

MATERIAL SAFETY DATA SHEET

Product Name: Ethambutol
MSDS #: L-MSDS7121-4

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Section 1: Product and Company Information

Product Name: Ethambutol
Product Code: 7115-60
Manufacturer: TREK Diagnostic Systems
982 Keynote Circle, Suite 6
Cleveland, OH 44131
USA
Phone Number: (800) 871-8909
Fax: (216) 351-5456
24-hour Emergency: (800) 642-7029

European: TREK Diagnostic Systems
Unit 17-19
Birches Industrial Estate
East Grinstead
West Sussex, RH19 1XZ
UK
Telephone No. 44-1342-318777

Section 2: Composition and Ingredient Information

<u>Common Name</u>	<u>Chemical Name</u>	<u>CAS No.</u>	<u>EINECS/ ELINCS</u>	<u>Wt.%</u>	<u>Symbol</u>	<u>R-phrases</u>
Ethambutol dihydrochloride	[S-(R*,R*)]-2,2'-(Ethylenediimino) dibutan-1-ol dihydrochloride	1070-11-7	213-970-7	2.1	Xn	R22
Cyclodextrin	Beta-cycloamylose	7585-39-9	231-493-2	97.9	Xn	R22

* See Section 16 for the full text of the R-phrases declared above

Note: See Section 8 of this MSDS for exposure limit data for these ingredients.

Section 3: Hazards Identification

Appearance, Color and Odor: Solid, white, crystalline, caked powder (freeze-dried)

Primary Route(s) of Exposure: Inhalation, ingestion, skin, eyes.

Potential Health Effects: **ACUTE (short term):** see Section 8 for exposure controls

Inhalation: May be harmful.

Ingestion: May cause gastrointestinal disturbances.

Skin: May be harmful.

Eyes: May be harmful.

CHRONIC (long term): see Section 11 for additional toxicological data

Target organs – eyes

Repeated or prolonged exposure to ethambutol may cause decreases in visual acuity.

Medical Conditions Aggravated by Exposure: None.

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Section 4: First Aid Measures

- Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
- Eye Contact:** Rinse immediately with plenty of water and seek medical advice.
- Skin Contact:** Wash immediately with plenty of water, and seek medical advice if symptoms arise.
- Ingestion:** Seek medical advice immediately and show the container.

Section 5: Fire Fighting Measures

- Flash Point and Method (°F):** Not considered to be a fire hazard.
- Flammability Limits (%):** Not applicable.
- Auto Ignition Temperature (°F):** Not applicable.
- Extinguishing Media:** Use appropriate extinguishing media for surrounding material.
- Unusual Fire and Explosion Hazards:** Emits toxic fumes under fire conditions.
- Fire Fighting Instructions:** Wear self-contained breathing apparatus, and protective clothing to prevent contact with eyes and skin.
- Hazardous Combustion Products:** Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride gas.

Section 6: Accidental Release Measures

- Air Release:** Avoid creating dust clouds.
- Land Spill:** While wearing protective equipment, sweep up and place in a container for proper disposal.
- Water Spill:** Completely soluble in water.

Section 7: Handling and Storage

- Storage Temperature:** 2 – 8 °C
- Storage Pressure:** Not applicable.
- General:** Keep container tightly closed and store in a cool, dry place. Use a chemical fume hood to control dust.

Section 8: Exposure Controls and Personal Protection

<u>Ingredient</u>	<u>ACGIH TLV</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>	<u>U.S. OSHA PEL</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>	<u>UK OEL</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>
Ethambutol dihydrochloride	Not established	Not established	Not established
Cyclodextrin	Not established	Not established	Not established

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Engineering Controls:

Provide general and/or local exhaust ventilation to control airborne concentrations below the recommended exposure guideline.

Personal Protection:

Respiratory Protection:

Use a NIOSH/MSHA approved respirator to protect from dust exposures.

Skin Protection:

Chemical resistant gloves and body-covering clothing to prevent contact. Nitrile or neoprene gloves are recommended.

Eye Protection:

Safety goggles.

Other:

None.

Section 9: Physical and Chemical Properties

<u>Physical State:</u>	Solid	<u>Vapor Pressure:</u> <u>(mm Hg @ 20°C)</u>	Not applicable.
<u>Appearance:</u>	Solid	<u>Vapor Density:</u> <u>(Air = 1)</u>	Not applicable.
<u>pH:</u>	White, crystalline, caked powder (freeze-dried).	<u>Solubility in Water:</u>	Completely soluble.
<u>Specific Gravity:</u> <u>(water = 1)</u>	4.5-6.0 when rehydrated with 25 ml water.	<u>Water / Oil distribution coefficient:</u>	Not available.
<u>Boiling Point:</u>	Not applicable.	<u>Odour Type:</u>	Odourless.
<u>Freezing Point:</u>	Not applicable.	<u>Evaporation Rate:</u> <u>(n-Butyl Acetate = 1)</u>	Not applicable.
<u>Viscosity:</u>	Not applicable.	<u>Other:</u>	None.

Section 10: Stability and Reactivity

<u>Stability:</u>	Stable.
<u>Incompatible Materials and Conditions to Avoid:</u>	Strong oxidizing agents.
<u>Hazardous Decomposition Products:</u>	Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride gas.
<u>Hazardous Polymerization:</u>	Will not occur.
<u>Other Reactivity Concerns:</u>	None.

Section 11: Toxicological Information

Carcinogenicity: The table below indicates whether or not each agency has listed each ingredient as a carcinogen.

<u>Ingredient</u>	<u>ACGIH</u>	<u>IARC</u>	<u>NTP</u>	<u>OSHA</u>
Ethambutol dihydrochloride	Not listed	Not listed	Not listed	Not listed
Cyclodextrin	Not listed	Not listed	Not listed	Not listed

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<u>Ingredient</u>	<u>LD₅₀ Oral</u> (mg/kg)	<u>LD₅₀ Dermal</u> (mg/kg)	<u>LC₅₀ Inhalation</u> (mg/m ³ , 4 hrs.)
Ethambutol dihydrochloride	6800 (rat)	Not available	Not available
Cyclodextrin	18 800 (rat)	Not available	Not available

Section 12: Ecological Information

The ecological effects have not been thoroughly investigated, but currently none have been identified.

Section 13: Disposal Considerations

Waste Disposal Method: Dispose of in accordance with local, state and federal regulations.

Section 14: Transport Information

DOT Proper Shipping Name: Not regulated

DOT Hazard Classification: Primary: Not regulated
Secondary:

DOT Special Provisions: None

DOT Packaging Exceptions: None

DOT Non-bulk Packaging: None

DOT Bulk Packaging: None

IMDG Proper Shipping Name: Not regulated

IATA Proper Shipping Name: Not regulated

Section 15: Regulatory Information

TSCA Status: Exempt under TSCA.

California Proposition 65: None

SARA Title III:

Sec. 302/304: None

Sec. 313: None

Right to Know: None

EC Directive: The product is classified as dangerous according to Directive 1999/45/EC and its amendments.



Xn Harmful

R22 Harmful if swallowed.

S20 When using, do not eat or drink.

S24/25 Avoid contact with skin and eyes.

S45 In case of accident or if you feel unwell, seek medical advice immediately (Show the label where possible)

Other: None

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Section 16: Other Information

HMIS and NFPA Hazard Rating:

Category	HMIS	NFPA
Acute Health	2	2
Flammability	0	0
Reactivity	0	0

Full Text of R-phrases appearing in Section 2: R22 – Harmful if swallowed

Text of classifications appearing in Section 2: Xn - Harmful

Preparation Information:

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