

1. IDENTIFICATION		
Product Description:	LINALYL FORMATE	
CAS#	115-99-1	
Other means of identification Qaroma Item #	1032824	
Recommended use	For R&D use only. Not fo	r medicinal, household, or other use.
Recommended restrictions	For Manufacturing Use O	nlv
<u>Company</u>		,
Qaroma Incorporated		
8055 TX-60 S		
Bay City, TX, 77414		
call: 979-244-0100		
Manufacturer/Importer/Supplier/D	istributor information	
Manufacturer		
Company name Address	Qaroma Incorporated 8055 TX-60 S	
Address	Bay City, TX, 77414	
	United States	
Telephone	For information call:	979-244-0100
E-mail	ehsbc@chemicalsinc.	
	com	
Emergency phone number	979-244-0100	

2. HAZARD(S) IDENTIFICATION

HAZARDS

	Flammable liquids (Category 4), H227
	Combustible liquid.
PRECAUTIONS	P210 Keep out from ignition sources
	P272 Neat work clothes
	P280 Wear proper PPE
	Use appropriate fire extinguisher during fire
	Store in a well-ventilated place.
	Dispose of contents/container in accordance with
	local/regional/national/international regulations.



3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical name	Common names and	CAS number	Concentration(%)
	synonyms		
3,7-dimethylocta-1,6-	LINALYL FORMATE,	115-99-1	95-100
dien-3-yl formate	LINALOOL FORMATE		

4. FIRST-AID MEASURES

Inhalation	If inhaled, move a person into fresh air.
Skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Eye contact	Flush the eyes with plenty of fresh water. Get medical assistance immediately
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Symptoms	No data
Indication of immediate medical attention and special treatment needed	Not available.
General advice	Consult a physician. Show this safety data sheet to the doctor in attendance
symptoms/effects	No data



SAFETY DATA SHEET LINALYL FORMATE

Indication of immediate medical attention and special treatment needed	Not available.
General information	Provide all the necessary documents regarding this chemical to the physician.
5. FIRE-FIGHTING MEASU	JRES
Suitable extinguishing media Unsuitable extinguishing media	Use Foam Carbon dioxide (CO2) Dry powder For this substance/mixture no limitations of extinguishing agents are given.
Specific hazards arising from the chemical	Carbon oxides, Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapors is possible in the event of fire.
Special protective equipment and precautions for firefighters	No Data
Firefighting equipment/instructions	Wear self-contained breathing apparatus for firefighting if necessary.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No Data
6. ACCIDENTAL RELEASE	E MEASURES
Personal precautions, protective equipment, and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors or aerosols. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Methods and materials for containment and cleaning up	Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.
	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
	Large Spills: Stop the flow of material if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers.
	Small Spills: Wipe up with absorbent material (e.g., cloth, fleece). Clean surface thoroughly to remove residual contamination.



Environmental precautions	Retain and dispose of contaminated wash water. Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate the water.	
7. HANDLING AND STORAGE		
Precautions for safe handling	Keep away from open flames, hot surfaces, and sources of ignition. Take precautionary	
	measures against static discharge.	
Conditions for safe storage, including any incompatibilities	Keep container closed. Handle containers with care. Open slowly to control possible pressure release. Store in a cool, well-ventilated area. Storage class (TRGS 510): 10: Combustible liquids	

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredients with workplace

control parameters Contains no substances with occupational exposure limit values.

Occupational Exposure limit values No Data available

Biological limit values	No Data available
Individual protection measures, su	ich as personal protective equipment
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses Face shield is recommended.
Skin protection	Wear impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique(without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Hand protectionOther	Chemical resistant gloves.
Respiratory protection	Respiratory protection is not required. If ventilation is insufficient, suitable respiratory protection must be provided.
Thermal hazards	No Data available.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Physical state Purity(%) Color Odor threshold	Colorless Liquid. Liquid. 95 to 100 Colorless. Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	100 - 103 °C 212 - 217 °F at 13 hPa - lit.
Flash point	86 °C (187 °F) - closed cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits Explosive limit - lower (%) Not available. Explosive limit - upper (%) Not available.	
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available
Solubility(ies) Solubility (water) Partition coefficient (n-octanol/water)	Soluble Not available.
Auto-ignition temperature Decomposition temperature	Not available. Not available.
Viscosity	Not available.
Other information Explosive properties Molecular formula Oxidizing properties	Not available. $C_{11}H_{18}O_2$ Not available.
Specific gravity	0.92 @ 25°C



10. STABILITY AND REACTIVITY

Reactivity Chemical stability	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Chemical Stability Possibility of hazardousreactions	Stable under ambient temperature(Room temperature). No Data available
Conditions to avoid	Strong heating.
Incompatible materials	Strong oxidizing agents.

Hazardous decompositionproducts	in the event of fire : see section 5

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure		
Inhalation	No Data available.	
Skin contact	No Data available.	
Eye contact	No Data available.	
Ingestion	No Data available.	
Symptoms related to the physical, chemical, and toxicological characteristics	No Data available.	
Information on toxicological effect	S	
Acute toxicity	No Data available.	
Additional Information	RTECS: RG5925600	
	To the best of our knowledge, the chemical, physical, and toxicological properties have not	
	been thoroughly investigated.	
12. ECOLOGICAL INFORMATION		
Ecotoxicity	No Data available.	
Persistence and degradability Bioaccumulative potential	No data is available on the degradability of this product.	
Mobility in soil	No data available.	
Other adverse effects	No Data Availabe.	





13. DISPOSAL

Disposal instructions	Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways, or ditches with chemical or used containers. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Waste from residues	Empty containers or liners may retain some product residues. This material and its container mustbe disposed of in a safe manner
Contaminated packaging	Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. TRANSPORTATION

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

DOT BULK

NA-Number: 1993 Class: NONE Packing group: III Proper shipping name: Combustible liquid, n.o.s. (Linalyl formate) Reportable Quantity (RQ): Poison Inhalation Hazard: No Packaging exceptions: 150 Packaging bulk: 241 Labels Required: 3

DOT

NON-BULK Not regulated as dangerous goods. IATA Not regulated as dangerous goods. IMDG Not regulated as dangerous goods.



15. REGULATORY INFORMATION

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA) TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated

CERCLA Hazardous Substance List (40 CFR 302.4) Not listed

SARA 304 Emergency release notification Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) Not listed

Superfund Amendments and Reauthorization Act of 1986 (SARA) SARA 302 Extremely hazardous substance Not listed

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Flammable (gases, aerosols, liquids, or solids)

SARA 313 (TRI reporting) Not regulated

Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not Regulated

Safe Drinking Water Act (SDWA) Not regulated