

ENTHONE

MATERIAL SAFETY DATA SHEET

Health	2
Flammability	2
Reactivity	1
Personal Protection	

In Case of Emergency

Section 1. Chemical Product and Company Identification

Product Name ENTHONE® CATALYST 5 (HD-5005)
Product Code Number(s) 135191
135192
135193
135194
Material Uses Specialty chemicals for the electronics and surface finishing industries.
Manufacturer ENTHONE
350 Frontage Road
West Haven, CT 06516
(203) 799-4917
(203) 799-8179 (fax)
www.cooksonelectronics.com
Supersedes Date 09/11/00 **Revision No.** 1.03
Print Date 8/21/2003. **Validation Date** 8/21/2003.
Prepared by Anton Mayer - Regulatory Specialist

Section 2. Composition, Information on Ingredients

Name	CAS #	% by Weight
1H-IMIDAZOLE, 2-ETHYL-4-METHYL-	931-36-2	40-50
ETHYLENE GLYCOL BUTYL ETHER	111-76-2	40-50

All ingredients comply with applicable rules or orders under TSCA

Section 3. Hazards Identification

Physical State and Appearance Liquid. **Odor** Ammoniacal. **Color** Amber.

Emergency Overview WARNING!

Very hazardous in case of ingestion. May be fatal if swallowed.

Routes of Entry Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects

Eyes Very hazardous in case of eye contact (irritant). Slightly hazardous in case of eye contact (corrosive). Inflammation of the eye is characterized by redness, watering, and itching.

Skin Hazardous in case of skin contact (corrosive, irritant, sensitizer). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation Hazardous in case of inhalation (lung irritant, lung sensitizer). Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath.

Ingestion Very hazardous in case of ingestion. May be fatal if swallowed. May cause burns to mouth, throat and stomach.

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Medical Conditions Caused or Aggravated by Overexposure Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated or prolonged exposure may cause irritation and dermatitis. Prolonged skin exposure may lead to sensitization and allergic reaction.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention.

Skin Contact Wash with soap and water. Get medical attention if irritation develops.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Section 5. Fire Fighting Measures

Flammability of the Product Combustible.

Flash Points Closed cup: 71.11°C (160°F). (Setaflash)

Products of Combustion These products are carbon oxides (CO, CO₂) nitrogen oxides (NO, NO₂...)

Fire Fighting Media and Instructions SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Protective Equipment (Fire) Wear NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.

Section 6. Accidental Release Measures

Spill or Leak Absorb with an inert material and place in a DOT approved waste disposal container.

Section 7. Handling and Storage

Handling Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. To avoid fire, minimize ignition sources.

Storage Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls, Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes Splash goggles.

Body Synthetic apron.

Respiratory Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and the safe working limits of the selected respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent.

Hands Neoprene gloves. Natural rubber gloves. Nitrile gloves.

Feet Boots.

Protective Equipment (Pictograms)



Personal Protection in Case of a Large Spill Splash goggles. Full suit. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Ingredient Name

Exposure Limits

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ETHYLENE GLYCOL BUTYL ETHER

ACGIH TLV (United States, 2000). Skin
TWA: 20 ppm 8 hour(s).
NIOSH REL (United States, 2000). Skin
TWA: 24 mg/m³ 10 hour(s).
TWA: 5 ppm 10 hour(s).
OSHA PEL 1989 (United States, 1989). Skin
TWA: 120 mg/m³ 8 hour(s).
TWA: 25 ppm 8 hour(s).

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.	Odor Ammoniacal.	Color Amber.
pH	Not applicable.		
Boiling Point	148.89 °C		
Melting/Freezing Point	Not available.		
Specific Gravity	0.95 (Water = 1)		
VOC	Before use this product must be mixed with another Enthone product. To obtain VOC information on the mixture please call Enthone directly at (203) 799-4917.		
Solubility	Soluble in Butyl acetate.		

Section 10. Stability and Reactivity

Stability and Reactivity	Stable under recommended storage and handling conditions (see section 7).
Conditions of Instability	Keep away from heat, sparks and flame.
Incompatible Substances	Reactive with oxidizing agents.
Hazardous Decomposition Products	In a fire: toxic oxides of carbon and nitrogen.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Toxicity Data

<u>Ingredient Name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
ETHYLENE GLYCOL BUTYL ETHER	LD50	470 mg/kg	Oral	Rat
	LD50	300 mg/kg	Oral	Rabbit
	LD50	1200 mg/kg	Oral	Guinea pig
	LD50	220 mg/kg	Dermal	Rabbit

Chronic Effects on Humans **CARCINOGENIC EFFECTS:** None identified.
MUTAGENIC EFFECTS: None identified.
TERATOGENIC EFFECTS: None identified.

Special Remarks on Toxicity Absorption of toxic amounts through the skin is unlikely under ordinary conditions of industrial use. Prolonged skin exposure may lead to sensitization and allergic reaction. The glycol ether in this product does not cause adverse effects on the male and female reproductive systems. Central nervous system depression, acidosis, renal damage, hematuria and oxaluria are possible following the ingestion of large volumes due to ethylene glycol like compounds.

Any component listed in this section that is not listed in Section 2 is present in the product in concentrations below legal disclosure limits (1% for hazardous components and 0.1% for carcinogens)

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Section 12. Ecological Information

Enthone has not conducted specific studies on the ecotoxicity or environmental fate of this product.

Section 13. Disposal Considerations

Waste Information Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream Dispose of according to all federal, state and local applicable regulations.

Section 14. Transport Information

DOT Classification -
UN number Not regulated.
Proper shipping name -
Special Remarks on Transportation Information Ink Materials, NMFC Item 101720, Class 55

This Transport Information applies only to the Product Code Number(s) listed in Section 1. Other container sizes may require different Transport Information. If assistance is required, contact Regulatory Affairs at 203-799-4936.

Section 15. Regulatory Information

U.S. Federal Regulations SARA 313 toxic chemical notification and release reporting: ETHYLENE GLYCOL BUTYL ETHER
All ingredients comply with applicable rules or orders under TSCA
State Regulations

California prop 65: This product contains ingredients, at a concentration below 0.1%, which the State of California has found to cause cancer and reproductive harm, which would require a warning under the statute.

Any component listed in this section that is not listed in Section 2 is present in the product in concentrations below legal disclosure limits (1% for hazardous components and 0.1% for carcinogens).

Section 16. Other Information

Definition of Terms

ACGIH	American Conference of Governmental Industrial Hygienists
Ceiling	Maximum exposure limit defined by OSHA
CAS	Chemical Abstract Service
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
REL	Recommended Exposure Limit
RTK	Right to Know
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TLV	ACGIH Threshold Limit Value
TLV-C	ACGIH Threshold Limit Value, Ceiling
TRADE SECRET	Claimed as allowed under 29CFR§1910.1200
TSCA	Toxic Substances Control Act

Disclaimer

This Material Safety Data Sheet may be used to comply with OSHA's Hazard Communication Standard, 29CFR§1910.1200. Enthone furnishes the data contained herein in good faith at customer's request without liability or legal responsibility for same whatsoever, and no warranty or guarantee, express or implied, is made with respect to such data; nor does Enthone grant permission, recommendation, or inducement to infringe any patent whether owned by Enthone or others. The data is offered solely for your information and consideration. Since conditions of use are beyond Enthone's control, user assumes all responsibility and risk.

