1. Identification

Product identifier used on the label

MasterFlow 648 PART C also MASTERFLOW 648CP PLUS GRT PTC

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 data available.

2. Hazards Identification


Classification of the product

STOT RE 1 (by inhalation) Specific target organ toxicity — repeated exposure

Label elements

Pictogram:
Signal Word:
Danger

Hazard Statement:
H372 Causes damage to organs (Lung) through prolonged or repeated exposure (inhalation).

Precautionary Statements (Prevention):
P260 Do not breathe dust/gas/mist/vapours.
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):
P314 Get medical advice/attention if you feel unwell.

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

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>14808-60-7</td>
<td>&gt;= 25.0 - &lt;= 125.37%</td>
<td>crystalline silica</td>
</tr>
<tr>
<td>7727-43-7</td>
<td>&gt;= 15.0 - &lt; 20.0 %</td>
<td>Barium sulfate</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. Immediately remove contaminated clothing.

If inhaled:
After inhalation of dust. Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.
If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

Most important symptoms and effects, both acute and delayed
Symptoms: No significant reaction of the human body to the product known.
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

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
carbon dioxide, carbon monoxide, harmful vapours, nitrogen oxides, fumes/smoke, carbon black

Advice for fire-fighters
Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. If exposed to fire, keep containers cool by spraying with water. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Do not breathe dust. Wear eye/face protection. Use personal protective clothing. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions
Contain contaminated water/firefighting water. 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. Dispose of contaminated material as prescribed.
For large amounts: Pick up with suitable appliance and dispose of. Dispose of absorbed material in accordance with regulations.
Avoid raising dust.

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**7. Handling and Storage**

**Precautions for safe handling**

Avoid dust formation. Wear suitable protective clothing and eye/face protection. Avoid inhalation of dusts/mists/vapours. Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:

Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Keep away from sources of ignition - No smoking. Dust can form an explosive mixture with air.

**Conditions for safe storage, including any incompatibilities**

No applicable information available.

Suitable materials for containers: tinned carbon steel (Tinplate)

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight.

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**8. Exposure Controls/Personal Protection**

**Components with occupational exposure limits**

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium sulfate</td>
<td>PEL 5 mg/m3 Respirable fraction ; PEL 15 mg/m3 Total dust ; TWA value 10 mg/m3 Total dust ; TWA value 5 mg/m3 Respirable fraction ;</td>
<td>TWA value 10 mg/m3 ; The value is for particulate matter containing no asbestos and &lt;1% crystalline silica. TWA value 5 mg/m3 Inhalable fraction ; The value is for particulate matter containing no asbestos and &lt;1% crystalline silica.</td>
</tr>
</tbody>
</table>
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/(%SiO2+5), using a value of 100%
SiO2. Lower percentages of SiO2 will yield higher exposure limits.
TWA value  0.1 mg/m3  Respirable ;
The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100%
SiO2. Lower percentages of SiO2 will yield higher exposure limits.
TWA value  0.3 mg/m3  Total dust ;
The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100%
SiO2. Lower percentages of SiO2 will yield higher exposure limits.

ACGIH TLV  TWA value  0.025 mg/m3  Respirable fraction ;

Advice on system design:
No applicable information available.

Personal protective equipment
Respiratory protection:
Wear respiratory protection if ventilation is inadequate.

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

Eye protection:
Safety glasses with side-shields.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection,
apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Avoid inhalation of dusts. Wearing of closed work clothing is required additionally to the stated
personal protection equipment. Avoid exposure - obtain special instructions before use. 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).

9. Physical and Chemical Properties

Form:  granules
Odour:  odourless
Odour threshold:  white  No applicable information available.
Colour:  white
Melting temperature:  > 800 °C  No applicable information available.
Boiling point:  No applicable information available.
Sublimation point:  No applicable information available.
10. Stability and Reactivity

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

Corrosion to metals:
Corrosive effects to metal are not anticipated.

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.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
strong acids, strong bases, strong oxidizing agents, strong reducing agents

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: Study scientifically not justified. The substance is inert.
Oral
No applicable information available.

Inhalation
No applicable information available.

Dermal
No applicable information available.

Assessment other acute effects
No applicable information available.

Irritation / corrosion
Assessment of irritating effects: May cause mechanical irritation. No irritation is expected under intended use and appropriate handling.

Sensitization
Assessment of sensitization: No applicable information available.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: 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: 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.

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 is 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

Reproductive toxicity
Assessment of reproduction toxicity: The chemical structure does not suggest a specific alert for such an effect.

Teratogenicity
Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect.

Other Information
No reports of ill effects provided product was correctly handled and processed. The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

**Symptoms of Exposure**

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

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**12. Ecological Information**

**Toxicity**

Aquatic toxicity
Assessment of aquatic toxicity:
At the present state of knowledge, no negative ecological effects are expected. There is a high probability that the product is not acutely harmful to aquatic organisms. 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)
Experience shows this product to be inert and non-degradable.

**Bioaccumulative potential**

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
Study scientifically not justified.

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**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:**
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

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**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): Chronic;

<table>
<thead>
<tr>
<th>CERCLA RQ</th>
<th>CAS Number</th>
<th>Chemical name</th>
</tr>
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<tbody>
<tr>
<td>1000 LBS</td>
<td>7727-43-7</td>
<td>Barium sulfate</td>
</tr>
</tbody>
</table>

State regulations

CA Prop. 65:
WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

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

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2015/04/17

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