

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 1/11
(30562481/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Masterflow 4316

Recommended use of the chemical and restriction on use

Recommended use*: for industrial and professional users

* 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

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: No applicable information available.

2. Hazards Identification

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

Classification of the product

Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
STOT SE	3 (irritating to respiratory system)	Specific target organ toxicity — single exposure
STOT RE	1	Specific target organ toxicity — repeated exposure
Aquatic Acute	3	Hazardous to the aquatic environment - acute

Label elements

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 2/11
(30562481/SDS_GEN_US/EN)

Pictogram:



Signal Word:
Danger

Hazard Statement:

H318 Causes serious eye damage.
H315 Causes skin irritation.
H335 May cause respiratory irritation.
H372 Causes damage to organs (Lung) through prolonged or repeated exposure.
H402 Harmful to aquatic life.

Precautionary Statements (Prevention):

P280 Wear protective gloves and eye/face protection.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust/gas/mist/vapours.
P273 Avoid release to the environment.
P270 Do not eat, drink or smoke when using this product.
P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash before reuse.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

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

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
14808-60-7	>= 25.0 - < 75.0 %	crystalline silica
65997-15-1	>= 25.0 - < 50.0 %	Cement, portland, chemicals
13397-24-5	>= 0.3 - < 3.0 %	Gypsum (Ca(SO4).2H2O)

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 3/11
(30562481/SDS_GEN_US/EN)

1305-78-8	>= 0.1 - < 5.0 %	calcium oxide
1317-65-3	>= 0.0 - < 3.0 %	Limestone
7632-00-0	>= 0.0 - < 1.0 %	sodium nitrite

4. First-Aid Measures

Description of first aid measures

General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Eye irritation, skin irritation, irritation of the mucous membranes

Hazards: No applicable information available.

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

Suitable extinguishing media:

foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

Additional information:

Product itself is non-combustible. Only the packaging materials can catch fire. The extinguishing agents normally used are sufficient.

Special hazards arising from the substance or mixture

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 4/11
(30562481/SDS_GEN_US/EN)

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire. Product is not combustible or explosive.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. The degree of risk is governed by the burning substance and the fire conditions. 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. Avoid contact with skin and eyes. Use personal protective clothing. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Pick up with suitable appliance and dispose of. Pack in tightly closed containers for disposal.
For residues: Rinse with plenty of water.
Avoid raising dust.

7. Handling and Storage

Precautions for safe handling

Avoid dust formation. The Cement contained in this product reacts alkaline when in contact with water or humidity. This may cause severe irritation of skin or mucous membranes. The humidity of the skin or mucous membranes is enough for this reaction. Prolonged direct contact to the dry product should be avoided therefore. Avoid inhalation of dusts. Avoid skin contact. Pour downwind and allow as little free fall as possible while emptying bags into equipment. Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:
No special precautions necessary.

Conditions for safe storage, including any incompatibilities

Segregate from metals. Segregate from acids. Segregate from lyes. Segregate from oxidants.
Segregate from foods and animal feeds.

Suitable materials for containers: Paper/Fibreboard

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

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 5/11
(30562481/SDS_GEN_US/EN)

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

calcium oxide	OSHA PEL ACGIH TLV	PEL 5 mg/m ³ ; TWA value 5 mg/m ³ ; TWA value 2 mg/m ³ ;
Limestone	OSHA PEL	PEL 5 mg/m ³ Respirable fraction ; PEL 15 mg/m ³ Total dust ; TWA value 15 mg/m ³ Total dust ; TWA value 5 mg/m ³ Respirable fraction ;
Gypsum (Ca(SO ₄).2H ₂ O)	OSHA PEL ACGIH TLV	PEL 5 mg/m ³ Respirable fraction ; PEL 15 mg/m ³ Total dust ; TWA value 15 mg/m ³ Total dust ; TWA value 5 mg/m ³ Respirable fraction ; TWA value 10 mg/m ³ Inhalable fraction ;
crystalline silica	OSHA PEL	TWA value 2.4 millions of particles per cubic foot of air Respirable ; The exposure limit is calculated from the equation, $250/(\%SiO_2+5)$, using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits. TWA value 0.1 mg/m ³ Respirable ; The exposure limit is calculated from the equation, $10/(\%SiO_2+2)$, using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits. TWA value 0.3 mg/m ³ Total dust ; The exposure limit is calculated from the equation, $30/(\%SiO_2+2)$, using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits.
	ACGIH TLV	TWA value 0.025 mg/m ³ Respirable fraction ;
Cement, portland, chemicals	OSHA PEL ACGIH TLV	PEL 15 mg/m ³ Total dust ; PEL 5 mg/m ³ Respirable fraction ; TWA value 1 mg/m ³ Respirable fraction ; The value is for particulate matter containing no asbestos and <1% crystalline silica.

Advice on system design:

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

Personal protective equipment

Respiratory protection:

Breathing protection if dusts are formed.

Hand protection:

Chemical resistant protective gloves, Manufacturer's directions for use should be observed because of great diversity of types.

