

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	The health risks of this compound have not been fully determined. Exposure may cause irritation of the skin, eyes, and respiratory system.	   

Section I. Chemical Product and Company Identification

Chemical Name	Methyl Palmitate		
Catalog Number	P0006	Supplier	TCI America 9211 N. Harborside St. Portland OR 1-800-423-8616
Synonym	Hexadecanoic acid, methyl ester (CA INDEX NAME); Methyl Hexadecanoate; Palmitic Acid Methyl Ester		
Chemical Formula	C ₁₇ H ₃₄ O ₂		
CAS Number	112-39-0	In case of Emergency Call	Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Methyl Palmitate	112-39-0	Min. 97.0 (GC)	Not available.	Not available.

Section III. Hazards Identification

Acute Health Effects	No specific information is available in our data base regarding the toxic effects of this material for humans. However, exposure to any chemical should be kept to a minimum. Skin and eye contact may result in irritation. May be harmful if inhaled or ingested. Always follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.
Chronic Health Effects	CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY : Not available. Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	>113°C (235.4°F)	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO ₂).		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures

Spill Cleanup Instructions
 If the product is in its solid form: Use a shovel to put the material into a convenient waste disposal container. If the product is in its liquid form: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and Storage

Handling and Storage Information
 Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. Do not breathe dust. Always store away from incompatible compounds such as oxidizing agents.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls
 Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection
 Splash goggles. Lab coat. Dust respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.



Exposure Limits
 Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Solid. (White crystal lumps.)	Solubility	Immiscible with water. Soluble in alcohols.
Specific Gravity	0.85 (water=1)		
Molecular Weight	270.45	Partition Coefficient	Not available.
Boiling Point	185°C (365°F) @ 10 mmHg	Vapor Pressure	Not applicable.
Melting Point	27°C (80.6°F) (freezing point)	Vapor Density	Not available.
Refractive Index	1.45	Volatility	Not available.
Critical Temperature	Not available.	Odor	Not available.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability
 This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability
 Avoid excessive heat and light.

Incompatibilities
 Reactive with oxidizing agents.

Section XI. Toxicological Information

RTECS Number
 Not available.

Routes of Exposure
 Eye Contact. Ingestion. Inhalation.

Toxicity Data
 Not available.

Chronic Toxic Effects
CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY: Not available.
 Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

Acute Toxic Effects
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Section XII. Ecological Information

Ecotoxicity
 Not available.

Environmental Fate Methyl palmitate's production and use as a synthetic intermediate may result in its release to the environment through various waste streams. Methyl palmitate is found naturally as a flavor component of some foods. If released to air, a vapor pressure of 0.00006 mm Hg at 25 deg C indicates methyl palmitate will exist in both the vapor and particulate phases in the ambient atmosphere. Vapor-phase methyl palmitate will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 20 hours. Particulate-phase methyl palmitate will be removed from the atmosphere by wet and dry deposition. If released to soil, methyl palmitate is expected to have no mobility based upon an estimated Koc of 18,000. Volatilization from moist soil surfaces is expected to be an important fate process based upon an estimated Henry's Law constant of 0.009 atm-cu m/mole. However, adsorption to soil is expected to attenuate volatilization. Methyl palmitate is expected to rapidly biodegrade in aerobic soils as suggested by results of screening studies. If released into water, methyl palmitate is expected to adsorb to suspended solids and sediment in the water column based upon the estimated Koc. Methyl palmitate is expected to rapidly biodegrade in aerobic waters. Volatilization from water surfaces is expected to be an important fate process based upon this compound's estimated Henry's Law constant. Estimated volatilization half-lives for a model river and model lake are 5 and 160 hours, respectively. However, volatilization from water surfaces is expected to be attenuated by adsorption to suspended solids and sediment in the water column. The volatilization half-life from a model pond is estimated to be about 60 hours ignoring adsorption; when considering maximum adsorption the volatilization half-life increases to 150 days. An estimated BCF of 620 suggests the potential for bioconcentration in aquatic organisms is high. An estimated base-catalyzed second-order hydrolysis rate constant of 0.030 L/mole-sec corresponds to half-lives of 7.3 years and 270 days at pH values of 7 and 8, respectively. Occupational exposure to methyl palmitate may occur through inhalation and dermal contact with this compound at workplaces where methyl palmitate is produced or used. The general population may be exposed to methyl palmitate due to its occurrence in some foods.

Section XIII. Disposal Considerations

Waste Disposal Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

Section XIV. Transport Information

DOT Classification Not a DOT controlled material (United States).

PIN Number Not applicable.

Proper Shipping Name Not applicable.

Packing Group (PG) Not applicable.

DOT Pictograms



Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA) This compound is **ON** the EPA Toxic Substances Control Act (TSCA) inventory list.

WHMIS Classification (Canada) On DSL.

EINECS Number (EEC) 203-966-3

EEC Risk Statements Not available.

Japanese Regulatory Data ENCS No. 2-798

Section XVI. Other Information

Version 1.0
Validated on 1/28/2010.
Printed 1/28/2010.

Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.