

MasterFlow 649 GROUT PART B

Version 2.0 Revision Date: 11/22/2021 SDS Number: 000000261487 Date of last issue: 08/28/2020
Date of first issue: 08/28/2020

SECTION 1. IDENTIFICATION

Product name : MasterFlow 649 GROUT PART B
Product code : 000000000051680977 000000000051680977
Other means of identification : MFlow 649 GRT PTB

Manufacturer or supplier's details

Company name of supplier : Master Builders-Construction Systems US, LLC
Address : 23700 CHAGRIN BLVD
Beachwood OH 44122
Emergency telephone : ChemTel: +1-813-248-0585
National Emergency Telephone Number : USA: +1-800-255-3924 ChemTel contract no. MIS9240420

Recommended use of the chemical and restrictions on use

Recommended use : Injection or grouting applications
Restrictions on use : Reserved for industrial and professional use.

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 3
Skin corrosion : Category 1B
Serious eye damage : Category 1
Skin sensitization : Category 1
Specific target organ toxicity - single exposure : Category 3
Reproductive toxicity : Category 2
Short-term (acute) aquatic hazard : Category 1
Long-term (chronic) aquatic hazard : Category 1

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GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H331 Toxic if inhaled.
 H314 Causes severe skin burns and eye damage.
 H302 Harmful if swallowed.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H361d Suspected of damaging the unborn child.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P261 Avoid breathing mist or vapors.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
 P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P363 Wash contaminated clothing before reuse.
 P391 Collect spillage.

Storage:

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

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
 Chemical nature : curing agent

Components

Chemical name	CAS-No.	Concentration (% w/w)
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	>= 70 - < 90
2,2'-iminodi(ethylamine)	111-40-0	>= 0 - < 20
3,6,9-triazaundecamethylene-1,11-diamine	112-57-2	>= 5 - < 10
N,N'-bis(3-aminopropyl)ethylenediamine	10563-26-5	>= 0 - < 20
triethylenetetramine	112-24-3	>= 0 - < 20
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	>= 1 - < 5
N,N-Bis(2-aminoethyl)ethylenediamine	4097-89-6	>= 0 - < 5
Salicylic acid	69-72-7	>= 0 - < 1
Fatty acids, C18-unsatd., trimers, compds. with oleylamine	147900-93-4	>= 0.1 - < 1
N-(2-aminoethyl)-1,3-propanediamine	13531-52-7	>= 0 - <= 5

Actual concentration is withheld as a trade secret

SECTION 4. 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.

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 : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.

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- Keep eye wide open while rinsing.
Remove contact lenses.
Seek medical advice.
- If swallowed : Immediately rinse mouth and then drink 200-300 ml 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 : Toxic if inhaled.
Causes severe skin burns and eye damage.
Harmful if swallowed.
May cause an allergic skin reaction.
May cause respiratory irritation.
Suspected of damaging the unborn child.
- Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Foam
Water spray
Dry powder
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : water jet
- Hazardous combustion products : nitrogen oxides
Carbon oxides
fumes/smoke
carbon black
corrosive gases/vapours
- 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.
- Special protective equipment for fire-fighters : Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

SECTION 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 materials for : Soak up with inert absorbent material (e.g. sand, silica gel,

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containment and cleaning up acid binder, universal binder, sawdust).
Pick up with suitable appliance and dispose of.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Handle and open container with care.
Wear personal protective equipment.
Avoid contact with skin and eyes.
Avoid aerosol formation.
Keep container tightly sealed.
Keep away from sources of ignition - No smoking.
- 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.
Store protected against freezing.
- Recommended storage temperature : > 39 °F / > 4 °C
- Further information on storage stability : PROTECT FROM FREEZING DURING THE COLD-SEASON (BELOW 40°F / 5°C).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2,2'-iminodi(ethylamine)	111-40-0	TWA value	1 ppm	ACGIHTLV
		REL value	1 ppm 4 mg/m ³	NIOSH
		TWA value	1 ppm 4 mg/m ³	29 CFR 1910.1000 (Table Z-1-A)
		TWA	1 ppm	ACGIH
		TWA	1 ppm 4 mg/m ³	NIOSH REL
		TWA	1 ppm 4 mg/m ³	OSHA P0
3,6,9-triazaundecamethylene-	112-57-2	TWA	5 mg/m ³	US WEEL

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1,11-diamine triethylenetetramine	112-24-3	TWA	1 ppm	US WEEL
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Engineering measures : Ensure adequate ventilation.

Personal protective equipment

Respiratory protection : Wear appropriate certified respirator when exposure limits may be exceeded.
 Use NIOSH approved respiratory protection.

Hand protection

Remarks : Wear chemical resistant protective gloves. Manufacturer's directions for use should be observed because of great diversity of types.

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

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

Protective measures : Do not inhale gases/vapours/aerosols.
 Avoid contact with the skin, eyes and clothing.
 Handle in accordance with good building materials hygiene and safety practice.

