

SAFETY DATA SHEET

FABRIKEM® BLUE RETARDER

SECTION 01: PRODUCT AND COMPANY IDENTIFICATION

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| Product Identifier: | Fabrikem® Retarder |
| Product Use: | Concrete Set Retarder |
| Manufacturer's Name: | Fabrikem Manufacturing Ltd. 20361 Duncan Way, Langley, BC V3A 7N3 |
| Supplier's Name: | Fabrikem Manufacturing Ltd. 20361 Duncan Way, Langley, BC V3A 7N3 |
| Preparation Date of SDS: | 12 January 2017 |
| Revision Date of SDS: | 21 February 2020 |
| SDS Prepared By: | WHMIS Committee |
| Phone Number of Preparer: | 604-532-3883 |
| CANUTEC Emergency Number: | 613-996-6666 |

SECTION 02: HAZARDOUS IDENTIFICATION

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| GHS Classification: | No need for classification according to GHS criteria for this product. |
| GHS Labelling: | The product does not require a hazard warning label in accordance with GHS criteria. |

SECTION 03: HAZARDOUS INGREDIENTS

| Ingredients: | CAS# | % | Common Name/Synonyms | Other Identifiers |
|---|---------|-----|----------------------|-------------------|
| 2-Hydroxy-1,2,3 Propanetricarboxylic Acid | 77-92-9 | 1-5 | Citric Acid | |

SECTION 04: FIRST AID MEASURES

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| General Advice: | Show this safety data sheet to the doctor in attendance. If exposed or concerned: Get medical advice/attention. |
| Inhalation: | If difficulties occur after vapour has been inhaled, remove to fresh air and seek medical attention. |
| Eye Contact: | Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. |
| Skin Contact: | After contact with skin, wash immediately with plenty of water and soap. If irritation develops, seek medical attention. |
| Ingestion: | 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. |
| Self-protection of the first aider: | First aid personnel should pay attention to their own safety. Immediately remove contaminated clothing. |
| Most important symptoms and effects, both acute and delayed: | No applicable information available. |
| Immediate medical attention and special treatment : | Treatment based on sound judgment of physician and individual reactions of patient. |

SECTION 05: FIRE FIGHTING MEASURES

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| Flammable: | Not flammable |
| Suitable Means of Extinction: | Extinguish fire using agent suitable for surrounding fire. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Use water spray to knock-down vapours. |
| Unsuitable Means of Extinction: | Not Available |
| Specific Hazards Arising from the Product: | Carbon dioxide, carbon monoxide, fumes/smoke, |
| Hazardous Combustion Products: | Oxides of carbon. |
| Special Protective Equipment and Precautions Fire-Fighters: | Wear a self-contained breathing apparatus. 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 local regulations. |

SECTION 06: ACCIDENTAL RELEASE MEASURES

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| Personal Precautions, Protective Equipment and Emergency Procedures: | Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. |
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| Environmental Precautions: | Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Do not allow to enter into soil/subsoil. Prevent product from entering drains. |
| Methods for Containment and Cleaning Up. | SMALL SPILLS: Contain and soak up spill with absorbent material. Put material in suitable, covered, labeled containers. Flush area with water. LARGE SPILLS: Pump off product. |

SECTION 07: HANDLING AND STORAGE

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| Precautions for Safe Handling: | Avoid aerosol formation. Avoid inhalation of mists/vapours. Avoid skin contact. No special measures necessary provided product is used correctly. |
| Conditions for Safe Storage: | Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Protect from sunlight. Protect from temperatures below 5°C. |

SECTION 08: EXPOSURE CONTROL/PERSONAL PROTECTION

| Control Parameters | | | | |
|--------------------|-----------|------|----------|------|
| Chemical Name | ACGIH TLV | | OSHA PEL | |
| | TWA | STEL | TWA | STEL |
| Citric Acid | N/A | N/A | N/A | N/A |

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| Appropriate Engineering Controls: | No applicable information available. | |
| Individual Protection Measures: | Eye/Face Protection: | Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes. |
| | Hand Protection: | Appropriate chemical resistant gloves should be worn. Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: Nitrile, Neoprene, Ethyl Vinyl Alcohol Laminate (EVAL), Natural Rubber, Polyvinyl Chloride (PVC), or Polyethylene gloves. |
| | Skin and Body Protection: | Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential |
| | Respiratory Protection: | Wear respiratory protection if ventilation is inadequate. |
| | General Hygiene Considerations: | Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. |

