GE Power & Water
Water & Process Technologies

SAFETY DATA SHEET

MP-4

1. Product and Company Identification

Material name	**MP-4**
Version #	2.0
Revision date	Sep-02-2015
Supersedes date	Apr-04-2013
Prepared by	This SDS has been prepared by GE Water & Process Technologies Regulatory Department (1-215-355-3300).
CAS #	Mixture
Product application	Membrane cleaner

Company/undertaking identification

GE Water & Process Technologies Canada
3239 Dundas Street West
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T 905-465-3030

Emergency telephone

(800) 877-1940

2. Hazards Identification

Emergency overview Moderately irritating. May be corrosive in contact with moist skin. Severe irritant to the eyes, possibly corrosive. Repeated exposure may result in respiratory sensitization.

Potential health effects

Eyes	Severe irritant to the eyes. May be corrosive to the eyes.
Skin	Primary route of exposure May cause moderate irritation to the skin. May be corrosive in contact with moist skin.
Inhalation	Primary route of exposure Dusts or mists are irritating to mucous membranes. Repeated exposure may result in respiratory sensitization.
Ingestion	May cause gastrointestinal irritation and abdominal pain. In solution, material may become corrosive to tissues. Possible severe allergic reactions in sensitive individuals.
Target organs	Prolonged or repeated exposures may cause primary irritant dermatitis, skin sensitization, and/or allergic respiratory reactions.
Signs and symptoms	Inhalation may cause eye, nose, throat and lung irritation and possible respiratory sensitisation or asthma. Skin contact may cause moderate irritation or severe burns and sensitization.
Medical conditions aggravated by exposure	Asthma Allergies Respiratory diseases Skin disorders

3. Composition / Information on Ingredients

Components	CAS #	Percent (wt/wt)
Sodium Bisulfite	7631-90-5	60 - 100
Sodium sulphite	7757-83-7	0.1 - 1

Composition comments Information for specific product ingredients as required by the WHMIS Regulations is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

4. First Aid Measures

First aid procedures

Inhalation Move to fresh air. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary. Get medical attention immediately.

Skin contact Wash off with soap and water. Take off contaminated clothing and wash before reuse. Get medical attention if irritation develops and persists.

Eye contact URGENT! Immediately flush eyes with plenty of low-pressure water for at least 20 minutes while removing contact lenses. Hold eyelids apart. Get immediate medical attention.

Ingestion If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. Call a physician immediately. Dilute contents of stomach using 2-8 fluid ounces (60-240ml) of milk or water.

Notes to physician Corrosive material It may not be advisable to induce vomiting. Possible mucosal damage may contraindicate the use of gastric lavage.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media Dry chemical, CO2, water spray or regular foam.

Protection of firefighters

Protective equipment for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray. Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

Explosion data

Sensitivity to static discharge Not available.

Sensitivity to mechanical impact Not available.

6. Accidental Release Measures

Personal precautions Wear appropriate protective equipment and clothing during clean-up. Avoid contact with spilled material. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental precautions Avoid discharge into drains, water courses or onto the ground. Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements.

Methods for cleaning up Ventilate area, use specified protective equipment. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Flush with plenty of water. Wet area may be slippery. Spread sand/grit.

7. Handling and Storage

Handling Vent carefully before opening. Sulfur dioxide can be formed during the normal use and handling of this product.

Storage Keep container tightly closed in a dry and well-ventilated place.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium Bisulfite (CAS 7631-90-5)	TWA	5 mg/m3

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Sodium Bisulfite (CAS 7631-90-5)	TWA	5 mg/m3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Sodium Bisulfite (CAS 7631-90-5)	TWA	5 mg/m3

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Sodium Bisulfite (CAS 7631-90-5)	TWA	5 mg/m3

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Sodium Bisulfite (CAS 7631-90-5)	TWA	5 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Sodium Bisulfite (CAS 7631-90-5)	TWA	5 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Engineering controls Adequate ventilation to maintain air contaminants below exposure limits.

Personal protective equipment

Eye/face protection Chemical goggles are recommended. Splash proof chemical goggles.

Skin protection Wear suitable protective clothing. Chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Chemical resistant apron. Glove selection must take into account any solvents and other hazards present. neoprene gloves Wash off after each use. Replace as necessary.

Respiratory protection If air-purifying respirator use is appropriate, use a respirator with acid gas cartridges and dust/mist prefilters.

9. Physical & Chemical Properties

Appearance

Physical state Powder

Color White to yellow

Odor Sulfur dioxide

Odor threshold Not available.

pH in aqueous solution 4.3 (1% SOL.)

Vapor pressure < 0.01 mm Hg

Vapor pressure temp. 70 °F (21 °C)

Vapor density < 1 (Air = 1)

Boiling point Not available.

Melting point/Freezing point Not available.

Solubility (water) 100 %

Specific gravity (70°F, 21°C) Not available.

Flash point > 213 °F (> 101 °C) P-M(CC)

Flammability limits in air, upper, % by volume Not available.

Flammability limits in air, lower, % by volume Not available.

Auto-ignition temperature Not available.

Evaporation rate < 1 (Ether = 1)

Viscosity temperature 70 °F (21 °C)

Percent volatile 0 (Estimated)

10. Chemical Stability & Reactivity Information

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Conditions to avoid Not available.

Incompatible materials Strong oxidizing substances.

Hazardous decomposition products Sulfur oxides.

Possibility of hazardous reactions Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Product	Species	Test Results
MP-4 (CAS Mixture)		
Acute		
Oral		
LD50	Rat	1000 mg/kg, (Calculated according to GHS additivity formula (Category 4))

Components	Species	Test Results
Sodium Bisulfite (CAS 7631-90-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 5.5 mg/l, 4 Hour
Oral		
LD50	Rat	1420 mg/kg
Sodium sulphite (CAS 7757-83-7)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 5.5 mg/l, 4 Hour
Oral		
LD50	Rat	2610 mg/kg

Carcinogenicity

ACGIH Carcinogens

Sodium Bisulfite (CAS 7631-90-5)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Sodium Bisulfite (CAS 7631-90-5)	3 Not classifiable as to carcinogenicity to humans.
Sodium sulphite (CAS 7757-83-7)	3 Not classifiable as to carcinogenicity to humans.

12. Ecological Information

Ecotoxicity No ecotoxicity data noted for the ingredient(s).

13. Disposal Considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

Waste from residues / unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

TDG

Not regulated as dangerous goods.

DOT

Not regulated as a dangerous good.

Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.

IMDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

15. Regulatory Information

WHMIS status Controlled

WHMIS classification D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

WHMIS labeling

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

List of abbreviations Not available.

HMIS® ratings Health: 3
Flammability: 0
Physical hazard: 0
Personal protection: B

NFPA ratings Health: 2
Flammability: 1
Instability: 0

Disclaimer 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.

This data sheet contains changes from the previous version in section(s): Composition / Information on Ingredients: Disclosure Overrides
HazReg Data: International Inventories