

Safety Data Sheet

F220 1/4"

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Version: 7.0

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(10852278/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

F220 1/4"

Recommended use of the chemical and restriction on use

Recommended use*: Industrial catalyst

* 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:

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International emergency number:

Telephone: +49 180 2273-112

Other means of identification

Chemical family: metal oxides

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

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.

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Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
1344-28-1	80.0 - < 100.0%	Aluminum oxide

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air. If necessary, give oxygen. If not breathing, give artificial respiration. Seek medical attention if necessary.

If on skin:

After contact with skin, wash immediately with plenty of water and soap. Consult a doctor if skin irritation persists.

If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed:

No hazards anticipated. If large quantities are ingested, seek medical advice.

Most important symptoms and effects, both acute and delayed

Symptoms: No significant reaction of the human body to the product known.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Additional information:

Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

No particular hazards known.

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Advice for fire-fighters

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid contact with the skin, eyes and clothing. Use personal protective clothing. Information regarding personal protective measures see, section 8.

Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

Vacuum up spilled product. Place into suitable container for disposal.

7. Handling and Storage

Precautions for safe handling

Avoid dust formation in confined areas. Avoid contact with the skin, eyes and clothing. Ensure adequate ventilation.

Protection against fire and explosion:

Product is not explosive.

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: Keep container tightly closed in a cool, well-ventilated place.

Storage stability:

Keep container dry.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Aluminum oxide	OSHA PEL	PEL 5 mg/m3 Respirable fraction ; PEL 15 mg/m3 Total dust ; TWA value 5 mg/m3 Respirable fraction ; TWA value 10 mg/m3 Total dust ;
	ACGIH TLV	TWA value 1 mg/m3 Respirable fraction ;

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Advice on system design:

Provide local exhaust ventilation to control dust. Provide local exhaust ventilation to maintain recommended P.E.L.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) particulate respirator. Observe OSHA regulations for respirator use (29 CFR 1910.134). Wear appropriate certified respirator when exposure limits may be exceeded.

Hand protection:

Wear chemical resistant protective gloves., Consult with glove manufacturer for testing data.

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:

No eating, drinking, smoking or tobacco use at the place of work.

9. Physical and Chemical Properties

Form:	The form is derived from the trade name.
Odour:	odourless
Odour threshold:	not applicable, odour not perceivable
Colour:	off-white
pH value:	9.4 - 10.1
Melting point:	2,050 °C
Boiling point:	2,977 °C (1,013 hPa) Literature data.
Flash point:	not applicable, the product is a solid
Flammability:	not flammable
Lower explosion limit:	For solids not relevant for classification and labelling.
Upper explosion limit:	For solids not relevant for classification and labelling.
Vapour pressure:	not applicable, solid with a melting temperature over 300 °C
Density:	3.97 - 3.99 g/cm3 (20 °C) Literature data.
Relative density:	3.97 - 3.99 (20 °C) Literature data.
Bulk density:	38.0 - 52 lb/ft3 (68 °F)
Vapour density:	The product is a non-volatile solid.
Partitioning coefficient n-octanol/water (log Pow):	The value has not been determined because the substance is inorganic.
Self-ignition temperature:	not self-igniting

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Thermal decomposition:	No decomposition if used correctly.
Viscosity, dynamic:	not applicable, the product is a solid
Solubility in water:	≤ 0.00002 g/l (20 °C) not soluble
Evaporation rate:	The product is a non-volatile solid.

10. Stability and Reactivity

Reactivity

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

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties:

not fire-propagating

Formation of

flammable gases:

Remarks:

Forms no flammable gases in the presence of water.

Chemical stability

The product is chemically stable.

Possibility of hazardous reactions

The product is chemically stable.

No hazardous reactions known.

Conditions to avoid

Avoid deposition of dust. Avoid dust formation.

Incompatible materials

water, reducing 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: Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. Virtually nontoxic after a single ingestion.

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Oral

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.

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: 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.

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.

Irritation / corrosion

Assessment of irritating effects: Inhalation of dust may cause respiratory tract irritation, coughing and breathing difficulties. Contact with the eyes or skin may cause mechanical irritation.

Skin

Species: rabbit

Result: non-irritant

Method: similar to OECD guideline 404

Eye

Species: rabbit

Result: non-irritant

Method: similar to OECD guideline 405

Sensitization

Species: guinea pig

Result: Non-sensitizing.

The data refer to a preparation of the substance.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated inhalative uptake of the substance did not cause substance-related effects.

Genetic toxicity

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Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not genotoxic in a test with mammals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Carcinogenicity

Assessment of carcinogenicity: In long-term animal studies in which the substance was given by inhalation, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Other Information

The product has not been tested. The statements on toxicology have 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.

Symptoms of Exposure

No significant reaction of the human body to the product known.

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.

No toxic effects occur within the range of solubility.

Toxicity to fish

Information on: Aluminum oxide

LC50 (96 h) > 218.64 mg/l, Pimephales promelas (Fish test acute, semistatic)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Tested above maximum solubility.

Aquatic invertebrates

Information on: Aluminum oxide

No observed effect concentration (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Tested above maximum solubility. The details of the toxic effect relate to the nominal concentration.

Aquatic plants

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Information on: Aluminum oxide

No observed effect concentration (72 h) > 100 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201, static)

Tested above maximum solubility. The details of the toxic effect relate to the nominal concentration.

Chronic toxicity to fish

Information on: Aluminum oxide

EC10 (7 d) 0.0938 mg/l, Pimephales promelas (semistatic)

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.

Persistence and degradability

Assessment biodegradation and elimination (H2O)

Not applicable for inorganic substances.

Additional information

Other ecotoxicological advice:

The product has not been tested. The statements on ecotoxicology have 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. Check for possible recycling. 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).

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

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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

State RTK

CAS Number

Chemical name

PA

1344-28-1

Aluminum oxide

MA

1344-28-1

Aluminum oxide

NJ

1344-28-1

Aluminum oxide

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: 2018/02/14

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