Safety Data Sheet

Martoxid® KMS-96 BO

Japan-JIS Z 7253:2019
Occupational Safety and Health Act
GHS (Globally Harmonized System)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Martoxid® KMS-96 BO

Chemical Name Preparation : Al_2O_3

Pure substance/mixture Mixture

Recommended Use Raw material for ceramics, refractory products, etc

Uses advised against None known

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2. HAZARD IDENTIFICATION

Japan GHS Classification
Physical Hazards Not classified.

Health Hazard Not classified.

Environmental Hazards Not classified.

GHS label elements
Symbols/Pictograms None

Signal Word None

Hazard statements This product is not classified as hazardous according to the UN GHS guideline and labeling is not required

Precautionary Statements
Prevention
Do not handle until all safety precautions have been read and understood
Employ good industrial hygiene practice
Do not breathe dust

Response IF exposed or concerned: Get medical advice/attention

Wash with plenty of soap and water

Storage Store away from incompatible materials.
Keep in a dry place

Disposal Dispose of contents/container to an approved waste disposal plant

Additional Information: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Mixture

Chemical Name	CAS NUMBER:	Weight-%	Japan	Japan GHS Classification
Aluminum oxide	1344-28-1	>=86	(1)-23 (ENCS)(ISHL)	Not classified.

Notes The above values are not product specifications

4. FIRST AID MEASURES

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse

IF IN EYES: In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
Call a physician if irritation develops and persists

If swallowed: Rinse mouth thoroughly with water

Most Important Symptoms and Effects, Both Acute and Delayed Treat symptomatically

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Water spray (fog)
Foam
Dry chemical
Carbon dioxide (CO2)

Unsuitable Extinguishing Media Do not use water jetstream

Special hazards arising from the substance or mixture Avoid dust formation

Fire-fighting measures In case of fire and/or explosion do not breathe fumes
Water mist may be used to cool closed containers
Keep unauthorized personnel away

Special Protective Equipment for Firefighters Wear self-contained breathing apparatus and protective suit

6. ACCIDENTAL RELEASE MEASURES

Protective Equipment and Precautions for Firefighters Avoid dust formation
Ensure adequate ventilation
Use personal protection recommended in Section 8
Avoid contact with eyes and skin. Wear suitable personal protection equipment.
Keep unauthorized personnel away

Environmental Precautions Keep out of drains, sewers, ditches and waterways
Disposal considerations
See section 13 for more information

Methods and material for containment and cleaning up Large Spill: Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust
Small Spill: Vacuum or sweep material and place in a disposal container Minimize use of water during clean-up
Recommended filter type: High efficiency particulate air filter (HEPA filter)

Other Information Not applicable

7. HANDLING AND STORAGE

Handling

Technical measures Provide adequate ventilation as well as local exhaustion at critical locations
Ensure adequate ventilation
Use personal protection equipment
See section 8 for more information

Advice on safe handling Minimize dust generation and accumulation

Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a cool, well-ventilated place

Hygiene Measures Wash hands thoroughly after handling

Storage

Packaging compatibilities Keep/store only in original container

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits Provide adequate ventilation as well as local exhaustion at critical locations

Aluminum oxide

Japan TWA: 0.5 mg/m³ (respirable dust)
2 mg/m³ (total dust)

Engineering Measures Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment

Respiratory Protection In case of inadequate ventilation wear respiratory protection

Hand protection For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn

Eye Protection Wear safety glasses with side shields (or goggles)

Skin and Body Protection Wear suitable protective clothing.
Chemical resistant apron.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice
Wash thoroughly after handling
Avoid contact with eyes and skin
Do not breathe dust

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid, Powder
Color	White (Al203)
Odor	Odorless
Odor Threshold	No information available
Melting Point / Melting Range	No data available
Boiling Point	No data available
Freezing Point	No information available
Autoignition Temperature	No data available
Evaporation Rate	Not applicable
Flammability	No information available
Explosive Properties	None
Vapor Pressure	1 hPa (2158 °C)
Water Solubility	Insoluble
Partition coefficient	Not applicable : Product/Substance is inorganic
Viscosity	No data available
Specific Gravity	No data available
Oxidizing Properties	None
Decomposition Temperature	No data available
Flash Point	Not applicable. Product/Substance is inorganic. Solid.
pH:	+/- 9 (10 % / H2O)
Melting point / Freezing point	2000 °C (3632 °F) (1013 hPa)
Initial boiling point and boiling range	2980 °C (5396 °F) (1013 hPa) Melting Point : > 300°C
Relative Vapor Density	Not applicable Melting Point : > 300°C
Relative Density	+/- 3.7 - 3.9
Solubility in other solvents	No information available
Dynamic viscosity	Not applicable Solid

Other information: No data available

10. STABILITY AND REACTIVITY

Reactivity Stable under normal conditions

Chemical stability Stable under normal conditions

Possibility of hazardous reactions None known

Conditions to avoid Dust formation. Incompatible materials.

