

MATERIAL SAFETY DATA SHEET

MENTHOL

PADDOCK LABORATORIES, INC. 3940 QUEBEC AVENUE NORTH MINNEAPOLIS, MINNESOTA 55427 PHONE: (612)-546-4676	EMERGENCY ASSISTANCE: CHEMTREC 800-424-9300 202-483-7616 PADDOCK TECH. ASST. 800-328-5113
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DATE PREPARED: 5-10-90 BY: Patrick L. Johnson

SECTION 1 - PRODUCT IDENTIFICATION AND HAZARDOUS COMPONENTS

PRODUCT: (l-) Menthol Crystals USP

SYNONYMS: Hexahydrothymol, 5-Methyl-2-(1-methylethyl)-cyclohexanol

MOLECULAR FORMULA: C₁₀H₂₀O MOLECULAR WEIGHT: 156.27

CHEMICAL FAMILY: Aromatic alcohol.

<u>INGREDIENT (CAS #)</u>	<u>%</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Menthol (89-78-1)	100	N/A	N/A

SECTION 2 - PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING POINT: 212°C VAPOR PRESSURE: 0.8 mm Hg (@20°C)

MELTING POINT: 41-43°C VAPOR DENSITY: N/A

SPECIFIC GRAVITY: 0.890 EVAPORATION RATE: N/A
(WATER = 1) (BUTYL ACETATE = 1)

WATER SOLUBILITY: Slight. WATER REACTIVE: No.

APPEARANCE AND ODOR: Clear, colorless hexagonal crystals, fused masses or crystalline powder with an aromatic peppermint odor.

SECTION 3 - FIRE AND EXPLOSION DATA

FLASH POINT (METHOD): 190°C (FTCC) AUTOIGNITION TEMPERATURE: N/A

FLAMMABLE LIMITS: LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA: CO₂, dry chemical, foam.

SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear full protective gear including self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: As with any organic compound, this material may produce toxic fumes if heated to decomposition.

Exposure to heat may cause pressure to build up in closed containers which should be cooled with a water stream.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY: Stable (X) Unstable ()

INCOMPATIBILITY (MATERIALS TO AVOID): None known.

HAZARDOUS DECOMPOSITION PRODUCTS: As with any organic compound, this material may produce toxic fumes if heated to decomposition.

HAZARDOUS POLYMERIZATION: May Occur () Will Not Occur (X)

SECTION 5 - HEALTH HAZARD DATA

TOXICITY: Fatal oral dose in man has been estimated to be 2 grams. Extreme care should be taken if administered to young children or infants as there have been reports of apnea and instant collapse after local application to nostrils.

CARCINOGEN LISTED BY: NTP Yes () No (X)
IARC Yes () No (X)
OSHA Yes () No (X)
Other Yes () No (X)

ROUTES OF ENTRY: Inhalation, ingestion, absorption.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: May cause hypersensitivity reactions including contact dermatitis.

INHALATION: May cause irritation of the respiratory tract.

EYE CONTACT: May cause irritation.

SKIN CONTACT: May cause irritation.

INGESTION: May cause irritation of the gastrointestinal tract.

CHRONIC EFFECTS OF OVEREXPOSURE: May cause hypersensitivity.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Asthma, bronchitis, emphysema or other respiratory impairment and hypersensitivity.

EMERGENCY FIRST AID PROCEDURES: Any person exhibiting a hypersensitive (anaphylactic) reaction must receive immediate medical attention.

INHALATION: Remove to from exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical attention.

EYE CONTACT: Flush with water for 15 minutes. If irritation persists or develops seek medical attention.

SKIN CONTACT: Wash with soap and water. If irritation persists or develops seek medical attention.

INGESTION: Induce vomiting and seek medical attention or contact a poison control center immediately.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

RESPIRATORY PROTECTION: NIOSH/MSHA approved fume respirator recommended.

PROTECTIVE GLOVES: Rubber.

EYE PROTECTION: Safety glasses or goggles. Avoid wearing contact lenses when working with this or any chemical due to the possibility of increased severity of eye damage.

VENTILATION: Local exhaust recommended.

OTHER PROTECTIVE EQUIPMENT: Appropriate laboratory apparel.

HYGIENIC WORK PRACTICES: Do not eat, drink or smoke near this material. Wash thoroughly after handling and wash any contaminated clothing before reuse.

SECTION 7 - HANDLING AND STORAGE PRECAUTIONS

HANDLING PRECAUTIONS: Avoid contact with eyes, skin or clothing and avoid breathing dust or fumes. Wash thoroughly after handling and wash any contaminated clothing before reuse.

STORAGE PRECAUTIONS: Store in a tight container in a cool, dry, well ventilated location away from ignition sources and incompatible materials.

SECTION 8 - SPILL AND DISPOSAL PROCEDURES
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STEPS TO BE TAKEN IN CASE OF SPILL OR DISCHARGE: Wear all protective gear including: respirator, goggles, gloves. Vacuum or sweep up spillage and place in a tight container. Wash and ventilate spill site. Wash thoroughly after handling and wash all clothing and protective gear before reuse.

WASTE DISPOSAL METHOD: Dispose of in accordance with all applicable local, state, federal, and environmental regulations.

SECTION 9 - DISCLAIMER

The information contained in this Material Safety Data Sheet has been compiled from reliable sources and is believed to be correct as of the date issued. It is the responsibility of the user to determine the appropriateness and applicability to their situation. Paddock Laboratories, Inc. disclaims any expressed or implied warranty as to the accuracy of the above information and shall not be held liable for any direct, incidental, or consequential damages from use or reliance on the above information.

DEFINITIONS OF ABBREVIATIONS USED:

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstract Service

IARC: Internal Agency for Research on Cancer

IDLH: Immediately Dangerous to Life or Health level

N/A: Not available

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value