheet, or in con Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / -Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent LD50: Lethal concentration, 50 percent COS: Chemical Abstrates of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) MTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)

USA