

Date of issue: 19/12/2017

Safety Data Sheet

 Identification of the substance/mixture and of the company/undertaking Product identifier: Product name: tri-Sodium citrate,2-hydrate Product code(SDS NO): 7134E-1
 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

 Hazards identification GHS classification and label elements of the product Classification of the substance or mixture (Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

Composition/information on ingredients
 Mixture/Substance selection:
 Substance
 Ingredient name:tri-Sodium Citrate Dihydrate
 Content(%):99(min)
 Chemical formula:C6H9Na3O9
 Chemicals No, Japan:2-1323
 CAS No.:6132-04-3
 MW:144.5573

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

4. First-aid measures

| Descriptions of first-aid measures | |
|--|----------|
| 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. | |
| 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. | |

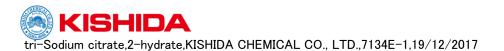


tri-Sodium citrate,2-hydrate,KISHIDA CHEMICAL CO., LTD.,7134E-1,19/12/2017

| 5. Fire-fighting measures | | |
|--|---|--|
| Extinguishing media | | |
| Suitable extinguishing media Use appropriate extinguishing media suitable for surrounding facilities. | | |
| | | |
| Containers may e | explode when heated. | |
| Fire may produce | irritating, corrosive and/or toxic gases. | |
| Advice for firefighters | Advice for firefighters Specific fire-fighting measures Evacuate non-essential personnel to safe area. | |
| Specific fire-fighting m | | |
| Evacuate non-es | | |
| Special protective equ | Special protective equipment and precautions for fire-fighters Wear fire/flame resistant/retardant clothing. | |
| Wear fire/flame r | | |
| Wear protective g | gloves/protective clothing/eye protection/face protection. | |
| Firefighters shoul | d wear self-contained breathing apparatus with full face peace operated | |
| positive pressure | mode. | |
| 6. Accidental release measu | res | |
| Personnel precautions, pr | otective equipment and emergency procedures | |
| | er material pick up is complete. | |
| Wear proper prot | | |
| | r containment and cleaning up | |
| | n a bag and hold for waste disposal. | |
| Preventive measures for | | |
| Collect spillage. | ,,,, | |
| | | |
| 7. Handling and storage | | |
| Precautions for safe hand | lling | |
| Preventive measures | | |
| (Protective measure | es against fire and explosion) | |
| | neat/sparks/open flames/hot surfaces No smoking. | |
| Exhaust/ventilator | | |
| Exhaust/ventilato | or should be available. | |
| Safety treatments | | |
| Avoid contact wit | h skin. | |
| Avoid contact wit | h eyes. | |
| Safety Measures/Inco | | |
| - | gloves, protective clothing or face protection. | |
| | t eat, drink or smoke. | |
| | ge, including any incompatibilities | |
| Recommendation for s | | |
| Keep container ti | - | |
| | ry place. Do not store in direct sunlight. | |
| , | | |
| 8. Exposure controls/persor | al protection | |
| Exposure controls | | |
| Appropriate engineerin | g controls | |
| Do not use in are | as 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: Crystals or crystalline powder Color: White Odor: Odourless Phase change temperature Initial Boiling Point/Boiling point data N.A. Melting point/Freezing point: (decomposes) 150°C 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: 1.76g/cm3 Solubility Solubility in water: 77 g/100 ml 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 incompatible materials.
 Contact with fire source.
 Incompatible materials
 Oxidizing agents, Reducing agents
 Hazardous decomposition products
 Carbon oxides

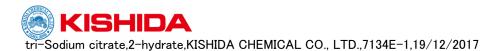
11. Toxicological Information
Information on toxicological effects
No Acute toxicity data available
No Irritant properties data available
No Allergenic and sensitizing effects data available
No Mutagenic effects data available
No Carcinogenic effects data available
No Teratogenic effects data available
No reproductive toxicity data available
No STOT-single/repeated exposure data available

No STOT single/repeated exposure data av

No Aspiration hazard data available

Additional data

May cause lung disorders by massive inhalation of powdered substance.



-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

12. Ecological Information

Ecotoxicity
No Aquatic toxicity data available
Water solubility

(tri-Sodium Citrate Dihydrate)
77 g/100 ml (ICSC, 2003)

No Persistence and degradability data available
No Bioaccumulative potential data available
No Mobility in soil data available
Ozone depleting chemical data not available

Disposal considerations
 Waste treatment methods
 Dispose of contents/container in accordance with local/national regulation.

14. Transport Information Not applicable to UN NO.

15. Regulatory Information

Other regulatory information

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

16. Other information

The product is not applicable to GHS classifications.

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 ECNO6182012) 2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT) 2017 TLVs and BEIs. (ACGIH)

http://monographs.iarc.fr/ENG/Classification/index.php

Supplier's data/information Hazard Communication Standard - 2012

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 2016).