SECTION 1. IDENTIFICATION

Product name: MasterFlow 648 PART C
Product code: 000000000050380503 000000000050380503

Manufacturer or supplier’s details
Company name of supplier: Master Builders-Admixtures US, LLC
Address: 23700 CHAGRIN BLVD
          Beachwood OH 44122
Emergency telephone: ChemTel: +1-813-248-0585 USA: +1-800-255-3924 Contract
                    Number MIS9240420

Recommended use of the chemical and restrictions on use
Recommended use: Product for construction chemicals
Restrictions on use: Reserved for industrial and professional use.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Carcinogenicity (Inhalation): 1A

Specific target organ toxicity - single exposure: 3
Specific target organ toxicity - repeated exposure (Inhalation): Category 1

Specific target organ toxicity - repeated exposure (Inhalation): 2 (Kidney, Immune system)

GHS label elements
Hazard pictograms: ⚠️ ⚠️

Signal Word: Danger

Hazard Statements: H335 May cause respiratory irritation.
H350 May cause cancer.
H372 Causes damage to organs through prolonged or repeated exposure if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements: Prevention:
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P201 Obtain special instructions before use.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust or mist.
P202 Do not handle until all safety precautions have been read and understood.
P270 Do not eat, drink or smoke when using this product.
P264 Wash face, hands and any exposed skin thoroughly after handling.

Response:
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P314 Get medical advice/ attention if you feel unwell.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Disposal:
P501 Dispose of contents/container to appropriate hazardous waste collection point.

Other hazards
No data available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : inorganic compounds

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (SiO2)</td>
<td>14808-60-7</td>
<td>&gt;= 25 - &lt; 100</td>
</tr>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>&gt;= 0.1 - &lt; 0.2</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : 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.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed:
Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed:
May cause respiratory irritation.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure if inhaled.
May cause damage to organs through prolonged or repeated exposure.

Notes to physician:
Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:
Water spray
Foam
Dry powder
Carbon dioxide (CO2)

Unsuitable extinguishing media:
High volume water jet

Hazardous combustion products:
harmful vapours
nitrogen oxides
fumes/smoke
carbon black

Further information:
Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for fire-fighters:
Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
Ensure adequate ventilation.

Environmental precautions:
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up:
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion:
Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling: Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

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.

Materials to avoid: Segregate from incompatible substances.

Further information on storage stability: No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>calcium oxide</td>
<td>1305-78-8</td>
<td>TWA value</td>
<td>2 mg/m³</td>
<td>ACGIHTLV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REL value</td>
<td>2 mg/m³</td>
<td>NIOSH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>29 CFR 1910.1000 (Table Z-1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA value</td>
<td>5 mg/m³</td>
<td>29 CFR 1910.1000 (Table Z-1-A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>OSHA P0</td>
</tr>
<tr>
<td>Barium sulfate</td>
<td>7727-43-7</td>
<td>TWA value (Inhalable fraction)</td>
<td>5 mg/m³</td>
<td>ACGIHTLV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REL value (Respirable)</td>
<td>5 mg/m³</td>
<td>NIOSH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REL value (Total)</td>
<td>10 mg/m³</td>
<td>NIOSH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL (Total dust)</td>
<td>15 mg/m³</td>
<td>29 CFR 1910.1000 (Table Z-1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL (Respirable fraction)</td>
<td>5 mg/m³</td>
<td>29 CFR 1910.1000</td>
</tr>
</tbody>
</table>
Quartz (SiO2)

<table>
<thead>
<tr>
<th>TWA (Inhalable particulate matter)</th>
<th>5 mg/m3</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA (Respirable)</td>
<td>5 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>TWA (total)</td>
<td>10 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td>TWA (total dust)</td>
<td>15 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td>TWA (respirable fraction)</td>
<td>5 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td>TWA (Total dust)</td>
<td>10 mg/m3</td>
<td>OSHA P0</td>
</tr>
<tr>
<td>TWA (respirable dust fraction)</td>
<td>5 mg/m3</td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>

Quartz (SiO2) 14808-60-7

<table>
<thead>
<tr>
<th>TWA value (Respirable fraction)</th>
<th>0.025 mg/m3</th>
<th>ACGIHTLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA value (Respirable dust)</td>
<td>0.05 mg/m3</td>
<td>29 CFR 1910.1001-1050</td>
</tr>
<tr>
<td>OSHA Action level</td>
<td>0.025 mg/m3</td>
<td>29 CFR 1910.1001-1050</td>
</tr>
<tr>
<td>REL value (Respirable dust)</td>
<td>0.05 mg/m3</td>
<td>NIOSH</td>
</tr>
<tr>
<td>TWA (Respirable dust)</td>
<td>0.05 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td>TWA (respirable)</td>
<td>10 mg/m3 / %SiO2+2</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td>TWA (respirable)</td>
<td>250 mppcf / %SiO2+5</td>
<td>OSHA Z-3</td>
</tr>
<tr>
<td>TWA (respirable dust fraction)</td>
<td>0.1 mg/m3</td>
<td>OSHA P0</td>
</tr>
<tr>
<td>TWA (Respirable particulate matter)</td>
<td>0.025 mg/m3 (Silica)</td>
<td>ACGIH</td>
</tr>
<tr>
<td>PEL (respirable)</td>
<td>0.05 mg/m3</td>
<td>OSHA CARC</td>
</tr>
<tr>
<td>TWA (Respirable dust)</td>
<td>0.05 mg/m3</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>

**Engineering measures**: Ensure adequate ventilation.

**Personal protective equipment**

**Respiratory protection**: Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) respirator as necessary.

**Hand protection**

**Remarks**: The suitability for a specific workplace should be discussed.
with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures : Do not inhale dust/fumes/aerosols.
Avoid contact with the skin, eyes and clothing.
Avoid exposure - obtain special instructions before use.
Handle in accordance with good building materials hygiene and safety practice.
Wearing of closed work clothing is recommended.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : granules

Color : white

Odor : odorless

Odor Threshold : No data available

pH : neutral (as aqueous suspension)

Melting point : No applicable information available.

