



SAFETY DATA SHEET

1. Identification

Product identifier Fedtun
Recommended use For Industrial Use Only
Recommended restrictions Basic dry mix, for the working lining of steel continuous casting tundish

Manufacturer/Supplier information

Company name: FRC Global
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2. Hazard(s) identification

This product is not classified, according to the Globally Harmonized System (GHS).

Physical hazards Not classified
Health hazards Not classified
Environmental hazards Not classified
OSHA defined hazards Not classified

Label elements None
Signal word Not applicable
Hazard Statement Not applicable
Precautionary statement Not applicable
Hazard(s) not otherwise None Known.

Classified (HNOC)

Results of PBT and vPvB assessment

PBT: Not applicable
vPvB: Not applicable

3. Composition/information on ingredients

Description: Mixture of the substances listed below with nonhazardous additions

Chemical Name	Common Name/Synonyms	CAS Number	%
Magnesium Oxide		1309-48-4	*

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

General information	No special measures required
After inhalation	Supply fresh air; consult doctor in case of complaints
After skin contact	Generally the product does not irritate the skin
After eye contact	Rinse opened eye for several minutes under running water
After swallowing	If symptoms persist consult doctor

Information for doctor

Most important symptoms and effects both acute and delayed: No further relevant information available

Indication of any immediate medical attention and special treatment needed: No further relevant information available

5. Fire-fighting measures

Suitable extinguishing agents	Use fire-fighting measures that suit the environment.
Special hazards arising from the substance or mixture	No further relevant information available.
Special protective equipment and precautions for firefighters	No special measures required.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures

For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Pick up mechanically

See section 7 for information on safe handling.

See section 13 for disposal information.

Environmental precautions

Do not allow to enter sewers, surface, or ground water

Protective Action Criteria for Chemicals

<i>PAC-1</i>		
CAS 1309-48-4	Magnesium Oxide	30 mg/m ³
<i>PAC-2</i>		
CAS 1309-48-4	Magnesium Oxide	120 mg/m ³
<i>PAC-3</i>		
CAS 1309-48-4	Magnesium Oxide	730 mg/m ³

7. Handling and storage

Precautions for safe handling

No special measures required

Information about protection against explosions and fires

No special measures required

Conditions for safe storage, including any incompatibilities

Store in dry conditions.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<i>Components</i>	<i>Type</i>	<i>Value</i>	<i>Form</i>
Magnesium Oxide (CAS 1309-48-4)	PEL	15 mg/m ³	Fume; total particulate
Magnesium Oxide (CAS 1309-48-4)	TLV	10mg/m ³	As inhalable fraction

Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses

Body protection

Protective work clothing

Skin protection

Hand protection

The glove material has to be impermeable and resistant to the product/the substance/the preparation. Due to missing tests, no recommendation to the glove material can be given for the product/the preparation/the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

The selection of suitable gloves does not only depend on the material, but also further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory protection

Suitable respiratory protective device recommended.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary



General Hygiene Considerations

The usual precautionary measures for handling chemicals should be followed.

9. Physical and chemical properties

Appearance

Physical state

Solid.

Form

Powder.

Color

Beige.

Odor

Odorless.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

Not available.

Flash point

Not available.

Evaporation rate

Not available.

Flammability (solid, gas)

Not available.

Auto igniting

Product is not self-igniting.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Not available.

Flammability limit - upper (%)

Not available.

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Danger of explosion

Product does not present an explosion hazard.

Vapor pressure

Not available.

Density at 20 °C (68 °F)

1.1 g/cm³ (9.18 lbs/gal) (bulk density)

Vapor density

Not available.

Relative density

Not available.

Solubility(ies)

Solubility (water)

Insoluble.

Solvent content

VOC content

0.00 %

Solids content

100.0 %

Partition coefficient (n-octanol/water)

Not available.

Auto-ignition temperature

Not available.

Decomposition temperature

Not available.

Viscosity

Not available.

10. Stability and reactivity

Reactivity

No further relevant information is available.

Chemical stability

Possibility of hazardous reactions

No dangerous reactions known.

Thermal decomposition/conditions to avoid

No decomposition if used according to specifications. No further relevant information available.

Incompatible materials

No further relevant information available.

Hazardous decomposition products

No dangerous decomposition products known.

11. Toxicological information

Information on likely routes of exposure

Skin contact

No irritating effect

Eye contact

No irritating effect

Sensitization

No sensitizing effects known

Additional toxicological information

The product is not subject to classification according to internally approved calculation methods for preparation. When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12. Ecological information

Aquatic toxicity

No further relevant information available.

Persistence and degradability

No further relevant information available.

Bio accumulative potential

No further relevant information available.

Mobility in soil

No further relevant information available.

Additional ecological information

General notes

Water hazard class 1 (self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewage system.

Results of PBT and vPvB assessment

PBT

Not applicable

vPvB

Not applicable

Other adverse effects

No further relevant information available.

13. Disposal considerations

Disposal instructions

Waste can be transported to an approved landfill.

Hazardous waste code

Not applicable.

Waste from residues / unused products

Not available.

Contaminated packaging

Disposal must be made according to official regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

Environment hazard

Not applicable

Special precautions for user

Not applicable

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

One or more components are not listed on TSCA.

All chemical substances in this product are listed on the TSCA chemical substance inventory where required.

TSCA Toxic Substances Control Act

1309-48-4 Magnesium oxide

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 355 Extremely Hazardous Substances

Not listed.

SARA 313 Specific Toxic Chemical Listings

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Chemicals known to cause reproductive toxicity for females

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males

None of the ingredients is listed

Carcinogenic categories

EPA None of the ingredients is listed

TLV Threshold Limit Value established by ACGIH

1309-48-4 Magnesium oxide A4

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not Regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Not listed

US. New Jersey Worker and Community Right-to-Know Act

Not listed

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed

US. Rhode Island RTK

Not listed

16. Other information, including date of preparation or last revision

This information is supplied to be informative and to alert the user of the material. The ultimate compliance with federal, state, and/or local regulations concerning the use of this material, or compliance with respects to products liability, rest solely upon the purchaser thereof.

Prepared by: FRC Global
Date: September, 2021

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End of Safety Data Sheet