1. Identification

Product identifier used on the label

F200 3/16”

Recommended use of the chemical and restriction on use

Recommended use*: Adsorbent for the chemical industry
Recommended use*: Industrial catalyst
Unsuitable for use: Not intended for sale to or use by the general public.

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller’s published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller’s sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: metal oxides

2. Hazards Identification


Classification of the product

No need for classification according to GHS criteria for this product.

Label elements
The product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

No applicable information available.

3. Composition / Information on Ingredients


Aluminum oxide
CAS Number: 1344-28-1
Content (W/W): 80.0 - < 100.0%
Synonym: Aluminium oxide; Alumina

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air.

If on skin:
Wash thoroughly with soap and water

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If swallowed:
Rinse mouth and then drink 200-300 ml of water.

Most important symptoms and effects, both acute and delayed

Symptoms: coughing, respiratory disorders

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, foam, dry powder
Additional information:
Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
No particular hazards known.

Advice for fire-fighters
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Do not breathe dust. Avoid contact with the skin, eyes and clothing. Use personal protective clothing. Information regarding personal protective measures, see section 8.

Environmental precautions
Discharge into the environment must be avoided.

Methods and material for containment and cleaning up
Avoid raising dust. Dampen, pick up mechanically and dispose of. Dispose of absorbed material in accordance with regulations. Reclaim for processing if possible.

7. Handling and Storage

Precautions for safe handling
Avoid dust formation. Avoid inhalation of dusts. Avoid contact with the skin, eyes and clothing. Wear suitable protective clothing and gloves. Provide suitable exhaust ventilation at the processing machines. Ensure adequate ventilation. Keep container tightly closed.

Protection against fire and explosion:
The product is not an oxidizer, not self-combustible and not explosive. The substance/product is non-combustible.

Conditions for safe storage, including any incompatibilities
Segregate from reducing agents.

Suitable materials for containers: Carbon steel (Iron), Low density polyethylene (LDPE), High density polyethylene (HDPE)

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

Storage stability:
Keep container dry.
8. Exposure Controls/Personal Protection

**Components with occupational exposure limits**

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH, US:</th>
<th>OSHA Z1:</th>
<th>OSHA Z1A:</th>
<th>OSHA Z3:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>TWA value 1 mg/m3 Respirable fraction</td>
<td>PEL 5 mg/m3 Respirable fraction</td>
<td>TWA value 5 mg/m3 Respirable fraction</td>
<td>TWA value 5 mg/m3 Respirable fraction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL 15 mg/m3 Total dust</td>
<td></td>
<td>TWA value 15 mg/m3 Total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA value 5 millions of particles per cubic foot of air Respirable fraction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA value 15 millions of particles per cubic foot of air Total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA value 15 mg/m3 Total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA value 50 millions of particles per cubic foot of air Total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA value 15 millions of particles per cubic foot of air Respirable fraction</td>
</tr>
</tbody>
</table>

The nuisance dust limit value is to be kept.

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH, US:</th>
<th>OSHA Z1A:</th>
<th>OSHA Z3:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particles, not otherwise specified, respirable</td>
<td>TWA value 3 mg/m3 Respirable particles</td>
<td>TWA value 15 mg/m3 Total dust</td>
<td>TWA value 15 millions of particles per cubic foot of air Total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particles, not otherwise specified, inhalable</td>
<td>TWA value 10 mg/m3 Inhalable particles</td>
<td>TWA value 15 mg/m3 Total dust</td>
<td>TWA value 50 millions of particles per cubic foot of air Total dust</td>
</tr>
</tbody>
</table>

**Advice on system design:**

Provide local exhaust ventilation to maintain recommended P.E.L. Ensure adequate ventilation.

**Personal protective equipment**

**Respiratory protection:**


**Hand protection:**

Wear chemical resistant protective gloves.

**Eye protection:**

Safety glasses with side-shields.

**Body protection:**

No body protection required if used for intended purpose and satisfying generally accepted industrial hygiene rules.

**General safety and hygiene measures:**

Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>The form is derived from the trade name, solid</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>not applicable, odour not perceivable</td>
</tr>
</tbody>
</table>
10. Stability and Reactivity

**Reactivity**
No hazardous reactions if stored and handled as prescribed/indicated.

**Oxidizing properties:**
Not an oxidizer.

**Reactions with water/air:**
- Reaction with: water
- Flammable gases: no
- Toxic gases: no

**Chemical stability**
The product is chemically stable.

**Peroxides:**
The product does not contain peroxides. The product/substance has not a tendency towards the formation of peroxide.

**Possibility of hazardous reactions**
The product is stable if stored and handled as prescribed/indicated.
No hazardous reactions when stored and handled according to instructions.
Conditions to avoid
Avoid dust formation. Avoid deposition of dust.