Boiling point : not applicable, solid with a melting temperature over 300 °C

Flash point : not applicable

Evaporation rate : The product is a non-volatile solid.

Flammability (solid, gas) : not flammable

Self-ignition : not self-igniting (for a component of this mixture)

Upper explosion limit / Upper flammability limit : No applicable information available.

Lower explosion limit / Lower flammability limit : No applicable information available.

Vapor pressure : No applicable information available.

Relative vapor density : No applicable information available.

Relative density : approx. 1.15

Solubility(ies)
Water solubility : insoluble (68 °F / 20 °C)
Solubility in other solvents : (68 °F / 20 °C)
insoluble

Partition coefficient: n-octanol/water : Study technically not feasible.
Autoignition temperature : No applicable information available.
Decomposition temperature : No decomposition if stored and handled as prescribed/indicated.

Viscosity
Viscosity, dynamic : Not applicable
Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : Based on its structural properties the product is not classified as oxidizing.

Self-heating substances : No data available
Sublimation point : No applicable information available.
Molecular weight : No data available
Metal corrosion rate : Corrosive effects to metal are not anticipated.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
Chemical stability : No decomposition if stored and applied as directed.
Possibility of hazardous reactions : No decomposition if stored and applied as directed.
Conditions to avoid : See SDS section 7 - Handling and storage.
Incompatible materials : Strong acids
                        : Strong bases
                        : Strong oxidizing agents
                        : Strong reducing agents
Hazardous decomposition products : No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not classified based on available information.

Product:
Acute oral toxicity : Remarks: No applicable information available.
Acute inhalation toxicity : Remarks: No applicable information available.
Acute dermal toxicity : Remarks: No applicable information available.
Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
May cause cancer.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
May cause respiratory irritation.

STOT-repeated exposure
Causes damage to organs through prolonged or repeated exposure if inhaled. May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity
Not classified based on available information.

Further information

Product:
 Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment
Acute aquatic toxicity : This product has no known ecotoxicological effects.
Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Persistence and degradability

Product:
Biodegradability : Remarks: Taking into consideration the properties of several ingredients, the product is estimated not to be readily biode-
Bioaccumulative potential

**Product:**

Bioaccumulation: Remarks: No data available.
Discharge into the environment must be avoided.

**Components:**

**Quartz (SiO2):**

Partition coefficient: \( n\)-octanol/water: Remarks: The value has not been determined because the substance is inorganic.

**Barium sulfate:**

Partition coefficient: \( n\)-octanol/water: Pow: 4.26
log Pow: 0.63
Method: other (calculated)

**calcium oxide:**

Partition coefficient: \( n\)-octanol/water: Remarks: The value has not been determined because the substance is inorganic.

**Mobility in soil**

No data available

**Other adverse effects**

**Product:**

Ozone-Depletion Potential: Remarks: The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional ecological information: There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

Waste from residues: Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of in accordance with national, state and local regulations.
Do not discharge into drains/surface waters/groundwater.

Contaminated packaging: Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.
SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

US State Regulations

Pennsylvania Right To Know
Barium sulfate 7727-43-7
Quartz (SiO2) 14808-60-7
crystalline silica 14808-60-7

New Jersey Right To Know
Quartz (SiO2) 14808-60-7
crystalline silica 14808-60-7

California Prop. 65

WARNING: This product can expose you to chemicals including Quartz (SiO2), which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

The ingredients of this product are reported in the following inventories:
TSCA : On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Further information
NFPA 704:  

HMIS® IV:  

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "**" represents a chronic hazard, while the "/'" represents the absence of a chronic hazard.

Full text of other abbreviations

29 CFR 1910.1000 (Table Z-1-A) : OSHA - Table Z-1-A (29 CFR 1910.1000)
29 CFR 1910.1000 (Table Z-1) : OSHA - Table Z-1 (Limits for Air Contaminants) 29 CFR 1910.1000
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIHTLV : American Conference of Governmental Industrial Hygienists - threshold limit values (US)
NIOSH : NIOSH Pocket Guide to Chemical Hazards (US)
NIOSH REL : USA. NIOSH Recommended Exposure Limits
OSHA CARC : OSHA Specifically Regulated Chemicals/Carcinogens
OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
29 CFR 1910.1000 (Table Z-1-A) / TWA value : Time Weighted Average (TWA):
29 CFR 1910.1000 (Table Z-1) / PEL : Permissible exposure limit
ACGIH / TWA : 8-hour, time-weighted average
ACGIHTLV / TWA value : Time Weighted Average (TWA):
NIOSH / REL value : Recommended exposure limit (REL):
NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA CARC / PEL : Permissible exposure limit (PEL)
OSHA P0 / TWA : 8-hour time weighted average

HEALTH  1  
FLAMMABILITY  0  
PHYSICAL HAZARD  0  

Special hazard
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