Date of issue: 25/01/2019
Date of revision: 14/01/2021

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Zirconium oxynitrate, 2-hydrate

SDS No. : 8818E-2

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
Address: 3-1, Honmachibashi, Chuo-ku,Osaka ,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

PHYSICAL AND CHEMICAL HAZARDS

Oxidizing solids: Category 3

HEALTH HAZARDS

Skin corrosion/irritation: Category 1C

(Note) GHS classification without description: Not classified/Classification not possible

Label elements

Signal word: Danger

HAZARD STATEMENT

May intensify fire; oxidizer

Causes severe skin burns and eye damage

PRECAUTIONARY STATEMENT

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep/Store away from clothing/combustible materials.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash contaminated parts thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Response

In case of fire: Use appropriate media other than water for extinction.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Disposal

Dispose of contents/container in accordance with local/national regulation.

Specific Physical and Chemical hazards

Oxidizing material. Organic or combustible material may catch fire in contact with it.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Zirconium oxynitrate, 2-hydrate

Content (%):99(min)

Chemical formula:ZrO(NO3)2・2H2O

Chemicals No, Japan:1-721

CAS No.:20213-65-4

MW:267.26

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. Do NOT induce vomiting.

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.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

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 peace operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Avoid raising dust.

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 and explosion)

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep/Store away from clothing/combustible materials.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Wear protective gloves/protective clothing/eye protection/face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Wash contaminated clothing before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

Polyethylene

8. Exposure controls/personal protection

Control parameters

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 state: Powder
Color: White
Odor: Odorless
Melting point/Freezing point data is not available.
Boiling point or initial boiling point data is not available.
Boiling range data is not available.
Flammability (gases, liquids and solids) data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Flash point data is not available.
Auto-ignition temperature data is not available.
Decomposition temperature data is not available.
pH data is not available.
Kinematic viscosity data is not available.
Solubility:
Solubility in water: Easily soluble
n-Octanol/water partition coefficient data is not available.
Vapor pressure data is not available.
Density and/or relative density data is not available.
Relative vapor density (Air=1) data is not available.
No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity
Not available.
Chemical stability
Hygroscopic (absorbs moisture from the air).
Possibility of hazardous reactions
Not available.
Conditions to avoid
Contact with incompatible materials.
Contact with fire source.
Incompatible materials
Strong reducing agents, Organic substances
Hazardous decomposition products
Nitrogen oxides

11. Toxicological Information

Information on toxicological effects
Acute toxicity data is not available.
Irritant properties
Skin corrosion/irritation
[Company proprietary data]
(Zirconium oxynitrate, 2-hydrate)
Category 1C

Serious eye damage/irritation data is not available.
Allergenic and sensitizing effects data is not available.
Mutagenic effects data is not available.
Carcinogenic effects data is not available.
Reproductive toxicity data is not available.
STOT
STOT-single exposure data is not available.
STOT-repeated exposure data is not available.
Aspiration hazard data is not available.
Information on other hazards
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
Ecotoxicity data is not available.
Persistence and degradability
Persistence and degradability data is not available.
Bioaccumulative potential
Bioaccumulative potential data is not available.
Mobility in soil
Mobility in soil data is not available.
Other adverse effects
Ozone depleting chemical data is not available.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging
Waste treatment methods
Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No. or ID No.: 3085
UN Proper Shipping Name :
OXIDIZING SOLID, CORROSIVE, N.O.S.
Class or division (Transport hazard class) : 5.1
Subsidiary hazard(s) : 8
Packing group : III
ERG GUIDE No.: 140
Special provisions No.: 223; 274

IMDG Code (International Maritime Dangerous Goods Regulations)
UN No.: 3085
Proper Shipping Name :
OXIDIZING SOLID, CORROSIVE, N.O.S.
Class or division : 5.1
Subsidiary hazard(s) : 8
Packing group : III
Special provisions No.: 223; 274

IATA Dangerous Goods Regulations
UN No.: 3085

Proper Shipping Name :
OXIDIZING SOLID, CORROSIVE, N.O.S.
Class or division : 5.1
Subsidiary hazard(s) : 8
Hazard labels : Oxidizer & Corrosive
Packing group : III
Special provisions No.: A3; A803

Environmental hazards

MARPOL Annex III - Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

15. Regulatory Information

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

Chemicals listed in TSCA Inventory

Zirconium oxynitrate, 2-hydrate

Other regulatory information

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

16. Other information

GHS classification and labelling

Ox. Sol. 3: H272 May intensify fire; oxidizer
Skin Corr. 1C: H314 Causes severe skin burns and eye damage

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (7th revised edition, 2017), UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN
IMDG Code, 2018 Edition (Incorporating Amendment 39-18)
IATA Dangerous Goods Regulations (61th Edition) 2020
Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2020 TLVs and BEIs. (ACGIH)
http://monographs.iarc.fr/ENG/Classification/index.php
Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.
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 2019).