



SAFETY DATA SHEET

MIST Kit Components

SECTION 1 Identification

Product Name: MIST Kit Components

Covered Components: MIST Linker, Dilution Buffer, MIST Quencher

Product Code(s): MADC-*-* / MCFL-*-*. Covers all product variants under the MADC and MCFL prefixes.

Recommended Use: Laboratory research chemical for research and development (R&D) use only.

Uses Advised Against: Not for human or veterinary diagnostic or therapeutic use; not for food or drug use; not for any use other than the recommended laboratory application.

Manufacturer / Supplier:

MIST Bioscience, LLC

10 Parsons Dr., Dix Hills, NY 11746

631(509)-2673

contact@mistbioscience.com

Emergency Telephone Number: 631(509)-2673

For research use only. Not for use in diagnostic procedures.

SECTION 2 Hazard(s) Identification

Classification of the Substance or Mixture: Not classified as hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200) / GHS. All hazardous components are present below their applicable GHS classification cut-off values.

GHS Label Elements

Pictogram: None required

Signal Word: None

Hazard Statements: None

Precautionary Statements: None required. For general good practice, avoid contact with skin and eyes and wash hands after handling.

Hazards Not Otherwise Classified (HNOC) / Supplemental Information

This product contains sodium azide at 0.05%, which is below the generic GHS classification cut-off of 0.1% for acute toxicity; the mixture is therefore not classified. The following residual hazards are noted for safe handling:

- Sodium azide can react with copper, lead, brass, or solder in plumbing and drainage systems to form accumulated metal azides, which are shock-sensitive and highly explosive.
- Contact of sodium azide with acids can liberate toxic and explosive hydrazoic acid (HN₃).
- MIST Quencher contains solid microparticle resin beads that can create a severe slipping hazard if spilled.

Ingredients of Unknown Acute Toxicity: 0% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3 Composition / Information on Ingredients

Description: Aqueous mixture of biological components and buffering agents. Only components that are hazardous per GHS and present at or above disclosure thresholds are listed below.

Chemical Name	CAS No.	Weight %	GHS Classification of Component
Sodium azide	26628-22-8	0.05%	Acute Tox. 2 (Oral), 1 (Dermal), 2 (Inhal.); Aquatic Acute 1; Aquatic Chronic 1
Ethylenediaminetetraacetic acid (EDTA)	60-00-4	~0.15% (5 mM)	Not classified / classification criteria not met

Note: The classifications shown are those of the pure substances and are provided for transparency; at the concentrations present, neither component causes the mixture to meet GHS classification criteria. Remaining ingredients (proteins, bovine serum albumin, Tween-20, water, and crosslinked polyacrylamide resin beads) are non-hazardous or are present below OSHA disclosure limits. The exact percentages of composition have been withheld as a trade secret where permitted under 29 CFR 1910.1200(i).

SECTION 4 First-Aid Measures

Inhalation: Move the affected person to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Obtain medical attention if symptoms develop.

Skin Contact: Remove contaminated clothing. Wash affected skin with plenty of soap and water. Obtain medical attention if irritation develops and persists.

Eye Contact: Rinse cautiously with water for several minutes (at least 15 minutes). Remove contact lenses if present and easy to do; continue rinsing. Obtain medical attention if irritation occurs or persists.

Ingestion: Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention if a significant quantity is swallowed or if symptoms develop.

Most Important Symptoms and Effects (Acute and Delayed)

Under normal conditions of use the dilute mixture is not expected to produce significant effects. In case of gross overexposure to the sodium-azide-containing component, symptoms may include headache, dizziness, hypotension (low blood pressure), nausea, and irritation of the eyes, skin, or respiratory tract.

Indication of Immediate Medical Attention / Notes to Physician

Treat symptomatically and supportively. In the event of significant sodium azide exposure, monitor blood pressure, as azide is a potent vasodilator. There is no specific antidote.

SECTION 5 Fire-Fighting Measures

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide appropriate to the surrounding fire.

Unsuitable Extinguishing Media: None known. Avoid high-pressure water jets that could spread material unnecessarily.

Specific Hazards Arising from the Chemical: The product itself is not flammable. On evaporation to dryness or under fire conditions, the sodium-azide component may thermally decompose to release nitrogen oxides (NO_x), sodium oxide, and hydrazoic acid.

Special Protective Equipment for Firefighters: Wear a self-contained breathing apparatus (SCBA) and full protective firefighting gear as necessary.

