

MATERIAL SAFETY DATA SHEET

This MSDS Complies With 29 CFR 1910.1200 (The Hazard Communication Standard)
This material safety data sheet conforms to the requirements of ANSI Z400.1

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FR WG BUFFER – FR WG Buffer Package

Manufacturer/Supplier:

American Chemical Technologies, Inc.
485 E. Van Riper Road, Fowlerville, MI 48836
Office: 517-223-0300 Fax: 517-223-1703

Emergency Spill Information:

INFOTRAC 1-800-535-5053
24 HOURS/DAY, 7 DAYS/WEEK

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS#</u>	<u>Range % by wt.</u>
Diethanol amine	11-42-2	50% - 70%
	TLV (ACGIH): TWA: 3ppm PEL (OSHA): TWA: 3ppm	
Morpholine	110-91-8	10% - 20%
	Hazardous Per 29 CFR 1910.1200: Yes OSHA PEL 20 ppm 70 mg/m ³ ; skin designation TLV (ACGIH): STEL 30-ppm (skin) 30ppm TWA: 20-ppm (skin) 20-ppm	
Carboxylic Acid Salt	Proprietary	5% - 10%
Water	7732-18-5	5% - 10%

SECTION 3 – HAZARDS IDENTIFICATION

Emergency Overview: WARNING: MAY CAUSE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION. MAY CAUSE LIVER DAMAGE BASED ON ANIMAL DATA. MAY CAUSE KIDNEY DAMAGE BASED ON ANIMAL DATA. MAY CAUSE LUNG DAMAGE BASED ON ANIMAL DATA.

Potential Health Effects:

Eye Contact: may cause severe eye irritation. May cause severe corneal injury.

Skin Contact: Prolonged or repeated contact may cause skin irritation with local redness repeated contact may cause skin burns. Symptoms may include pain, severe and local redness, swelling, and tissue damage.

Inhalation: No significant health hazards identified.

Ingestion: Do not take internally. Swallowing may result in gastrointestinal irritation or ulceration.

HMIS III rating: (Health:2) (Flammability:1) (Physical hazard:1) (Protection: C)

NFPA Code: (Health:2) (Flammability:1) (Reactivity:1)

SECTION 4 – FIRST AID MEASURES

Eyes: Immediately flush with water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops call a physician.

Skin: Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops, get medical attention.

Inhalation: Move to fresh air. Aid in breathing if necessary, and get medical attention.

Ingestion: Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth of the victim is unconscious or having convulsions.

Primary Routes of Entry: The primary routes of exposure to this material are eye or skin contact, and inhalation. Prolonged or repeated skin or eye contact may result in irritation. Vapors or mists of diethylene glycol may be irritating to the respiratory tract. The effects of ingestion include nausea, diarrhea, dizziness, drowsiness, kidney damage and possible coma. Chronic overexposure to diethylene glycol may result in kidney and liver damage. Breathing mists by inhalation or ingestion.

Effects of Chronic Overexposure: No information found for this mixture.

Medical Conditions Aggravated by Exposure: None known.

SECTION 5 – FIRE FIGHTING MEASURES

Flashpoint: 168 °C (334 °F) **Method:** Pensky-Martens Closed Cup ASTM D93

UEL: Not determined.

LEL: Not determined.

Autoignition Temperature: Not determined.

Flammability Classification: Not Flammable.

Extinguishing Media: Agents approved for Class B (e.g., dry chemical, carbon dioxide, foam, steam) or water fog.

Fire Fighting Equipment: Fire fighters should wear an approved self-contained breathing apparatus and turn-out gear.

Hazardous Combustion Products: None.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill Mitigation Procedures: Spill should be contained, solidified, and placed in suitable containers for disposal. This material is not regulated under RCRA or CERCLA (“superfund”).

SECTION 7 – HANDLING AND STORAGE

Handling: No special requirements if handled with reasonable care.

Storage: Store in a cool dry place. Keep container closed. Avoid prolonged contact with skin or clothing. Avoid extreme heat.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye: Chemical goggles; also wear a face-shield in compliance with OSHA regulations if splashing hazard exists.

Skin: Wear chemical impermeable gloves if prolonged or repeated contact is likely.

Inhalation: Use local ventilation to limit exposure. If vapors or mists are generated wear NIOSH/MSHA approved respirator.

Engineering Controls: Control airborne concentrations below the exposure guidelines.

Other Protective Equipment: Gloves, coveralls, apron, boots as necessary to prevent skin contact. Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact. Avoid inhalation of vapors/mists. Keep away from food/drink and animal feeding stuffs. Take off immediately all contaminated clothing. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9 – CHEMICAL AND PHYSICAL PROPERTIES

Appearance and Odor	: clear amber liquid with ammonia odor
pH	: 10.7
Vapor Pressure	: 3.5 mm Hg @ 20 °C.
Vapor Density	: 2.1 (air=1)
Boiling Point	: >200 °F
Pour Point	: -53 °F
Solubility in water	: Soluble
Specific Gravity	: 1.08 (water = 1)
Bulk Density	: 8.99 lbs./gal

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: Extreme heat.