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance: | Blue liquid |
| Odour: | Essentially odourless |
| Odour Threshold: | N/E |
| pH: | 4.5-5.0 |
| Melting and Freezing Point: | 0°C |
| Initial Boiling Point and Boiling Range: | 100°C |
| Flash Point: | No data available |
| Evaporation Rate (n-butyl acetate = 1): | No data available |

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| Flammability (solid, gas) | No data available |
| Upper and Lower Flammability or Explosive Limit: | No data available |
| Vapour Pressure: | No data available |
| Vapour Density (air = 1): | No data available |
| Relative Density (water = 1): | 1.06 |
| Solubility in Water: | Soluble in water |
| Solubility in Other Liquids | No data available |
| Partition Coefficient n-Octanol/Water (Log Kow) | N/E |
| Auto-ignition Temperature: | N/E |
| Decomposition Temperature: | N/E |
| Viscosity: | |

SECTION 10: STABILITY AND REACTIVITY

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| Reactivity: | Stable |
| Chemical Stability: | Stable |
| Possibility of Hazardous Reactions: | No additional remarks. |
| Conditions to Avoid: | Direct sunlight, heat. |
| 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

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| Likely Routes of Exposure: | |
| Inhalation: | Virtually non-toxic |
| Eye Contact: | Virtually non-toxic |
| Skin Contact: | Virtually non-toxic |
| Ingestion: | Virtually non-toxic |

| Acute Toxicity: | LC ₅₀ | LD ₅₀ (oral) | LD ₅₀ (dermal) |
|-----------------|------------------|-------------------------|---------------------------|
| Citric Acid | N/A | 3 g/kg (Rat) | N/A |

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| Skin Corrosion/Irritation: | No irritation is expected. |
| Serious Eye Damage/Irritation: | No irritation is expected. |
| Specific Target Organ Toxicity (Single Exposure): | May cause respiratory irritation. |
| Aspiration Hazard: | No information available. |
| Specific Target Organ Toxicity (Repeated Exposure): | No information available. |
| Respiratory and/or Skin Sensitization: | No information available. |
| Carcinogenicity: | No information available. |
| Reproductive Toxicity: | No information available. |
| Germ Cell Mutagenicity: | No information available. |
| Interactive Effects: | No information available. |

SECTION 12: ECOLOGICAL INFORMATION

| Ecotoxicity: | | | | |
|---------------|--------------------------------------|---|-------------------------------|---------------|
| Chemical Name | Ecotoxicity Freshwater Algae Data | Ecotoxicity Fish Species Data | Toxicity to Microorganisms | Crustacea |
| Citric Acid | Not Available | 1516 mg/L LC50 (Lepomis macrochirus) 96 h static | Not Available | Not Available |

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| Persistence and Degradability: | No information available. | | |
| Bioaccumulation: | No information available. | | |
| Component Information: | Chemical Name | Partition Coefficient | |
| | | | |
| | Citric Acid | -1.72 | |
| Other Adverse Effects: | No information available. | | |

SECTION 13: DISPOSAL CONSIDERATIONS

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| Disposal Methods: | Dispose of waste in accordance with environmental legislation. Should not be released into the environment. Dispose of in accordance with local regulations. |
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SECTION 14: TRANSPORT INFORMATION

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| Shipping Name: | Not regulated |
| PIN: | N/E |
| TDG: | Not regulated |
| DOT: | Not regulated |
| IMO: | N/E |
| ICAO: | N/E |
| ERAP: | N/E |

SECTION 15: REGULATORY INFORMATION

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|---|--------------------------------|-------------------------------------|--------------------------------|
| Safety, Health and Environmental Regulations | | | |
| U.S. Regulatory Rules | | | |
| | | | |
| Chemical Name | CERCLA/SARA Section 302 | SARA (311, 312) Hazard Class | CERCLA/SARA Section 313 |
| Citric Acid | Not Listed | Not Listed | Not Listed |
| TSCA: | Complies | | |
| DSL/NDSL: | Complies | | |
| IARC Monograph: | None | | |
| NFPA Rating: | None | | |

SECTION 16: OTHER INFORMATION

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| Date of Latest Revision: | 21 February 2020 |
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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It is provided solely for the customer's consideration, and verification and Fabrikem Manufacturing Ltd. hereby specifically claims it shall not be held liable for any damage resulting from handling or from contact with the above products.

N/A = Not Applicable
N/E = Not Established