

MATERIAL SAFETY DATA SHEET

ALFERROCK GmbH
Hauptstrasse 35
D-50126 Bergheim
Germany
European Community

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Section 1. Identification

Chemical name: Neutralized/detoxified/ chemically modified Bauxite Residue

Other means of identification: EC-Number 954-070-0

REACH-Registration-Number: 01-2120907559-45-0000

Type of substance: UVCB

Product type: Inorganic Solid / Bulk

Degree of purity: 100 % (w/w)

Material uses:

Filler for plastics, resins, rubbers as zero halogen flame retardant, smoke suppressant, char-promoting agent and substitute for antimony trioxide (aka ATO) both in PVC-compounds and halogenated FR-formulations; soil enhancer/fertilizer; radiopacity agent; sensitive high-temperature energy storage medium (ceramic form); sound suppression

Weight enhancer in drilling fluids

Adsorption medium in air, water (granular form)

Supplier: ALFERROCK GmbH

Emergency phone: +49 (0)176 199 199 60

E-mail address of person responsible for this MSDS: rainer.seeling@alferrock.com

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Section 2. Hazards identification

Classification of the substance or mixture: not classified

GHS label elements

Signal word: No signal word

Hazards statement: Aquatic Chronic 4 (H 413)

Precautionary statements

Prevention: not applicable

Response: n.a.

Storage: n.a.

Disposal: n.a.

Other hazards which do not result in classification: Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Section 3. Composition / information on ingredients

Substance /mixture: Substance

Chemical name: not applicable

Other means of identification:

CAS number/other identifiers

CAS number: none

EC number: 954-070-0

Ingredient name: not applicable

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence acquire reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

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Section 4. First aid measures

Description of necessary first aid measures

Inhalation: Move exposed person to fresh air. Get medical attention if symptoms occur.

Ingestion: Wash out mouth with water. Get medical attention if symptoms occur.

Skin contact: Wash with soap and water. Get medical attention if symptoms occur.

Eye contact:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and the lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation:

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Ingestion: No specific data

Skin contact: No known significant effects or critical hazards.

Eye contact:

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Over-exposure signs /symptoms

Inhalation: No specific data

Ingestion: No specific data

Skin: No specific data

Eyes:

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Adverse symptoms may include the following:

- Irritation
- Redness

Indication of immediate medical attention and special treatment needed, if necessary

Specific treatments: Not available

Notes to physicians: No specific treatment. Treat symptomatically.

Protection of first-aiders: No specific protection is required. See Section 8 for information on appropriate personal protective equipment.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable: Use an extinguishing agent suitable for the surrounding fire.

Not suitable: None known.

Specific hazards arising from the chemical: No specific fire or explosion /detonation hazard.

Hazardous thermal decomposition products: None known.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Put on appropriate personal equipment (see Section 8). Avoid breathing dust.

Environmental precautions :

Avoid dispersal of spilled material and run-off and contact with soil, waterways, drains and sewers.

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Methods and materials for containment and cleaning up:

Small spill: Recycle, if possible. Waste must be disposed of according to applicable regulations.

Large spill: Recycle, if possible. Waste must be disposed of according to applicable regulations.
Avoid creating dusty conditions and prevent wind dispersal.

Section 7. Handling and storage

Precautions for safe handling:

Avoid creating dusty conditions and prevent wind dispersal. Put on appropriate personal protective equipment (see Section 8). Workers should wash hands and face before eating, drinking and smoking. Avoid breathing dust.

Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Avoid creating dusty conditions and prevent wind dispersal.

Section 8 . Exposure control / personal protection

Control parameters

Occupational exposure limits

Follow workplace regulatory exposure limits for all types of airborne dust (e.g. total dust, respirable dust)

Appropriate engineering controls:

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If user operations generate dust, fumes , gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep workers exposure to airborne contaminants below any recommended or statutory limits.

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Environmental exposure controls:

Avoid creating dusty conditions and prevent wind dispersal.

Individual protection measures

Respiratory protection:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and safe working limits of the selected respirator.

Hand protection:

Wear suitable gloves.

Eye protection:

If operating conditions cause high dust concentrations to be produced, use dust goggles. Safety eyewear should be used when there is a likelihood of exposure.

Skin protection:

No special protective clothing is required.

Section 9 . Physical and chemical properties

Appearance

Physical state: Solid (powder)

Color: Reddish-brown to brownish-grey

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Odor:	Odorless
Odor threshold:	Not applicable
pH:	Not applicable
Melting point:	Not applicable
Boiling point:	Not applicable
Flash point:	Not applicable
Burning time:	Not applicable
Burning rate:	Not applicable
Evaporation rate:	Not applicable

Flammability (solid,gas):

Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks

And mechanical impacts, oxidizing materials, reducing materials, combustible materials, metals except aluminum in combination with intense heat, acids, alkalis and moisture.