Incompatible materials
strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products
Decomposition products:
Hazardous decomposition products: No hazardous decomposition products known.

Thermal decomposition:
No decomposition if used correctly.

11. Toxicological information

Primary routes of exposure
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Not expected to be acutely toxic. The product has not been tested. The statement has been derived from the properties of the individual components.

Oral
Type of value: ATE
Value: > 5,000 mg/kg

Information on: Aluminum oxide
Type of value: LD50
Species: rat
Value: > 10,000 mg/kg (similar to OECD guideline 401)
The data refer to a preparation of the substance.
No mortality was observed. No systemic toxicity.

Inhalation
Type of value: ATE
Value: > 5 mg/l
Exposure time: 4 h
Determined for dust

Information on: Aluminum oxide
Type of value: LC50
Species: rat
Value: > 2.3 mg/l (similar to OECD guideline 403)
Exposure time: 4 h
Tested as dust aerosol.
No mortality was observed.

Assessment other acute effects
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion
Assessment of irritating effects: Based on available Data, the classification criteria are not met. Contact with the eyes or skin may cause mechanical irritation. The product has not been tested. The statement has been derived from the properties of the individual components.

Sensitization
Assessment of sensitization: Based on available Data, the classification criteria are not met.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: Based on available Data, the classification criteria are not met.

Genetic toxicity
Assessment of mutagenicity: Based on available Data, the classification criteria are not met.

Carcinogenicity
Assessment of carcinogenicity: Based on available Data, the classification criteria are not met.

Reproductive toxicity
Assessment of reproduction toxicity: Based on available Data, the classification criteria are not met.

Teratogenicity
Assessment of teratogenicity: Based on available Data, the classification criteria are not met.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components. To some extent data gaps exist for individual components. According to our present knowledge and experience dangers which are not covered by the current labeling are not to be expected.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms.

Toxicity to fish

Information on: Aluminum oxide
LC50 (96 h) 0.078 - 281.6 mg Al/L, various species (other, other)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The LC50 is higher than the solubility limit.
Aquatic invertebrates

Information on: Aluminum oxide
EC50 (48 h) 0.07 - > 99.6 mg Al/L, other (other)
The EC50 is higher than the solubility limit. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants

Information on: Aluminum oxide
EC50 (72 h) 0.024 - 4.93 mg Al/L (growth rate), algae (other, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The EC50 is higher than the solubility limit.
EC10 (72 h) 0.051 - 3.15 mg Al/L (growth rate), algae (other, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. No toxic effects occur within the range of solubility.

Chronic toxicity to fish

Information on: Aluminum oxide
EC10 (30 d) 0.078 - 5.19 mg Al/L, Fish (other, other)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. No toxic effects occur within the range of solubility.

Chronic toxicity to aquatic invertebrates

Information on: Aluminum oxide
No observed effect concentration (21 d) 0.076 mg/l, Daphnia magna (OECD Guideline 211, semistatic)
The statement of the toxic effect relates to the analytically determined concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
No observed effect concentration (21 d) 0.076 - 4.9 mg Al/L, aquatic crustacea (other, other)
No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Literature data.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

Information on: Aluminum oxide
OECD Guideline 209 aquatic activated sludge, domestic/EC10 (3 h): > 200 mg Al/L
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Not applicable for inorganic substances.

Bioaccumulative potential
Assessment bioaccumulation potential
Significant accumulation in organisms is not to be expected.
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Mobility in soil

Assessment transport between environmental compartments
Adsorption to solid soil phase is possible.
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Additional information

Other ecotoxicological advice:
The product has not been tested. The statement has been derived from the properties of the individual components. The product has been assessed on the basis of the components’ available data. To some extent data gaps exist for individual components. According to our present knowledge and experience dangers which are not covered by the current labeling are not to be expected.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with local authority regulations. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected. All waste materials should be reviewed to determine the applicable hazards (testing may be necessary). Used catalysts may have different hazardous properties than the original products.

Container disposal:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Land transport
USDOT
Not classified as a dangerous good under transport regulations

Sea transport
IMDG
Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO
Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed
EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

<table>
<thead>
<tr>
<th>State RTK</th>
<th>CAS Number</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA</td>
<td>1344-28-1</td>
<td>Aluminum oxide</td>
</tr>
<tr>
<td>MA</td>
<td>1344-28-1</td>
<td>Aluminum oxide</td>
</tr>
<tr>
<td>NJ</td>
<td>1344-28-1</td>
<td>Aluminum oxide</td>
</tr>
</tbody>
</table>

NFPA Hazard codes:
Health: 1  Fire: 0  Reactivity: 0  Special:

HMIS III rating
Health: 1  Flammability: 0  Physical hazard: 0

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2021/04/05

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