

# Avocado Research Chemicals Ltd - Material Safety Data Sheet 11657

1. IDENTIFICATION OF SUBSTANCE AND SUPPLIER			
Name On Label	Methyl tetrolate		
Product Number	11657		
Supplier	Johnson Matthey Catalog Company Inc. 30 Bond Street, Ward Hill, Massachusetts, 01835-8099 Emergency Telephone Number: (978) 521-6300; CHEMTREC: (800) 424-9300		
Alternative Names	2-Butynoic acid methyl ester; Tetrolic acid methyl ester		
2. COMPOSITION AND INFORMATION ON COMPONENTS			
Name	Methyl tetrolate		
Minor Impurities	Not determined		
CAS No.	23326-27-4	EINECS No. Not listed	EEC No.
3. HAZARDS IDENTIFICATION			
Designation	FLAMMABLE ~ IRRITANT ~ LACHRYMATORY		
Risk Phrases	R10 Flammable. R36/37/38 Irritating to eyes, respiratory system and skin.		
4. FIRST AID MEASURES			
Inhalation	Remove to fresh air. If breathing is difficult give oxygen and seek medical attention.		
Eye Contact	Flush with copious amounts of water for at least 15 minutes. If irritation or lachrymation persists, seek medical attention.		
Skin Contact	Remove contaminated clothing. Wash affected area with soap and water. Rinse thoroughly. If irritation persists or other symptoms are observed, seek medical advice.		
Ingestion	Rinse out mouth and drink lots of water. In case of irritation or other symptoms, seek medical attention.		
5. FIRE FIGHTING MEASURES			
Extinguishing Medium	Use fire fighting measures which suit the environment and take into account other materials which may be involved. In general, water-based extinguishers should not be used for fires involving organic materials. Use carbon dioxide or dry powder.		
Protective Equipment	Wear self-contained breathing apparatus and protective clothing.		
Hazardous Products of Combustion may include: carbon monoxide, carbon dioxide.			
6. ACCIDENTAL RELEASE MEASURES			
Personal Protection	Avoid inhalation or contact of vapour with eyes. Wear protective equipment including rubber gloves, safety goggles or breathing equipment. Keep unprotected persons away.		
Environmental Protection	Take precautions to ensure product does not contaminate the ground or enter the drainage system.		
Collection	Absorb in vermiculite or proprietary absorbent material and transfer to sealed containers for disposal.		
7. HANDLING AND STORAGE			
Handling	Chemicals should be used only by those trained in handling potentially hazardous materials. Rubber gloves, eye protection and protective clothing should be worn. Operations should be carried out in an efficient fume hood or equivalent system.		
Storage	Store in tightly sealed containers in a refrigerator or cold room at 5 degrees centigrade or below. Protect from moisture.		
8. EXPOSURE CONTROLS AND PERSONAL PROTECTION			
Respiratory	Avoid inhalation of product. Handle in an efficient fume hood or equivalent system.		
Eye	Avoid eye contact. Wear safety spectacles, goggles or, for larger quantities, a full face mask.		
Hands and Body	Irritant product. Avoid skin contact. Wear rubber gloves, protective clothing and, for larger quantities, full arm, body and face protection. Wash hands thoroughly after handling.		

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9. PHYSICAL AND CHEMICAL PROPERTIES			
Appearance	Colorless liquid		
Physical Constants	b.p. 148-150°		
Molecular formula	C <sub>5</sub> H <sub>6</sub> O <sub>2</sub>	Formula Wt.	98.10
Water solubility		Density	0.981
Flash Point	45°		
10. STABILITY AND REACTIVITY			
Specific Hazard			
Incompatibilities	Bases. Acids. Oxidising agents.		
Decomposition	Hazardous products of decomposition may include:carbon monoxide, carbon dioxide.		
11. TOXICOLOGICAL INFORMATION			
RTECS No.	Not listed		
Acute Toxicity	LD <sub>50</sub> : No data reported Irritating to eyes, respiratory system and skin.		
12. ECOLOGICAL EFFECTS			
General	Take care to prevent chemicals from entering the ground, water courses or drainage systems.		
13. DISPOSAL CONSIDERATIONS			
Disposal	Disposal should be via an approved contractor and should take full account of local regulations.		
14. TRANSPORT INFORMATION			
UN Number	1993		
Land Transport	ADR/RIC Code/Class	3.3	Packing Group III
Maritime Transport	IMDG Code/Class	3.3	Packing Group III
Air Transport	IATA Code/Class	3.3	Packing Group III
15. REGULATORY INFORMATION			
CAS No. 23326-27-4	EINECS No. Not listed	EEC No.	UN No. 1993 RTECS No. Not listed
Hazard Indication	FLAMMABLE ~ IRRITANT ~ LACHRYMATORY		
Risk & Safety Phrases	Flammable. Irritating to eyes, respiratory system and skin. Keep away from sources of ignition - No Smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection.		
TSCA	Not listed. For research and development use only.		
16. OTHER INFORMATION			
It must be recognised that the physical and chemical properties of any product may not be fully understood and that new, possibly hazardous products may arise from reactions between chemicals. The information given in this data sheet is based on our present knowledge and shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.			
Date of Last Review:	3rd August 1998	Date Printed:	18th September 1998