

SECTION 1: IDENTIFICATION**Product Identifier****Product Form:** Liquid**Product Name:** 0.1 M MES**Synonyms:** 0.1 M Morpholinoethanesulfonic acid, 0.1 M 2-Morpholinoethanesulfonic acid**Intended Use of the Product****Use of the Substance/Mixture:** Zwitterionic buffer for use in Carterra instruments, for use in Carterra optical prism activation**Name, Address, and Telephone of the Responsible Party**

Carterra Inc.

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Salt Lake City, UT 84103

844.642.7635 x736

Emergency Number: +1-703-527-3887 (CHEMTREC)**SECTION 2: HAZARDS IDENTIFICATION****Classification of the Substance or Mixture**

Not a hazardous substance or mixture

GHS-US Classification**GHS-US Labeling**

Hazard Pictograms (GHS-US)	:	None
Signal Word (GHS-US)	:	None
Hazard Statements (GHS-US)	:	None
Precautionary Statements (GHS-US)	:	None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**Mixture**

Name	CAS No.	%	Classification
2-Morpholinoethanesulfonic acid	145224-94-8	1.0 – 2.0	None specified
Water	7732-18-5	98.0-99.0	None specified
pH Adjuster	N/A	Trace	None specified

SECTION 4: FIRST AID MEASURES**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (**First-aid Measures After Inhalation:** Move to fresh air. If breathing becomes difficult, give oxygen**First-aid Measures After Skin Contact:** Wash off immediately with soap and plenty of water, removing all contaminated clothes and shoes**First-aid Measures After Eye Contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician**First-aid Measures After Ingestion:** Clean mouth with water and afterwards drink plenty of water**Most Important Symptoms and Effects Both Acute and Delayed****Symptoms/Injuries:** None specified**Symptoms/Injuries After Inhalation:** None specified**Symptoms/Injuries After Skin Contact:** None specified**Symptoms/Injuries After Eye Contact:** None specified**Symptoms/Injuries After Ingestion:** None specified**Chronic Symptoms:** None specified**SECTION 5: FIRE-FIGHTING MEASURES****Suitable Extinguishing Media:** Dry chemical, CO₂, water spray, or regular foam**Unsuitable Extinguishing Media:** None specified**Special Hazards Arising from the Substance or Mixture:** None**Advice for Firefighters**

Precautionary Measures: No information available

Firefighting Instructions: No information available

Protection During Firefighting: MSHA/NIOSH (approved or equivalent) and full protective gear.

Hazardous Combustion Products: Nitrogen oxides, Sulfur oxides, carbon oxides

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid contact with skin, eyes, and clothing. Remove and wash contaminated clothing before reuse. Do not breath vapors/dust.

For Non-Emergency Personnel

Protective Equipment: Wear protective gloves/clothing

Emergency Procedures: Evacuate non-essential personnel from laboratory

For Emergency Personnel

Protective Equipment: Wear protective gloves/clothing

Emergency Procedures: Evacuate non-essential personnel from laboratory

Methods and Materials for Containment and Cleanup

Prevent further leakage or spillage if safe to do so. Cover with dry lime or soda ash. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling: Handle in accordance with good industrial hygiene and safety practice.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Store at room temperature. Keep containers tightly closed in a well-ventilated place.

Incompatible Products: Strong oxidizers

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Component	CAS-No.	Value	Control Parameters
2-Morpholinoethansulfonic acid	145224-94-8	N/A	None Specified

Exposure Controls and Risk Management Measures

Appropriate Engineering Controls	: Showers, Eyewash stations, Ventilation systems
Materials for Protective Clothing	: None specified
Hand Protection	: Wear protective gloves when handling
Eye Protection	: Avoid contact with eyes. Wear safety glasses with side-shields
Skin and Body Protection	: Wear protective clothing when handling
Respiratory Protection	: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Environmental Exposure Controls	: None specified

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear
Odor	: No data available
Odor Threshold	: No data available
pH	: 5.48 – 5.52
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available

Flash Point	:	No data available
Auto Ignition Temperature	:	No data available
Decomposition Temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor Pressure	:	No data available
Relative Vapor Density at 20° C	:	No data available
Relative Density	:	No data available
Specific Gravity	:	No data available
Solubility	:	Miscible with water
Partition Coefficient: N-Octanol/Water	:	No data available
Viscosity	:	No data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No data available

Chemical Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: None under normal processing

Conditions to Avoid: Extremes of temperature and direct sunlight

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: Carbon oxides. Nitrogen oxides. Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity:

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
2-Morpholinoethansulfonic acid	None Specified	None Specified	None Specified
Water	7732-18-5	Not Established	Not Established

Skin Corrosion/Irritation: Irritating to skin

pH: None Specified

Serious Eye Damage/Irritation: Irritating to eyes

pH: None Specified

Respiratory or Skin Sensitization: Irritating to skin/respiratory system

Germ Cell Mutagenicity: None Specified

Carcinogenicity: None Specified

IARC: None Specified

NTP: None Specified

OSHA: None Specified

Reproductive Toxicity: None Specified

Specific Target Organ Toxicity (Single Exposure): None Specified

Specific Target Organ Toxicity (Repeated Exposure): None Specified

Aspiration Hazard: None Specified

Symptoms/Injuries After Inhalation: None Specified

Symptoms/Injuries After Skin Contact: None Specified

Symptoms/Injuries After Eye Contact: None Specified

Symptoms/Injuries After Ingestion: None Specified

Chronic Symptoms: None Specified

SECTION 12: ECOLOGICAL INFORMATION

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available. •

Additional ecological information: •

General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized.

SECTION 13: DISPOSAL CONSIDERATIONS**Waste treatment methods:****Recommendation:** Must not be disposed together with household garbage. Do not allow product to reach usage system.**Recommendation:** Burn in chemical incinerator**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary, with cleansing agents.**SECTION 14: TRANSPORT INFORMATION****DOT:** Not regulated**IMDG/IMO:** Not regulated**IATA:** Not regulated**SECTION 15: REGULATORY INFORMATION**

Safety, health, and environmental regulations/legislation specific for the substance or mixture Section 355: N/A

Section 313 (Specific toxic chemical listings): N/A

TSCA (Toxic Substances Control Act): N/A.

Proposition 65 · Chemicals known to cause cancer: N/A

Chemicals known to cause reproductive toxicity for females: N/A

Chemicals known to cause reproductive toxicity for males: N/A

Chemicals known to cause developmental toxicity: N/A

Carcinogenic categories ·

EPA (Environmental Protection Agency) N/A

TLV (Threshold Limit Value established by ACGIH) N/A

NIOSH-Ca (National Institute for Occupational Safety and Health) N/A

Chemical safety assessment: A Chemical Safety Assessment has not been carried out

SECTION 16: OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: Quality Assurance. Creation date for SDS 06/19/2019.

review SDS for accuracy. 9/6/2022