Materials to Avoid: Segregate from acids and bases. Segregate from strong oxidizing agents.

Hazardous Decomposition: None identified.

SECTION 11 – TOXICOLOGICAL INFORMATION

Existing Medical Conditions Aggravated by Exposure to this Material: No information found for this mixture.

Information on Diethanolamine:

LD50, rat, female 680 – 1,000 mg/kg, LD50, rat, male 1,730 – 3,540 mg/kg

Skin Absorption LD50, rabbit >8,200 mg.kg

Results from repeated exposure tests on diethanolamine in laboratory animals include anemia (rats) and effects on kidneys (rats and mice) and liver (mice). Heart and nervous system effects were also observed in animals given exaggerated doses of diethanolamine. Changes in other organs, causes of which are nonspecific, were judged secondary to the poor health of the animals due to the extremely high doses of diethanolamine given.

Information on Morpholine: At sublethal doses, morpholine caused tearing of the eyes, irritation and inactivity. Repeated skin applications with morpholine caused skin, liver, and kidney injury in rabbits. Rats and guinea pigs exposed to 18,000 ppm morpholine exhibited eye and respiratory irritation. Repeated exposures cause lung, liver, and kidney injury. In a 13-week inhalation study with rats, morpholine caused nasal lesions at 100 and 250 ppm; no effects were seen at 25 ppm. In an industry sponsored study, morpholine was not carcinogenic to rats at 10, 50, or 100 ppm; but did cause ophthalmic and nasal lesions.

SECTION 12 – ECOLOGICAL INFORMATION

Aquatic Toxicity: No data available.

Fish Toxicity: LC >1000 mg/l (Fathead Minnow, 96 Hr.)

SECTION 13 – DISPOSAL INFORMATION

Waste Disposal Method: **DO NOT** discharge into waterways or sewer systems. Dispose of in accordance with all local, state and federal regulations.

Waste Disposal: This product does not meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of subpart C, nor is it listed as a hazardous waste under subpart D. As a non-hazardous liquid waste, it should be disposed of in accordance with local, state and federal regulations by incineration. Care must be taken to prevent environmental contamination from the use of this material. The user of this material has the responsibility to dispose of unused material, residues and containers in

compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and non-hazardous wastes.

SECTION 14 – TRANSPORTATION INFORMATION

Dot Hazard Classification:	Not Regulated
ICAO/IATA	Not Regulated
IMDG (Ambient)	Not Regulated
IMDG (Elevated)	Not Determined
IMDG EMS	Not Regulated
IMDG MFAG	Not Regulated
IMO Marine Bulk	Not Determined
USCG Compatibility	Not Determined
TDG Bulk (Ambient)	Not Regulated
TDG Bulk (Elevated)	Not Available
TDG Non-Bulk	Not Regulated
U.S. DOT Bulk (Ambient)	Not Regulated
U.S. DOT Bulk (Elevated)	Not Available
U.S. DOT Non-Bulk	Not Regulated
DOT NAERG	Not Regulated

SECTION 15 – REGULATORY INFORMATION

U.S. TSCA Inventory:	All components of this material are on the US TSCA Inventory.
SARA Section 311/312:	Hazard category: ACUTE
Sara Section 313:	This mixture or chemical trade-name product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.

Chemicals Listed are: Diethanolamine CAS#: 111-42-2

TDG Regulated Limits:	None known
CERCLA Hazardous Substances:	None known.
OSHA hazard category:	ACGIH TLV established

State Regulations

State RTK

<u>CAS Number</u>	<u>Chemical Name</u>	<u>State RTK</u>
11-42-2	Diethanolamine	PA
110-91-8	morpholine	MA, NJ, PA

CA Prop. 65: This product contains a chemical(s) known to the state of California to cause cancer and birth defects or other reproductive harm.

U.S. Fuel Registration: Not applicable.

U.S. Dept. of Agriculture: This product has not been filed with the USDA to support H2 approvals.

U.S. Tariff Heading #: Not available

Schedule B #: Not available

FDA Approval: Not applicable

Canada: All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

This product does not contain and is not manufactured with Class I or Class II ozone-depleting substances.

SECTION 16 – SPECIAL PRECAUTIONS

Caution!!! Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash with water.

Prepared By: Mark D. Latunski

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The information provided herein is believed to be accurate to the best of the company's knowledge as of the date of its issue. We do not warrant or guarantee the information provided and will not be held liable for any loss or damage from its use.