SECTION 6 Accidental Release Measures

Personal Precautions: Use appropriate personal protective equipment (see Section 8). Avoid contact with skin and eyes and avoid breathing any mist. Ensure adequate ventilation.

Environmental Precautions: Prevent further leakage or spillage where safe to do so. Do not allow large quantities to enter drains, sewers, or waterways; the sodium-azide component is toxic to aquatic life and may form metal azides in plumbing.

Methods and Materials for Containment and Clean-Up: Absorb spills with inert material (e.g., sand, silica gel, or a universal binder) and place in a suitable closed container for disposal. MIST Quencher contains microparticle resin beads that create a severe slipping hazard when spilled — sweep or wipe up thoroughly. Rinse the spill area with plenty of water to prevent azide accumulation.

SECTION 7 Handling and Storage

Precautions for Safe Handling: Avoid contact with skin and eyes and avoid inhalation of any mist. Eating, drinking, and smoking should be prohibited in areas where this material is handled. Wash hands thoroughly after handling. Do not dispose of azide-containing solutions into metal plumbing without generous water flushing.

Conditions for Safe Storage: Store in tightly closed original containers at 2–8 °C (refrigerated). Do not freeze unless the instruction permits. Protect from light. Keep away from acids, strong oxidizers, and heavy-metal salts.

Incompatible Materials: Acids, strong oxidizing agents, and heavy metals (copper, lead, brass, solder).

SECTION 8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Component	Source	Limit Value
Sodium azide (as NaN ₃)	ACGIH TLV	Ceiling 0.29 mg/m ³
Hydrazoic acid vapor (HN ₃)	ACGIH TLV	Ceiling 0.11 ppm
Sodium azide	OSHA PEL	None established
EDTA	ACGIH / OSHA	None established

At the concentrations present in this product, these limits are not expected to be exceeded under normal conditions of use.

Engineering Controls: Use general laboratory ventilation. Ensure eyewash stations and safety showers are readily accessible in the work area. Apply general industrial hygiene practice.

Personal Protective Equipment (PPE)

Eye / Face Protection: Safety glasses meeting an approved standard such as ANSI Z87.1, NIOSH (US), or EN 166 (EU) are recommended.

Skin / Hand Protection: Chemically resistant gloves (nitrile or latex). Inspect gloves before use; wash and dry hands after removal.

Body Protection: Standard laboratory coat or lightweight protective clothing.

Respiratory Protection: Not required under anticipated conditions of normal use.

SECTION 9 Physical and Chemical Properties

Appearance: MIST Linker & Dilution Buffer - clear, colorless liquid. MIST Quencher - translucent / white aqueous suspension containing solid microparticle resin beads.

Odor: Odorless

Odor Threshold: No data available

pH: ~7.4

Melting / Freezing Point: No data available

Initial Boiling Point / Range: ~100 °C (approx., water-based)

Flash Point: Not applicable (aqueous, non-flammable)

Evaporation Rate: No data available

Flammability (solid, gas): Not applicable

Upper / Lower Flammability Limits: Not applicable

Vapor Pressure / Vapor Density: No data available

Relative Density: ~1.0 g/cm³

Solubility: Buffers are fully miscible in water; resin beads in MIST Quencher are insoluble but dispersible.

Partition Coefficient (n-octanol/water): No data available

Auto-ignition Temperature: Not applicable

Viscosity: No data available

SECTION 10 Stability and Reactivity

Reactivity: Not reactive under normal conditions of use.

Chemical Stability: Stable under the recommended storage conditions.

Possibility of Hazardous Reactions: The sodium-azide component can react with heavy metals to form shock-sensitive, explosive metal azides, and with acids to liberate toxic hydrazoic acid. No hazardous polymerization will occur.

Conditions to Avoid: Avoid prolonged contact with lead, copper, or brass; avoid acids, strong oxidizers, evaporation to dryness, and excessive heat.

Incompatible Materials: Strong oxidizing agents, strong acids, and heavy metals.

Hazardous Decomposition Products: Under fire or thermal decomposition: nitrogen oxides (NO_x), sodium oxide, and hydrazoic acid.

SECTION 11 Toxicological Information

Likely Routes of Exposure: Skin and eye contact; incidental ingestion or inhalation of mist.