Lower and upper explosive (flammable) limits:	Not applicable
Vapor pressure:	Not applicable
Vapor density:	Not applicable

Relative density (kg/L):	3,6 to 5,5 depending upon production history.
Untamped bulk density (UTBD):	500 to 1900 kg/m ³
Granulometry:	100 nanometer to 50 micron
Solubility:	Insoluble in cold, hot water, partially soluble in hot hydrochloric acid

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Section 9. Physical and chemical properties (continued)

Partition coefficient: n-octanol/water:	Not applicable
Auto-ignition temperature:	Not applicable
Decomposition temperature:	Starting from 300°C (Liberation of water) up to 550°C (Liberation of carbon dioxide)
SADT:	Not applicable
Viscosity:	Not applicable

Section 10. Stability and reactivity

Chemical stability: The product is stable

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reaction will normally not occur (**See Section 9 . for further information**)

Conditions to avoid: None known

Incompatible material: Molten aluminum metal

Hazardous decomposition products None

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Section 11. Toxicological information

Information on the likely routes of exposure

Inhalation: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Ingestion: No known significant effects.

Skin contact: No known significant effects.

Eye contact: Exposure to airborne concentrations above statutory or recommended exposure limit may cause irritation of the eyes.

Delayed and immediate effects and chronic effects from short and long term exposure

Acute toxicity: None

Conclusion /summary: Not available

Irritation/ Corrosion:

Conclusion/ Summary

Skin: No significant irritation expected other than possible mechanical irritation.

Eyes: May cause mild eye irritation.

Respiratory: May cause respiratory irritation.

Sensitization

Conclusion/Summary

Skin: Not available

Respiratory: Not available

Potential chronic health effects

General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Inhalation: Repeated or prolonged inhalation of dust may lead to chronic respiratory

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Irritation

Ingestion: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Eye contact: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Chronic toxicity
Conclusions / Summary: No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary: No carcinogenic effect.

Mutagenicity

Conclusion/ Summary: No mutagenic effect

Teratogenicity

Conclusion / Summary: No teratogenic effect

Reproductive toxicity

Conclusion / Summary: No reproductive toxicity effect

Specific target organ toxicity (single exposure) None known

Specific target organ toxicity (repeated exposure) None known

Aspiration hazard None

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Numerical measures of toxicity None known
Acute toxicity estimates None known

Section 12. Ecological information

Ecotoxicity: Not readily biodegradable.

Aquatic and terrestrial toxicity

Conclusions / Summary: No known significant effects or critical hazards.

Persistence / degradability

Not available.

Conclusion / Summary: Not readily biodegradable.

Bioaccumulative potential

None

Mobility in soil

Soil / water partition coefficient (K_{oc}): Not applicable

Mobility: Not applicable

Other adverse effects: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods:

Recycle, if and where applicable. The generation of waste should be avoided or minimized where and whenever possible. Dispose of surplus and eventually non –recyclable products via a properly licensed waste disposal contractor according to regulations.

Section 14. Transport information

Regulatory information

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UN Class / UN Number: Not regulated.
ADR/RID Class: Not regulated.
IATA Class: Not regulated.
IMDG Class: Not regulated.

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product:

No known specific national and/or regional regulations applicable to this product (including its ingredients).

A. Regulation according to ISHA

ISHA Article 37: This material is not listed.

ISHA Article 38: This material is not listed.

B. Regulation according to TCCA

TCCA Toxic chemicals: Not applicable.

TCCA Observational Chemicals: This material is not listed.

TCCA Article 32 (Banned): This material is not listed.

TCCA Article 32 (Restricted): This material is not listed.

TCCA Article 17 (TRI): This material is not listed.

Korea inventory: This material is not listed or exempted.

C. Dangerous Materials Control Act: Not regulated.

D. Wastes regulation: Dispose of contents and container in accordance with all local, regional, national and international guidelines and regulations.

E. Regulation according to other foreign laws

Europe inventory: This material is not listed.

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United States inventory (TSCA 8b): This material is not listed.

Japan inventory: This material is not listed.

Section 16. Other information

History

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user.

All materials may present unknown hazards and should be used with caution and discretion, both in the laboratory and production.

Although certain hazards are described herein, we can not and will not guarantee, that these are the only hazards that exist.

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