

Avocado Research Chemicals Ltd - Material Safety Data Sheet 11326

1. IDENTIFICATION OF SUBSTANCE AND SUPPLIER			
Name On Label	D-(+)-Limonene		
Product Number	11326		
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	4-Isopropenyl-1-methylcyclohexene; p-Mentha-1,8-diene		
2. COMPOSITION AND INFORMATION ON COMPONENTS			
Name	D-(+)-Limonene		
Minor Impurities	Not determined		
CAS No.	5989-27-5	EINECS No. 2278135	EEC No.
3. HAZARDS IDENTIFICATION			
Designation	FLAMMABLE ~ HARMFUL ~ IRRITANT		
Risk Phrases	R10 Flammable. R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R36/37/38 Irritating to eyes, respiratory system and skin. R43 May cause sensitisation by skin contact.		
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 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	Keep away from ignition sources. Avoid inhalation of vapour. Wear protective equipment including rubber gloves, eye protection and 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 cool place. 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.		

Continued on next page...

11326 continued.

9. PHYSICAL AND CHEMICAL PROPERTIES				
Appearance	Colorless liquid			
Physical Constants	b.p. 174-176°			
Molecular formula	C ₁₀ H ₁₆	Formula Wt.	136.24	
Water solubility	V sl sol	Density	0.84	
Flash Point	48°			
10. STABILITY AND REACTIVITY				
Specific Hazard				
Incompatibilities	Strong oxidising agents.			
Decomposition	Hazardous products of decomposition may include: carbon monoxide, carbon dioxide.			
11. TOXICOLOGICAL INFORMATION				
RTECS No.	GW6360000			
Acute Toxicity	LD ₅₀ : ORL-RAT 4400mg/kg Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitisation by skin contact.			
Special Note	May cause sensitisation.			
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	2319			
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. 5989-27-5	EINECS No. 2278135	EEC No.	UN No. 2319	RTECS No. GW6360000
Hazard Indication	FLAMMABLE ~ HARMFUL ~ IRRITANT			
Risk & Safety Phrases	Flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitisation by skin contact. 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.			
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