First issue Publication date July 8, 2021

Kyowa Chemical Industry Co., Ltd. SAFETY DATA SHEETS

KISUMATM 5B

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE SUPPLIER

Product name KISUMATM 5B

Manufacturer

Company Name Kyowa Chemical Industry Co., Ltd.

Address 4035 Hayashida-cho, Sakaide, Kagawa, 762-0012, Japan

Telephone number +81-(0) 877-47-0011

Emergency telephone number

Kyowa Chemical Industry Co., Ltd.

Telephone No. +81-(0) 877-47-4704 (Quality Assurance Dept.)

Facsimile No. +81-(0) 877-47-4724

2. HAZARDS IDENTIFICATION

Physicochemical Hazards

GHS Classification

Explosives Out of classification Out of classification Flammable gases Out of classification Flammable aerosol

Oxidizing gases Out of classification Out of classification Gases under pressure Flammable liquids Out of classification

Flammable solids Not classified

Classification not possible Self-reactive substance and mixtures

Pyrophoric liquids Out of classification Pyrophoric solids Not classified

Self-heating substance and mixtures Not classified

Substance and mixtures which, in contact with water,

emits flammable gases Not classified

Oxidizing liquids Out of classification

Not classified Oxidizing solids Organic peroxides Out of classification

Corrosive to metals Not classified

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Health hazards

Acute toxicity (oral) Not classified

Acute toxicity (dermal) Classification not possible

Acute toxicity (gases) Out of classification

Classification not possible Acute toxicity (vapor) Acute toxicity (dust and mists) Classification not possible Skin corrosion / irritation Classification not possible Serious eye damage / eye irritation Classification not possible Respiratory or skin sensitization Classification not possible Germ cell mutagenicity Classification not possible Carcinogenicity Classification not possible Reproductive toxicity Classification not possible

Specific target organ systemic toxicity (single exposure) Classification not possible Specific target organ systemic toxicity (repeated exposure) Classification not possible

Aspiration hazard Classification not possible

Environmental hazards

Hazardous to the aquatic environment (acute) Classification not possible Hazardous to the aquatic environment (chronic) Classification not possible

Hazardous to the Ozone Layer Not classified

Labeling elements Nothing

Other hazard

Inhalation May cause symptoms of mucus irritation, cough Skin contact Prolonged contact may cause skin irritation

Eve contact May irritate mucus membranes

Ingestion No symptoms occur at low dose levels but there may be nausea,

vomiting at high dose levels

3. COMPOSITION/INFORMATION ON INGREDIENTS

Wt% Chemical name CAS registry# Magnesium Hydroxide ≥ 95 1309-42-8 **≤** 5 57-11-4 Higher fatty acid

Synonym(s) Milk of magnesia; Magnesium hydrate

EC No. 2151703 **TSCA** Registered

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4. FIRST AID MEASURES

Inhalation : Remove the exposed individual into fresh air and make him blow his

nose and gargle.

Eye contact First rinse with plenty of water for several minutes (Remove contact

lenses if easily possible), then take a doctor.

Skin contact Remove contaminated clothes, rinse skin with plenty of water or shower.

Ingestion Rinse mouth. In case of large amount, drink large quantity of water and

induce vomiting. Refer for medical attention.

Treat symptomatically. Note to physician

5. FIRE FIGHTING MEASURES

Extinguishing media This product is non-flammable.

Protection for firefighters Firefighters should wear protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear proper equipment and avoid contact with skin and inhalation

Environmental precautions : Do not discharge soil, subsoil, drain, surface water and groundwater.

Removal Vacuum or sweep up in a waste container. Wash away residue with

plenty of water.

7. HANDLING AND STORAGE

Handling : It is better to wear proper protective equipment not to contact with

skin or inhale the dust.

: This material should be stored in a dry place and the bag must be Storage

tightly closed after use because of its hygroscopicity.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls : Prevent dispersion of dust.

Personal protective equipment

Eye / Face Protection : Safety Glasses

Skin Protection : Working clothes and rubber gloves (Nothing of particular protection)

Respiratory Protection : Dust mask

Exposure Guidelines : Recommendation of Occupational Exposure Limits (OELs) (2007)

Respirable dust - 2 mg/m^3 , Total - 8 mg/m^3

The Japan Society for Occupational Health(JSOH)

9. PHYSICALAND CHEMICAL PROPERTIES

Appearance White powder Odour No information Odour threshold No information рΗ No information Melting point No information Initial boiling point 3600°C(MgO) Flash point No information Evaporation rate No information Flammability No information Upper/lower flammability or explosive limits No information No information Vapour pressure Vapour density No information

Relative density : 2.4

Solubility : Slightly soluble in water. Soluble in mineral acid.

Partition coefficient: n-octanol/water : No information Auto-ignition temperature : No information

Decomposition temperature : 350°C

Viscosity : No information

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10. STABILITY AND REACTIVITY

Chemical stability Stable under normal conditions Reactivity May react with oxidizing substances.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Magnesium hydroxide

> LD₅₀—over 8500mg/kg oral rat⁽¹⁾ LD_{50} —over 8500mg/kg oral mouse⁽¹⁾

LD₅₀—about 2780mg/kg intraperitoneal rat⁽¹⁾ LD₅₀—about 815mg/kg intraperitoneal mouse⁽¹⁾

TDLo-2747mg/kg human infant (2)

Skin corrosion/irritation Not available

Eye irritation If contacted with eyes, eyes are irritated

Respiratory or skin sensitization Not available Mutagenicity Not available Carcinogenicity Not available Aspiration hazard Not available

Magnesium hydroxide is affirmed as GRAS (generally recognized as safe) in FDA (U.S.A.).

(1) NIIRDN Drugs in Japan(Ethical Drugs), published by YAKUGYO JIHO CO., LTD(page1131,1990)

(2) JTCTDW Journal of Toxicology, Clinical Toxicology, by Marcel Dekker, USA(Vol.29, page215,1991)

12. ECOLOGICAL INFORMATION

Not available **Toxicity** Not available Persistence and degradability Bioaccumulative potential Not available Mobility in soil Not available Other adverse effects Not available

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13. DISPOSAL CONSIDERATIONS

Disposal methods In accordance with the laws of your country.

14. TRANSPORT INFORMATION

NA Not applicable UN No. Not applicable ADR/RID Not applicable IMO-IMDG code Not applicable Hazard Label(s) Unnecessary

15. REGULATORY INFORMATION

Symbol(s) Nothing R Phrase (s) Nothing S Phrase (s) Nothing

Please refer to any other national measures that may be relevant.

16. OTHER INFORMATION

No specific notes.

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