

Tissue Marking Dye
1. Identification
Product Name: Tissue Marking Dye

Synonyms: N/A

Recommended Use: N/A

Item #: MER DYE2Y, MER DYE2BL, MER DYE2BK, MER DYE2O, MER DYE2G, MER DYE2R, MER DYE2V, MER DYE8Y, MER DYE8BL, MER DYE8BK, MER DYE8O, MER DYE8G, MER DYE8R, MER DYE8V

Manufacturer:

 Cancer Diagnostics, Inc.
 4300 Emperor Blvd. #400
 Durham, NC 27703
 1-877-846-5393

Distributor:

 Mercedes Scientific
 12210 Rangeland Pkwy
 Lakewood Ranch, FL 34211
 1-800-331-2716

Restrictions on Use: N/A

In Case of Emergency:

 Chemtrec US 1-800-424-9300
 Infotrac International 1-352-323-3500

2. Hazards Identification
OSHA Hazard Classification(s):

Eye Damage / Irritation (Category 2A)

Skin Corrosion / Irritation (Category 2)

Signal Word: Warning

Hazard Statement(s): Causes skin irritation. Causes eye irritation.

Pictogram(s):

Precautionary Statement(s): Wash skin thoroughly after handling. Wear eye protection/ face protection. Take off contaminated clothing and wash it before reuse.

Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of soap and water. If eye or skin irritation persists: Get medical advice/ attention.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local regulations.

Descriptions of Hazards not otherwise classified: N/A

Percent of mixture with unknown acute toxicity: N/A

3. Composition and Information on Ingredients

| Chemical Name | Common Name | CAS # | Concentration % |
|-------------------|-------------------------|-----------|-----------------|
| Isopropyl alcohol | 2-Propanol | 67-63-0 | <4 |
| Ammonia | Azane, Hydrogen nitride | 7664-41-7 | <1 |

This composition consists of a combination of ingredients. The ones potentially contributing to classified hazards are reported above. The above chemistries are provided for industrial hygiene and environmental purposes and are not intended to represent product specifications. Read and understand the entire SDS, as there is important information throughout the document.

4. First Aid Measures
General advice: Move out of dangerous area. Show this safety data sheet to the doctor and first responders.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation occurs and persists: Get medical advice.

Tissue Marking Dye

Skin Contact: Wash off with soap and plenty of water. If irritation occurs and persists: Get medical advice.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Get medical advice.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Poison Control: 1-800-222-1222

Symptoms: See Sections 2 and 11.

Recommendations for immediate medical care/special treatment: No data available.

5. Fire- Fighting Measures
Extinguishing Media:

Suitable Extinguishing Media: Use dry chemical, CO₂, water spray (FOG) or foam.

Unsuitable Extinguishing Media: Avoid solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture: Use water spray to cool fire exposed container surfaces and to protect personnel. Thermal decomposition can produce carbon monoxide (highly toxic) and carbon dioxide (an asphyxiant at sufficient concentrations).

Advice for firefighters: As in any fire, fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. (MSHA/NIOSH approved or equivalent).

Further information: If employees are expected to fight fires, training and equipment information can be found in OSHA Fire Brigades Standard (29 CFR 1910.156).

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use appropriate safety equipment. Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Ventilate area of leak or spill.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Clean up with absorbent. Collect in suitable and properly labeled containers.

Reference to other sections-resources

For additional information, refer to Section 8: Exposure Controls and Personal Protection, Section 7: Handling, Section 12: Ecological Information, Section 13: Disposal Considerations and OSHA Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120).

7. Handling and Storage

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see section 2.

Storage: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Incompatibilities: N/A

Specific end use: See Section 1.

