SECTION 1. IDENTIFICATION

Product name : MasterFlow 648 PART A
Product code : 000000000050385593 000000000050385593

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
Skin corrosion/irritation : Category 2
Serious eye damage/eye irritation : Category 2A
Skin sensitization : Category 1
Short-term (acute) aquatic hazard : Category 2
Long-term (chronic) aquatic hazard : Category 2

GHS label elements
Hazard pictograms :

Signal Word : Warning
Hazard Statements : H319 Causes serious eye irritation.
                   H315 Causes skin irritation.
                   H317 May cause an allergic skin reaction.
                   H401 Toxic to aquatic life.
                   H411 Toxic to aquatic life with long lasting effects.
Precautionary Statements : Prevention:
                           P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
                           P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
                           P273 Avoid release to the environment.
                           P272 Contaminated work clothing should not be allowed out of
the workplace.
P264 Wash face, hands and any exposed skin thoroughly after handling.

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.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

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

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : No data available.

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reaction product: bisphenol-A-(epichlorhydrin)-Epoxy resin (number average molecular weight &lt;= 700)</td>
<td>25068-38-6</td>
<td>&gt;= 25 - &lt;= 100</td>
</tr>
<tr>
<td>1,4-bis(2,3-epoxypropoxy)butane</td>
<td>2425-79-8</td>
<td>&gt;= 15 - &lt; 20</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

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

If inhaled : Keep patient calm, remove to fresh air, seek medical attention.
Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : Wash thoroughly with soap and water
If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes. In case of eye contact: Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. Immediately flush eye(s) with plenty of water. 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: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

Notes to physician: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media: High volume water jet

Specific hazards during fire fighting: Do not allow run-off from fire fighting to enter drains or water courses.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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. 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: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against: Product is not explosive.
fire and explosion

Normal measures for preventive fire protection.

Advice on safe handling :
Avoid formation of aerosol.
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.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage :
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
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 :
Observe VCI storage rules.

Recommended storage temperature :
41 °F / 5 °C

Further information on storage stability :
Minimum storage temperature:

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

Engineering measures :
No applicable information available.

Personal protective equipment
Respiratory protection :
When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators.

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
Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection: Impervious clothing

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

Protective measures: Do not inhale gases/vapours/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: liquid

Color: colourless to slightly yellow

Odor: alcohol-like

Odor Threshold: No data available

pH: 6.5 - 7.5 (77 °F / 25 °C)

Melting point: No applicable information available.

Boiling point: > 340 °F / > 171 °C

to boiling temperature: approx. 450 °F / 232 °C

Flash point: > 212 °F / > 100 °C

approx. 399.9 °F / 204.4 °C

Method: Standard Method of Test for Flash Point by Setaflash Closed Tester

Evaporation rate: No applicable information available.

Flammability (solid, gas): not flammable

Vapor pressure: Not applicable

Relative density: No applicable information available.

Density: approx. 1.15 g/cm3 (68 °F / 20 °C)

Solubility(ies)

Water solubility: partly soluble, (for a component of this mixture) (68 °F / 20 °C)

Solubility in other solvents: No applicable information available.

Autoignition temperature: not determined
Decomposition temperature: No decomposition if stored and handled as prescribed/indicated.

Explosive properties: Not explosive

Oxidizing properties: not fire-propagating

Self-heating substances: It is not a substance capable of spontaneous heating.

Sublimation point: No applicable information available.

Molecular weight: No data available

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
Causes skin irritation.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation
Causes serious eye irritation.

Product:

Remarks: May cause irreversible eye damage.
Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.

Respiratory sensitization
Not classified based on available information.

Product:
Remarks: Causes sensitization.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Further information

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

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential

Product:
Bioaccumulation: Remarks: Because of the product's consistency and low water solubility, bioavailability is improbable.

Mobility in soil
No data available
Other adverse effects

**Product:**

Additional ecological information: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues: Dispose of in accordance with national, state and local regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. 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**

UN number: UN 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BISPHENOL-A-EPICHLORHYDRIN RESINS M <=700)

Class: 9
Subsidiary risk: EHSM
Packing group: III
Labels: 9 (EHSM)

**IATA-DGR**

UN/ID No.: UN 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BISPHENOL-A-EPICHLORHYDRIN RESINS M <=700)

Class: 9
Subsidiary risk: EHSM
Packing group: III
Labels: Miscellaneous, Environmentally hazardous
Packing instruction (cargo aircraft): 964
Packing instruction (passenger aircraft): 964

**IMDG-Code**

UN number: UN 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BISPHENOL-A-EPICHLORHYDRIN RESINS M <=700)

Class: 9
Subsidiary risk : EHSM
Packing group : III
Labels : 9 (EHSM)
EmS Code : F-A, S-F
Marine pollutant : yes

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

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely
based upon the properties of the unpackaged material as it is described within this Safety Data
Sheet. Transportation classifications may vary by mode of transportation, package sizes, and var-
iations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

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:

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

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of
Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensa-
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