1. Identification

Product identifier used on the label

MasterFlow 648 PART B

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


Classification of the product

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Acute Tox.</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Skin Corr./Irrit.</td>
<td>Skin corrosion/irritation</td>
</tr>
<tr>
<td>Eye Dam./Irrit.</td>
<td>Serious eye damage/eye irritation</td>
</tr>
<tr>
<td>Resp. Sens.</td>
<td>Respiratory sensitization</td>
</tr>
<tr>
<td>Skin Sens.</td>
<td>Skin sensitization</td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td>Hazardous to the aquatic environment - acute</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Hazardous to the aquatic environment - chronic</td>
</tr>
</tbody>
</table>
Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:
H312 Harmful in contact with skin.
H302 Harmful if swallowed.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H314 Causes severe skin burns and eye damage.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P260 Do not breathe dust or mist.
P273 Avoid release to the environment.
P284 [In case of inadequate ventilation] wear respiratory protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
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):
P310 Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P341 + P311 IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
P303 + P361 + P352 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P362 + P364 Take off contaminated clothing and wash before reuse.

Precautionary Statements (Storage):
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.

Labeling of special preparations (GHS):
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>112-24-3</td>
<td>&gt;= 15.0 - &lt; 20.0 %</td>
<td>triethylenetetramine</td>
</tr>
<tr>
<td>112-57-2</td>
<td>&gt;= 5.0 - &lt; 15.0 %</td>
<td>3,6,9-triazaundecamethylene-1,11-diamine</td>
</tr>
<tr>
<td>90-72-2</td>
<td>&gt;= 5.0 - &lt; 7.0 %</td>
<td>2,4,6-tris(dimethylaminomethyl)phenol</td>
</tr>
<tr>
<td>71074-89-0</td>
<td>&gt;= 1.0 - &lt; 3.0 %</td>
<td>Phenol, bis[(dimethylamino)methyl]-</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:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and 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: Eye irritation, skin irritation, allergic symptoms
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, nitrogen oxides, fumes/smoke, carbon black, corrosive gases/vapours

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

**Further information:**
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Use personal protective clothing. Do not breathe vapour/aerosol/spray mists. 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: Sweep/shovel up. Dispose of absorbed material in accordance with regulations.
For large amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

**Precautions for safe handling**
Avoid contact with the skin, eyes and clothing. Avoid inhalation of mists/vapours. Ensure adequate ventilation.

Protection against fire and explosion:
The product does not contribute to the spreading of flames, nor is it self combustible, not explosive.

**Conditions for safe storage, including any incompatibilities**
No applicable information available.

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Keep only in the original container in a cool, well-ventilated place. Protect from direct sunlight. Store protected against freezing.
8. Exposure Controls/Personal Protection

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) respirator as necessary.

Hand protection:
Wear chemical resistant protective gloves. Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:
Tightly fitting safety goggles (chemical goggles) and face shield.

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 contact with the skin, eyes and clothing. 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).

9. Physical and Chemical Properties

Form: paste
Odour: ammonia-like
Odour threshold: No applicable information available.
Colour: amber
pH value: alkaline
Melting point: No applicable information available.
Boiling point: No applicable information available.
Sublimation point: No applicable information available.
Flash point: approx. 148.89 °C (ASTM D3278)
Flammability: not highly flammable
Autoignition: approx. 294 °C
Vapour pressure: < 1 hPa (20 °C)
Density: approx. 0.96 g/cm³ (approx. 20 °C)
Relative density: No applicable information available.
Partitioning coefficient n-octanol/water (log Pow): No applicable information available.
Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.
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

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: Harmful in contact with skin and if swallowed.

Oral
Type of value: ATE
Value: 2,030 mg/kg

Inhalation
No applicable information available.

**Dermal**
Type of value: ATE
Value:  844 mg/kg

Assessment other acute effects
No applicable information available.

**Irritation / corrosion**
Assessment of irritating effects: Causes burns.

**Sensitization**
Assessment of sensitization: No applicable information available.

### Chronic Toxicity/Effects

**Genetic toxicity**
Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect.

**Carcinogenicity**
Assessment of carcinogenicity: The chemical structure does not suggest a specific alert for such an effect.

**Other Information**
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

**Symptoms of Exposure**
Eye irritation, skin irritation, allergic symptoms

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### 12. Ecological Information

**Toxicity**

Aquatic toxicity
Assessment of aquatic toxicity: Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**Persistence and degradability**

Assessment biodegradation and elimination (H2O)
Poorly biodegradable. The product has not been tested. The statement has been derived from the properties of the individual components.

**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. Adsorption to solid soil phase is expected.

Additional information
Other ecotoxicological advice:
Ecological data are not available.

Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. Do not allow to enter drains or waterways. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

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:
Dispose of container and any rinsate in an environmentally safe manner. Uncleaned empties should be disposed of in the same manner as the contents.

14. Transport Information

Land transport
USDOT
Hazard class: 8
Packing group: II
ID number: UN 3267
Hazard label: 8, EHSM
Proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (contains TRIETHYLENETETRAMINE, BIS[(DIMETHYLAMINO)METHYL]PHENOL, TALLOIL FATTY ACIDS, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE )

Sea transport
IMDG
Hazard class: 8
Packing group: II
ID number: UN 3267
Hazard label: 8, EHSM
Marine pollutant: YES
Proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (contains TRIETHYLENETETRAMINE, BIS[(DIMETHYLAMINO)METHYL]PHENOL, TALLOIL FATTY ACIDS, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE )

Air transport
IATA/ICAO
Hazard class: 8
Safety Data Sheet
MasterFlow 648 PART B

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

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

NFPA Hazard codes:
Health : 3  Fire: 1  Reactivity: 0  Special:

HMIS III rating
Health: 3¤  Flammability: 1  Physical hazard: 0

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2015/04/07

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END OF DATA SHEET