8. Exposure Controls/Personal Protection
OSHA Permissible Exposure Limits (PELs):

| Reagent | CAS # | OSHA PEL TWA |
|-------------|-----------|--------------|
| Isopropanol | 67-63-0 | 400 ppm |
| Ammonia | 7664-41-7 | 50ppm |

ACGIH Threshold Limit Values (TLVs):

| Reagent | CAS # | ACGIH PEL TLV | ACGIH STEL |
|-------------|-----------|---------------------------------|----------------------------------|
| Isopropanol | 67-63-0 | 400ppm (983 mg/m ³) | 500ppm (1230 mg/m ³) |
| Ammonia | 7664-41-7 | 25ppm | 35ppm |

Exposure Controls:

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Facilities storing, packaging or utilizing product should be equipped with an eyewash and a safety shower facility.

Tissue Marking Dye

Personal Protective Measures: Safety glasses and chemical resistant gloves are always recommended for handling chemicals. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Guidelines may not apply to every situation. Obtain detailed information from OSHA Personal Protective Equipment Standard (29 CFR 1910.132) and equipment suppliers.

Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good practices. Wash and dry hands.

Respiratory protection: Use when overexposure potential. Improper use of respirators is dangerous. Respirators should only be used with a written program as described in the OSHA Respiratory Protection Standard (29 CFR 1910.134).

Control of environmental exposure: Do not let product enter drains. Discharge into the environment must be avoided.

9. Physical and Chemical Properties Section

Form: Liquid

Color: Various Colors

Molecular Weight: N/A

Molecular Formula: N/A

pH: 8.5-10.0

Boiling Point and Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: >200°F / > 93.3°C

Specific Gravity/Relative Density (Water=1): 1.02-1.14

Odor: Faint Ammonia

Odor Threshold: N/A

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: N/A

Decomposition Temperature: N/A

Physical Data is typical values based on material tested, but may vary based on composition. Values should not be accepted as guaranteed for every lot or as specifications for this product.

10. Stability and Reactivity

Reactivity: Not reactive under normal conditions.

Chemical Stability: Stable under recommended storage conditions.

Conditions of Stability/Instability: When in contact with incompatible materials.

Stabilizers needed: None

Safety issue indicated by appearance change: N/A

Other: N/A

Hazardous Reactions: N/A

Hazardous Polymerization: Does not occur

Conditions to avoid: Contact with incompatible materials and temperature extremes.

Classes of Incompatible Materials: Strong Oxidizers

Tissue Marking Dye

Hazardous Decomposition Products: Does not decompose under normal conditions.

Other decomposition products: During fire, thermal decomposition can produce carbon monoxide (highly toxic) and carbon dioxide (an asphyxiant at sufficient concentrations).

11. Toxicological Information**Information on Toxicological Effects****Component toxicity**

Isopropanol (67-63-0): Acute toxicity LD50 Oral - Rat - 5,045 mg/kg - LC50 Inhalation - Rat - 8 h - 16000 ppm - LD50 Dermal - Rabbit - 12,800 mg/kg - Skin corrosion/irritation Skin - Rabbit Result: Mild skin irritation - Eye irritation - 24 h.
Ammonia (7664-41-7): Acute toxicity LC50 Inhalation - Rat - 4 h - 2000 ppm

Mixture toxicity

Skin corrosion/irritation - Inhalation - Serious eye damage/eye irritation - Respiratory or skin sensitization - Germ cell mutagenicity - Reproductive toxicity - Specific target organ toxicity - single exposure - Specific target organ toxicity - repeated exposure - Aspiration hazard: All no data available.

Carcinogenicity: Product not classified as a carcinogen by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or the Occupational Safety and Health Administration (OSHA).

Additional Information: None known.

12. Ecological Information**Ecotoxicity****Component ecotoxicity**

Isopropanol (67-63-0): Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h Immobilization EC50 - Daphnia magna (Water flea) - 6,851 mg/l - 24 h Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h EC50 - Algae - > 1,000.00 mg/l - 24 h.

Ammonia (7664-41-7): Toxicity to daphnia and other aquatic invertebrates LC50 - Daphnia magna (Water flea) - 25.4 mg/l - 48 h - Other adverse effects: Very toxic to aquatic life with long lasting effects.