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 6/11
(30562481/SDS_GEN_US/EN)

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts. In order to prevent contamination while handling, closed working clothes and working gloves should be used. Handle in accordance with good building materials hygiene and safety practice. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Contaminated equipment or clothing should be cleaned after each use or disposed of.

9. Physical and Chemical Properties

Form:	granules-powder mixture	
Odour:	faint odour	
Odour threshold:		Not determined due to potential health hazard by inhalation.
Colour:	grey	
pH value:	13	(20 °C) (as aqueous solution)
Melting point:		No applicable information available.
Boiling point:		No applicable information available.
Sublimation point:		No applicable information available.
Flash point:		Non-flammable.
Flammability:	not determined	
Lower explosion limit:		As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:		As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Autoignition:		No applicable information available.
Vapour pressure:		No applicable information available.
Relative density:		No applicable information available.
Bulk density:	1.25 g/m ³	
Vapour density:		No applicable information available.
Partitioning coefficient n-octanol/water (log Pow):		No applicable information available.
Self-ignition temperature:		not self-igniting
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:		No applicable information available.
Viscosity, kinematic:		No applicable information available.
Solubility in water:		(15 °C) insoluble
Miscibility with water:		immiscible
Solubility (quantitative):		No applicable information available.
Solubility (qualitative):	No applicable information available.	
Evaporation rate:		No applicable information available.

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 7/11
(30562481/SDS_GEN_US/EN)

10. Stability and Reactivity

Reactivity

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

Oxidizing properties:
Not an oxidizer.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is stable if stored and handled as prescribed/indicated.
Strong bases are formed on the addition of water.

Conditions to avoid

Avoid dust formation. Avoid humidity.

Incompatible materials

strong bases, strong acids

Hazardous decomposition products

Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

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: Product may present a nuisance dust hazard. Inhalation of dust may cause respiratory tract irritation, coughing and breathing difficulties.

Oral

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

Inhalation

Type of value: ATE
Value: > 5.0000 mg/l
Determined for dust

Dermal

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

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 8/11
(30562481/SDS_GEN_US/EN)

Assessment other acute effects

Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Skin contact causes irritation. May cause severe damage to the eyes.

Information on: calcium oxide

Assessment of irritating effects: Skin contact causes irritation. May cause severe damage to the eyes.

Information on: Cement, portland, chemicals

Assessment of irritating effects: Skin contact causes irritation. May cause severe damage to the eyes.

Sensitization

Assessment of sensitization: Chromate in this product has been reduced. Sensitization due to chromate within stated shelf-life is unlikely.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated exposure to small quantities may affect certain organs.

This product contains crystalline silica (quartz). Prolonged or repeated inhalation of respirable crystalline silica may result in silicosis.

Genetic toxicity

Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity

Assessment of carcinogenicity: Contains a known carcinogen. This product contains crystalline silica (quartz).

Information on: crystalline silica

Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. In long-term animal studies in which the substance was given by inhalation in high doses, a carcinogenic effect was observed. The substance and its compounds in the form of respirable dusts/aerosols classified by the German MAK commission as a category 1 carcinogen (substances that cause cancer to humans). A carcinogenic effect cannot safely be ruled out. The inhalation uptake of the alveolar fraction of the fine dust may cause damage to the lungs. The International Agency for Research on Cancer (IARC) has classified this substance as a Group 1 (known) human carcinogen.

NTP listed carcinogen

Teratogenicity

Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 9/11
(30562481/SDS_GEN_US/EN)

Experiences in humans

Information on: crystalline silica
May cause silicosis.

Other Information

The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure

Eye irritation, skin irritation, irritation of the mucous membranes

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.

The product gives rise to pH shifts.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Inorganic product which cannot be eliminated from water by biological purification processes. The product is slightly soluble in water. It can be largely eliminated from the water by abiotic processes, e.g. mechanical separation.

Experience shows this product to be inert and non-degradable.

Elimination information

not applicable

Bioaccumulative potential

Assessment bioaccumulation potential

The product will not be readily bioavailable due to its consistency and insolubility in water.

Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 10/11
(30562481/SDS_GEN_US/EN)

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with local authority regulations. Do not discharge into drains/surface waters/groundwater.

Container disposal:

Completely emptied packagings can be given for recycling.

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

Further information

This product may be shipped under exceptions/exemptions which can change the shipping classification. The BASF Bill of Lading contains the legal transport description for the material and should be taken as the defining document when in conflict with the MSDS.

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released; restriction on use / listed

This product contains an alkali metal nitrite which is subject to the SNUR at 40 CFR 721.4740 which prohibits the use of this product in metalworking fluids containing amines.
40 CFR 721.4740

EPCRA 311/312 (Hazard categories): Acute; Chronic

CERCLA RQ

100 LBS

CAS Number

7632-00-0

Chemical name

sodium nitrite

State regulations

CA Prop. 65:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Safety Data Sheet

Masterflow 4316

Revision date : 2015/04/10
Version: 2.1

Page: 11/11
(30562481/SDS_GEN_US/EN)

NFPA Hazard codes:

Health : 3 Fire: 0 Reactivity: 0 Special:

16. Other Information

SDS Prepared by:

BASF NA Product Regulations
SDS Prepared on: 2015/04/10

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE , IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
END OF DATA SHEET