Hygiene measures : 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).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : amber

Odor : ammonia-like

Odor Threshold : not determined

pH : No data available

Melting point : No data available

Boiling point : > 392 °F / > 200 °C

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Flash point : 325 °F / 163 °C
 Method: Standard Test Method for Sustained Burning of Liquid Mixtures Using the Small Scale Open-Cup Apparatus
 The product has not been tested. The statement has been derived from the properties of the individual components.

Evaporation rate : No data available

Flammability (liquids) : Not classified as a flammability hazard

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : < 0.01 hPa (68 °F / 20 °C)

Relative vapor density : Heavier than air.

Relative density : No data available

Density : 0.96 g/cm³ (68 °F / 20 °C)

Solubility(ies)
 Water solubility : insoluble
 Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : not applicable for mixtures

Autoignition temperature : 610 °F / 321 °C
 The product has not been tested. The statement has been derived from the properties of the individual components.

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

Viscosity
 Viscosity, dynamic : No data available
 Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

Sublimation point : No data available

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Molecular weight : Not applicable

SECTION 10. STABILITY AND REACTIVITY

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

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 SDS section 7 - Handling and storage.

Incompatible materials : Oxidizing agents
strong alkalis
Acids

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

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Harmful if swallowed.
Toxic if inhaled.

Product:

Acute oral toxicity : Acute toxicity estimate: 1,948 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 8.26 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization**Skin sensitization**

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

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Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Suspected of damaging the unborn child.

STOT-single exposure

May cause respiratory irritation.

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 statements on toxicology have been derived from the properties of the individual components.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:****Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:**Fatty acids, tall-oil, reaction products with tetraethylenepentamine:**

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 1

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**Product:**

Additional ecological information : Do not discharge product into the environment without control.

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mation

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 : Observe national and local legal requirements. Residues should be disposed of in the same manner as the substance/product.
- 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 2735
- Proper shipping name : AMINES, LIQUID, CORROSIVE, N.O.S.
(DIETHYLENETRIAMINE, TRIETHYLENETETRAMINE, FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE)
- Class : 8
- Packing group : II
- Labels : 8

IATA-DGR

- UN/ID No. : UN 2735
- Proper shipping name : AMINES, LIQUID, CORROSIVE, N.O.S.
(DIETHYLENETRIAMINE, TRIETHYLENETETRAMINE)
- Class : 8
- Packing group : II
- Labels : Corrosive
- Packing instruction (cargo aircraft) : 855
- Packing instruction (passenger aircraft) : 851

IMDG-Code

- UN number : UN 2735
- Proper shipping name : AMINES, LIQUID, CORROSIVE, N.O.S.
(DIETHYLENETRIAMINE, TRIETHYLENETETRAMINE, FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE)
- Class : 8
- Packing group : II
- Labels : 8
- EmS Code : F-A, S-B
- Marine pollutant : yes

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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**

UN/ID/NA number	: UN 2735
Proper shipping name	: AMINES, LIQUID, CORROSIVE, N.O.S. (DIETHYLENETRIAMINE, TRIETHYLENETETRAMINE, FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE)
Class	: 8
Packing group	: II
Labels	: CORROSIVE
ERG Code	: 153
Marine pollutant	: yes

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 variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION**US State Regulations****Pennsylvania Right To Know**

2,2'-iminodi(ethylamine)	111-40-0
3,6,9-triazaundecamethylene-1,11-diamine	112-57-2
triethylenetetramine	112-24-3

New Jersey Right To Know

2,2'-iminodi(ethylamine)	111-40-0
3,6,9-triazaundecamethylene-1,11-diamine	112-57-2
triethylenetetramine	112-24-3

The ingredients of this product are reported in the following inventories:

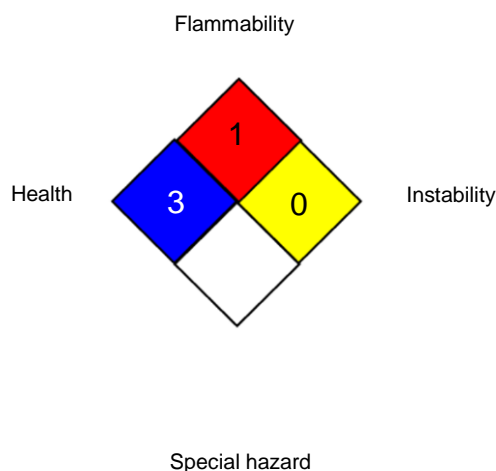
TSCA	: All substances listed as active on the TSCA inventory
DSL	: All components of this product are on the Canadian DSL

SECTION 16. OTHER INFORMATION**Further information**

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NFPA 704:



HMIS® IV:

HEALTH		
FLAMMABILITY		
PHYSICAL HAZARD		

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)
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 P0	: USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
US WEEL	: USA. Workplace Environmental Exposure Levels (WEEL)
29 CFR 1910.1000 (Table Z-1-A) / TWA value	: Time Weighted Average (TWA):
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 P0 / TWA	: 8-hour time weighted average
US WEEL / TWA	: 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - In-

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ternational Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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