Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking
   
   Product identifier:
   
   Product name: n-Hexadecyltrimethylammonium bromide
   
   Product code(SDS NO): 1537E-2
   
   Details of the supplier of the safety data sheet
   
   Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
   
   Address: 3-1, Honmachibashi, Chuo-ku, Osaka 540-0029, JAPAN
   
   Division: Safety Management Dept. of Chemicals
   
   Telephone number: +81-6-6946-8061
   
   FAX: +81-6-6946-1607
   
   e-mail address: kagakuhinanzenkanri@kishida.co.jp

2. Hazards identification
   
   GHS classification and label elements of the product
   
   Classification of the substance or mixture
   
   HEALTH HAZARDS
   
   Acute toxicity Oral: Category 4
   
   Skin corrosion/irritation: Category 2
   
   Serious eye damage/eye irritation: Category 2A
   
   Reproductive toxicity: Category 2
   
   Specific target organ toxicity – single exposure: Category 1 (heart; blood/blood system)
   
   ENVIRONMENT HAZARDS
   
   Hazardous to the aquatic environment – acute hazard: Category 1
   
   Hazardous to the aquatic environment – long-term hazard: Category 1
   
   Label elements

   Signal word: Danger
   
   HAZARD STATEMENT
   
   Harmful if swallowed
   
   Causes skin irritation
   
   Causes serious eye irritation
   
   Suspected of damaging fertility or the unborn child
   
   Causes damage to organs after single exposure
   
   Very toxic to aquatic life
   
   Very toxic to aquatic life with long lasting effects
   
   PRECAUTIONARY STATEMENT
   
   Prevention
   
   Avoid release to the environment.
   
   Do not breathe dust/fume/gas/mist/vapors/spray.
   
   Wash contaminated parts thoroughly after handling.
   
   Wear protective gloves.
   
   Wear eye protection/face protection.
   
   Do not eat, drink or smoke when using this product.
   
   Response
   
   Collect spillage.
2/6

3. Composition/information on ingredients
Mixture/Substance selection:

Substance
Ingredient name: n-Hexadecyltrimethylammonium bromide
Content(%): 99 (min)
Chemical formula: [C16H33N(CH3)3]Br
Chemicals No, Japan: 9–795
CAS No.: 57–09–0
MW: 364.45
ECNo: 200–311–3

Note: The figures shown above are not the specifications of the product.

4. First-aid measures
Descriptions of first-aid measures
General measures
IF exposed or concerned: Get medical advice/attention.

IF INHALED
Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)
Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

IF SWALLOWED
Rinse mouth.
Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures
Extinguishing media
Suitable extinguishing media
Use appropriate extinguishing media suitable for surrounding facilities.

Specific hazards arising from the substance or mixture
Containers may explode when heated.
Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters
Specific fire-fighting measures
Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters
Wear fire/flame resistant/retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures
Personnel precautions, protective equipment and emergency procedures
Ventilate area after material pick up is complete.
Wear proper protective equipment.

Methods and materials for containment and cleaning up
Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident
Collect spillage.

7. Handling and storage
Precautions for safe handling
Preventive measures

(Exposure Control for handling personnel)
Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire & explosion)
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Exhaust/ventilator
Exhaust/ventilator should be available.

Safety treatments
Avoid contact with skin.
Avoid contact with eyes.

Safety Measures/Incompatibility
Wear protective gloves, protective clothing or face protection.
Wear eye protection/face protection.
When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities
Recommendation for storage
Keep container tightly closed.
Store in a cool, dry place. Do not store in direct sunlight.

8. Exposure controls/personal protection
Exposure controls
Appropriate engineering controls
Do not use in areas without adequate ventilation.
Eye wash station should be available.
Washing facilities should be available.

Individual protection measures
Respiratory protection
Wear respiratory protection.

Hand protection
Wear protective gloves.