Acute Toxicity — Component Data

Component	Oral LD50	Dermal LD50	Inhalation LC50
Sodium azide (26628-22-8)	27 mg/kg (rat)	20 mg/kg (rabbit)	0.054–0.52 mg/L (rat, dust, 4 h)
EDTA (60-00-4)	>2,000 mg/kg (rat)	No data available	No data available

Values are for the pure substances. Because sodium azide is present at only 0.05%, the calculated acute toxicity estimate (ATE) of the mixture exceeds the thresholds for classification, and the mixture is not classified for acute toxicity.

Health Effects (Mixture)

Skin Corrosion / Irritation: Not classified

Serious Eye Damage / Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: No component present at $\geq 0.1\%$ is identified as a probable, possible, or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single / Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms: In case of gross overexposure to sodium azide: headache, dizziness, hypotension, nausea, and irritation of exposed tissues.

SECTION 12 Ecological Information

(This section is not mandated by OSHA and is provided for completeness.)

Aquatic Toxicity — Component Data

Component	Species	LC50 / EC50 (96 h)
Sodium azide (26628-22-8)	Fish (rainbow trout / bluegill)	0.7–1.6 mg/L
EDTA (60-00-4)	Fish (bluegill)	~2,340 mg/L

Toxicity: The sodium-azide component is very toxic to aquatic life; however, at the concentration present the mixture is not classified as environmentally hazardous. Avoid release to the environment as a matter of good practice.

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available

Mobility in Soil: The product is water-soluble and mobile in the aqueous phase.

Other Adverse Effects: None known.

SECTION 13 Disposal Considerations

(This section is not mandated by OSHA and is provided for completeness.)

Waste Treatment Methods: Dispose of contents and containers in accordance with all applicable local, state, and federal regulations. The waste generator is responsible for determining the correct waste classification.

Plumbing / Sewer Warning: This product contains 0.05% sodium azide. Sodium azide can react with lead and copper plumbing to form highly explosive metal azides. If small research quantities are disposed of to a sanitary sewer, flush with a large volume of water to prevent azide accumulation.

Regulatory Waste Notes: Pure (undiluted) sodium azide is a RCRA acutely hazardous listed waste (P105) and may exhibit the reactivity characteristic (D003). These listings apply to discarded commercial sodium azide; the dilute finished product may not meet these definitions, but the generator must confirm classification under 40 CFR Part 261.

SECTION 14 Transport Information

(This section is not mandated by OSHA and is provided for completeness.)

DOT (US): Not regulated as a dangerous good / hazardous material at the concentration supplied.

IMDG: Not regulated as a dangerous good.

IATA: Not regulated as a dangerous good.

Note: Pure sodium azide is transport-regulated (UN 1687, Class 6.1, Packing Group II); this dilute aqueous mixture falls below the concentration limits for regulation.

SECTION 15 Regulatory Information

(This section is not mandated by OSHA and is provided for completeness.)

TSCA (US): The components of this product are listed on, or exempt from, the TSCA inventory.

SARA 302 Components: No component is subject to the reporting requirements of SARA Title III, Section 302. (The sodium azide threshold for SARA 302 is 1.0%; this product contains 0.05%.)

SARA 311 / 312 Hazards: No SARA hazard categories apply.

SARA 313 Components: This material does not contain components above the SARA Title III, Section 313 threshold reporting levels.

CERCLA: Sodium azide is a CERCLA hazardous substance with a reportable quantity (RQ) of 1,000 lb. Given the 0.05% concentration, very large volumes would be required to reach the RQ; releases should nonetheless be evaluated against applicable thresholds.

California Prop. 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

SECTION 16 Other Information

HMIS Rating		NFPA 704 Rating	
Health Hazard	0	Health Hazard	0
Flammability	0	Fire Hazard	0
Physical Hazard	0	Reactivity Hazard	0

Abbreviations and Acronyms

ACGIH – American Conference of Governmental Industrial Hygienists; ATE – Acute Toxicity Estimate; CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act; DOT – Department of Transportation; GHS – Globally Harmonized System; HMIS – Hazardous Materials Identification System; IATA – International Air Transport Association; IMDG – International Maritime Dangerous Goods; LC50 – Lethal Concentration 50%; LD50 – Lethal Dose 50%; NFPA – National Fire Protection Association; OSHA – Occupational Safety and Health Administration; PEL – Permissible Exposure Limit; RCRA – Resource Conservation and Recovery Act; SARA – Superfund Amendments and Reauthorization Act; STOT – Specific Target Organ Toxicity; TLV – Threshold Limit Value; TSCA – Toxic Substances Control Act.

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