MasterFlow 648 Low Dust Part B

Version	Revision Date:	SDS Number:	Date of last issue: 01/07/2021
2.0	11/15/2021	000000727304	Date of first issue: 05/29/2020

SECTION 1. IDENTIFICATION

Product name : MasterFlow 648 Low Dust Part B

Product code : 000000000050455277 000000000050455277

Other means of identification : MFlow 648 Low Dust PTB

Manufacturer or supplier's details

Company name of supplier : MBSCS Canada, Inc.

Address : 7111 Syntex Drive, 3rd Floor
Mississauga ON L5N 8C3

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 Hazardous Products Regulations

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 3

Acute toxicity (Dermal) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Skin sensitization : Category 1

Reproductive toxicity : Category 2

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements :
H331 Toxic if inhaled.
H314 Causes severe skin burns and eye damage.
H302 + H312 Harmful if swallowed or in contact with skin.
H317 May cause an allergic skin reaction.
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:

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 : amine-containing

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Fatty acids, tall-oil, reaction products with tetraethylenepentamine	Fatty acids, tall-oil, reaction products with tetraethylene-pentamine	68953-36-6	>= 50 - < 70
2,2'-iminodi(ethylamine)	1,2-Ethanediamine, N-(2-aminoethyl)-	111-40-0	>= 0 - < 30
N,N'-bis(3-aminopro-pyl)ethylenediamine	1,3-Propanedia-mine, N,N''-1,2-ethanediylbis-	10563-26-5	>= 0 - < 30
triethylenetetramine	1,2-Ethanediamine, N,N'-bis(2-aminoethyl)-	112-24-3	>= 0 - < 30
2,4,6-tris(dimethylaminomethyl)phenol	Phenol, 2,4,6-tris[(dimethylamino)methyl]-	90-72-2	>= 5 - < 10
3,6,9-triazaundecameth-ylene-1,11-diamine	1,2-Ethanediamine, N-(2-aminoethyl)-N'-[2-[(2-ami-no-ethyl)amino]ethyl]-	112-57-2	>= 0 - < 10
N,N-Bis(2-ami-no-ethyl)ethylenediamine	1,2-Ethanediamine, N,N-bis(2-aminoethyl)-	4097-89-6	>= 0 - < 10
bis[(dimethylamino)methyl]phenol	Phenol, bis[(dimethylamino)methyl]-	71074-89-0	>= 1 - < 5

Salicylic acid	Benzoic acid, 2-hydroxy-	69-72-7	>= 0 - < 5
N-(2-aminoethyl)-1,3-propanediamine	1,3-Propanediamine, N-(2-aminoethyl)-	13531-52-7	>= 0 - <= 5
Fatty acids, C18-unsatd., trimers, compds. with oleylamine	Fatty acids, C^{18}-unsatd., trimers, compds. with oleylamine	147900-93-4	>= 0.1 - < 1

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	:	Remove contact lenses, if present. Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
If swallowed	:	Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Do NOT induce vomiting.
Most important symptoms and effects, both acute and delayed	:	Toxic if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful if swallowed or in contact with skin. 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
Specific hazards during fire fighting	:	See SDS section 10 - Stability and reactivity.

Hazardous combustion products	:	harmful vapours nitrogen oxides fumes/smoke carbon black carbon oxides
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.
Special protective equipment for fire-fighters	:	Wear a self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Do not breathe vapour/aerosol/spray mists. Wear eye/face protection. If exposed to high vapour concentration, leave area immediately. 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 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 fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Avoid aerosol formation. Avoid inhalation of mists/vapours. Avoid skin contact. Avoid contact with eyes.
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.

Recommended storage temperature : > 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/m3	NIOSH
		TWA value	1 ppm 4 mg/m3	29 CFR 1910.1000 (Table Z-1-A)
		TWA	1 ppm 4.2 mg/m3	CA AB OEL
		TWA	1 ppm	CA BC OEL
		TWAEV	1 ppm 4.2 mg/m3	CA QC OEL
		TWA	1 ppm	ACGIH
triethylenetetramine	112-24-3	TWA	0.5 ppm 3 mg/m3	CA ON OEL

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 : Wear safety glasses with side shields or goggles.

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.
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, 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.
Remove contaminated clothing immediately and clean before re-use or dispose it if necessary.
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 to yellowish
Odor	:	amine-like
Odor Threshold	:	not determined
pH	:	No data available
Melting point	:	No data available
Freezing point		No data available
Boiling point	:	approx. 205 °C Decomposition: Cannot be distilled without decomposition at normal pressure. Method: Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure
Flash point	:	approx. 163 °C Method: Calculation method
Evaporation rate	:	No data available
Flammability (liquids)	:	The product is not flammable.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available

Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	approx. 0.96 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	not applicable for mixtures
Autoignition temperature	:	not determined
Decomposition temperature	:	No decomposition if stored and handled as prescribed/indicated.
Viscosity		
Viscosity, dynamic	:	approx. 70 mPa.s (20 °C) Method: Viscosity of Liquids
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Not an oxidizer.
Sublimation point	:	No data available
Molecular weight	:	No data available

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	:	Strong acids Strong bases Strong oxidizing agents Strong reducing agents
Hazardous decomposition	:	No hazardous decomposition products if stored and handled

products as prescribed/indicated.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed or in contact with skin.
Toxic if inhaled.

Product:

Acute oral toxicity	:	Acute toxicity estimate: 1,258 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 5.02 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: 1,353 mg/kg Method: Calculation method

Skin corrosion/irritation

Causes severe burns.

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.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Suspected of damaging the unborn child.

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 statements on toxicolo-

gy 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. 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 : 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 2735
Proper shipping name	:	AMINES, LIQUID, CORROSIVE, N.O.S. (FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE, DIETHYLENETRIAMINE)
Class	:	8
Packing group	:	II
Labels	:	8

IATA-DGR

UN/ID No.	:	UN 2735
Proper shipping name	:	AMINES, LIQUID, CORROSIVE, N.O.S. (FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE, DIETHYLENETRIAMINE)
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. (FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE, DIETHYLENETRIAMINE)
Class	:	8
Packing group	:	II
Labels	:	8
EmS Code	:	F-A, S-B
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

TDG

UN number	:	UN 2735
Proper shipping name	:	AMINES, LIQUID, CORROSIVE, N.O.S. (FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH TETRAETHYLENEPENTAMINE, DIETHYLENETRIAMINE)
Class	:	8
Packing group	:	II
Labels	:	8
ERG Code	:	153
Marine pollutant	:	no

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

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

DSL	:	All components of this product are on the Canadian DSL
TSCA	:	All chemical substances in this product are either listed as active on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

SECTION 16. OTHER INFORMATION

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)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA ON OEL	:	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
NIOSH	:	NIOSH Pocket Guide to Chemical Hazards (US)
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):
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA ON OEL / TWA	:	Time-Weighted Average Limit (TWA)
CA QC OEL / TWAEV	:	Time-weighted average exposure value
NIOSH / REL value	:	Recommended exposure limit (REL):

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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 - International 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

Revision Date	:	11/15/2021
Date format	:	mm/dd/yyyy

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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