Eye protection
Wear eye/face protection.
9. Physical and Chemical Properties
   Information on basic physical and chemical properties
   Physical properties
   Appearance: Powder
   Color: White
   Odor: Slightly odour
   pH: 5–7
   Phase change temperature
   Initial Boiling Point/Boiling point data N.A.
   Melting point/Freezing point: 250–256°C
   Melting point/Freezing point data N.A.
   Decomposition temperature data N.A.
   Flash point data N.A.
   Auto-ignition temperature data N.A.
   Explosive properties data N.A.
   Vapor pressure data N.A.
   Vapor density data N.A.
   Specific gravity/Density data N.A.
   Solubility
   Solubility in water: Soluble
   n-Octanol /water partition coefficient data N.A.

10. Stability and Reactivity
    Chemical stability
    Stable under normal storage/handling conditions.
    Conditions to avoid
    Contact with fire source.
    Hazardous decomposition products
    Hydrogen halogenide

11. Toxicological Information
    Information on toxicological effects
    Acute toxicity
    Acute toxicity (Oral)
    [GHS Cat. Japan, base data]
    (n-Hexadecyltrimethylammonium bromide)
    rat LD50 =410 mg/kg (RTECS, 2006)
    Irritant properties
    Skin corrosion/irritation
    [GHS Cat. Japan, base data]
    (n-Hexadecyltrimethylammonium bromide)
    mouse moderate (CERI-NITE Hazard Assessment No. 206, 2005)
    Serious eye damage /irritation
    [GHS Cat. Japan, base data]
    (n-Hexadecyltrimethylammonium bromide)
    rabbit severe (CERI-NITE Hazard Assessment No. 206, 2005)
No Allergenic and sensitizing effects data available
No Mutagenic effects data available
No Carcinogenic effects data available
Reproductive toxicity
[GHS Cat. Japan, base data]
(n-Hexadecyltrimethylammonium bromide) cat.2; CERI/NITE hazard assessment No.206, 2005
No Teratogenic effects data available
Delayed and immediate effects and also chronic effects from short- and long-term exposure
STOT
STOT—single exposure
[cat.1]
[Japan published data]
(n-Hexadecyltrimethylammonium bromide) heart; blood/blood system (CERI/NITE hazard assessment, No.206, 2005)
No Aspiration hazard data available

12. Ecological Information
Toxicity
Aquatic toxicity
Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects
Aquatic acute toxicity component(s) data
[GHS Cat. Japan, base data]
(n-Hexadecyltrimethylammonium bromide)
Algae (Microcystis) EC50=0.03mg/L/96hr (EPA_Japan, 2004)
Persistence and degradability
(n-Hexadecyltrimethylammonium bromide)
BOD_Degradation : 0% (Registered chemicals data check & review, Japan)
Bioaccumulative potential
(n-Hexadecyltrimethylammonium bromide)
BCF=741 (Check & Review, Japan)
No Mobility in soil data available
Ozone depleting chemical data not available

13. Disposal considerations
Waste treatment methods
Avoid release to the environment (~ if this is not the intended use).
Dispose of contents/container in accordance with local/national regulation.

14. Transport Information
UN number: 3077
UN proper shipping name:
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport hazard class(es): 9
Packing group: III
ERG GUIDE NO.: 171
Special provisions NO.: 274; 331; 335; 375; A97; A158; A179; A197
15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

US major regulations

TSCA
n-Hexadecyltrimethylammonium bromide

Other regulatory information
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

GHS classification and labelling

Acute Tox. 4: H302 Harmful if swallowed
Skin Irrit. 2: H315 Causes skin irritation
Eye Irrit. 2A: H319 Causes serious eye irritation
Repr. 2: H361 Suspected of damaging fertility or the unborn child
STOT SE 1: H370 Causes damage to organs after single exposure
Aquatic Acute 1: H400 Very toxic to aquatic life
Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects

Reference Book
Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN Classification, labelling and packaging of substances and mixtures (table3-1 ENCO6182012) 2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT) 2017 TLVs and BEIs. (ACGIH)
http://monographs.iarc.fr/ENG/Classification/index.php
Supplier's data/information

General Disclaimer
This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.
The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Japan official data (NITE published in 2015).