Mixture ecotoxicity

Toxicity to Fish: Not Determined

Persistence and Biodegradability: Not Determined

Bioaccumulative Potential: Not Determined

Mobility in Soil: Not Determined

Other adverse effects: None known.

13. Disposal Considerations**Recommended Disposal**

Containers: Dispose of as unused product.

Methods: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.*

Special Precautions for Landfill and Incineration Activities: Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Waste Stream: Consult your local or regional authorities.*

Tissue Marking Dye
14. Transport Information

| | |
|---|--|
| 14.1 UN Number DOT, IATA,IMDG, ADR | DOT: Not Regulated for Transport by DOT. ADR/RID: Not Regulated for Transport by ADR/RID. IMDG: Not Regulated for Transport by IMDG. IATA: Not Regulated for Transport by IATA. |
| 14.2 UN Proper Shipping Name DOT, IATA,IMDG, ADR | ADR/RID: Not Regulated for Transport by ADR/RID. IMDG: Not Regulated for Transport by IMDG. IATA: Not Regulated for Transport by IATA. DOT: Not Regulated for Transport by DOT. |
| 14.3 Transport Hazard Class(es) | DOT: Not Regulated for Transport by DOT. IATA: Not Regulated for Transport by IATA. IMDG: Not Regulated for Transport by IMDG. ADR/RID: Not Regulated for Transport by ADR/RID. |
| 14.4 Packing Group DOT, IATA,IMDG, ADR | ADR/RID: Not Regulated for Transport by ADR/RID. IMDG: Not Regulated for Transport by IMDG. IATA: Not Regulated for Transport by IATA. DOT: Not Regulated for Transport by DOT. |
| 14.5 Environmental Hazards | Marine Pollutant: No |
| 14.6 Special Precautions for User | Not applicable. |

15. Regulatory Information
Federal

DSL: This product, or its components, are listed on or are exempt from the Canadian Domestic Substances List (DSL).

CERCLA: Product is not found in "List of Hazardous Substances and Reportable Quantities" (40 CFR 302.4

SARA TITLE III: (Superfund Amendments and Reauthorization Act)

302 Components: Ammonia (7664-41-7) subject to reporting levels established by Section 302.

313 Components: 2-Propanol (67-63-0) and Ammonia (7664-41-7) subject to reporting levels established by Section

311/312 Hazards: Acute, Health

States

State Right to Know Components: MA, PA and NJ: 2-Propanol (67-63-0) and Ammonia (7664-41-7)

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

Canada

TSCA: Components of this product are listed on the TSCA Inventory.

WHMIS: This product is not a controlled product under WHMIS.

INTERNATIONAL:

Chile: No information available

Tissue Marking Dye

16. Other Information

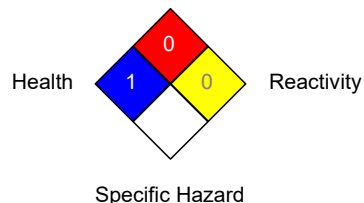
Revision Date: 2022-01-05

NFPA

| | |
|-----------------|---|
| Health | 1 |
| Fire Hazard | 0 |
| Reactivity | 0 |
| Specific Hazard | |

National Fire Protection Association (USA) NFPA

Fire Hazard



HMIS

| | |
|---------------------|---|
| Health | 1 |
| Flammability | 0 |
| Physical Hazard | 0 |
| Personal Protection | |

Hazardous Material Information System HMIS

| | |
|---------------------|---|
| Health | 1 |
| Flammability | 0 |
| Physical Hazard | 0 |
| Personal Protection | |

Alphanumeric H-Statements and P-Statements.

H320 Causes eye irritation.

H315 Causes skin irritation.

P264 Wash skin thoroughly after handling.

P280 Wear eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313 If eye irritation persists: Get medical advice/ attention.

P362+364 Take off contaminated clothing and wash it before reuse.

Notice to Reader:

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

You are encouraged and expected you to read and understand the entire SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.