Incompatible materials Strong oxidizing agents

Hazardous decomposition products None known

11. TOXICOLOGICAL INFORMATION

General Information Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Information on Likely Routes of Exposure

Inhalation Do not breathe dust

Skin Avoid prolonged or repeated contact with skin
Contact with dust can cause mechanical irritation or drying of the skin

Eyes Avoid contact with eyes
Dust contact with the eyes can lead to mechanical irritation

Ingestion Ingestion is not a likely route of exposure

Aspiration hazard Not an expected route of exposure.

Symptoms Low hazard for usual industrial or commercial handling

11.1. Information on toxicological effects

Aluminum oxide

Serious eye damage/eye irritation Non-irritant : Rabbit
Skin Corrosion/Irritation Non-irritant : Rabbit
Mutagenicity Based on available data, the classification criteria are not met.
Reproductive Effects No indication of effects on fertility.
No indication of effects on developmental toxicity.

Martoxid® KMS-96 BO

Acute Toxicity	Mixture Al_2O_3 Repeated dose toxicity Inhalation 28-d Rat NOAEL (No observed adverse effect level) 70 mg(Al)/m^3 . Target Organs Lungs Respiratory system Repeated dose toxicity 1- Year Oral Rat NOAEL (No observed adverse effect level) >=30 mg Al/kg bw
Serious eye damage/eye irritation	Non-irritant : Rabbit
Respiratory Sensitization	Based on available data, the classification criteria are not met.
Skin Corrosion/Irritation	Non-irritant : Rabbit
Mutagenicity	Based on available data, the classification criteria are not met.
Reproductive Effects	Based on available data, the classification criteria are not met.
Reproductive Toxicity	Based on available data, the classification criteria are not met.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Target Organ Effects	Lungs.
Specific target organ toxicity - Single exposure	No information available.
Specific target organ toxicity - Repeated exposure	No information available.
Mixture versus substance information	Mixture.

12. ECOLOGICAL INFORMATION

Aluminum oxide

Aquatic toxicity	Not considered to be harmful to aquatic life
Ecotoxicity	Based on available data, the classification criteria are not met.
Persistence and degradability	No data available
Bioaccumulation	No data available.
Mobility in soil	No data available
Hazardous to the ozone layer	No data available

13. DISPOSAL CONSIDERATIONS

Disposal	Dispose of in accordance with federal, state and local regulations
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling

or disposal

14. TRANSPORT INFORMATION

Mode of Transportation (Road, Water, Air, Rail)

ADR	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	Not regulated

14.1. UN number	None
14.2. UN proper shipping name	None
14.3. Transport hazard class(es)	None
14.4. Packing group	None
14.5. Environmental hazards	No
14.6. Special precautions for user	Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. REGULATORY INFORMATION

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

Poisonous and Deleterious Substances Control Act
Not applicable

Industrial Safety and Health Act (ISHA)
Not applicable under the Ordinance on Prevention of Hazards due to Specified Chemical Substances
Not applicable under the Ordinance on Prevention of Organic Solvent Poisoning
Substances requiring name labeling or notification (Designated Hazardous Substances)
Not applicable.

PRTR and Promotion of Chemical Management Law:
Not applicable

Fire Services Act
Not applicable

Japan - Specified Chemical Substances
Class I specified chemical substances
Not regulated.
Class II specified chemical substances
Not regulated.
Monitoring chemical substances
Not regulated.
Priority Assessment Chemical Substances (PACs)
Not regulated.
Reporting Exempted Substances
Not regulated.

Global Inventories

Pure substance/mixture Mixture

Chemical Name	CAS NUMBER:	EC No	EU REACH registration number	Australia (AIIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Aluminum oxide	1344-28-1	215-691-6	01-2119529248-35-xxxx	Y	Y	Y	(1)-23 (ENCS)(ISHL)	KE-01012	Y	Y	Y	Y	A

X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

Legend-Inventories
KECL - Korean Existing and Evaluated Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
TSCA (Toxic Substances Control Act)
DSL (Domestic Substance List)

NDSL (Non-Domestic Substances List)
Japan - ISHL Notifiable Substances
ENCS - Japan Existing and New Chemical Substances

16. OTHER INFORMATION

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Reason for Revision

This SDS complies with the requirements of JIS Z 7252:2019 and JIS Z 7253:2019 (Japan)

Bibliography

NITE GHS Classified list
Japan Society for occupational health (2015) recommendation of allowable concentrations, etc.
ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value

Abbreviations and acronyms

Land transport (ADR/RID)
BOD (Biochemical oxygen demand)
COD (Chemical oxygen demand)
DNEL (Derived No Effect Level)
PNEC (Predicted No Effect Concentration)
DOT (Department of Transportation)
ICAO (International Civil Aviation Organization)
IATA (International Air Transport Association)
IARC (International Agency for Research on Cancer)
IMDG (International Maritime Dangerous Goods)
PPE (Personal Protection Equipment)
SCBA (Self-Contained Breathing Apparatus) Positive Pressure
STEL (Short Term Exposure Limit)
TLV® (Threshold Limit Value)
TWA (Time-Weighted Average)
CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)
NIOSH (National Institute for Occupational Safety and Health)
EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)
TDG (Transport of Dangerous Goods) Canada
WHMIS (Workplace Hazardous Materials Information System)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet