

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Identification of the Substance:

Trade Name: TETRALOL®

Chemical Name: Mixture of Tetrahydrolinalool and Tetrahydromyrcenol

Use of the Substance: Fragrance ingredient

Company Identification:

LyondellBasell Flavors & Fragrances, LLC P.O. Box 389 Jacksonville, FL 32201, USA Telephone: 904-768-5800 Fax:904-768-2200	European Headquarters LyondellBasell Flavors & Fragrances, LLC C/O SCM EUROPE Place de l'ALBERTINE 2 B-1000 Brussels - Belgium Telephone: +32.2.289.05.10 Fax:+32.2.289.05.90
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Emergency Telephone: CHEMTREC: (USA, Canada): 1-800-424-9300 ;(All Others): 703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS Number	EINECS Number	Ingredient	Typical Weight %
18479-57-7	242-361-9	TETRAHYDROMYRCENOL	10-50
78-69-3	201-133-9	TETRAHYDROLINALOOL	> 50

EU Classifications (refer to Section 16 for descriptions):

Symbol(s)	Risk Phrase Code(s)	Safety Phrase Code(s)
Xi	R36/38	S24/25

3. HAZARDS IDENTIFICATION

This substance is classified as dangerous according to EU Directive 1999/45/EC.

Potential Health Effects

Acute Health Effects:

Prolonged contact of eyes or skin with the substance may cause irritation.

Chronic Health Effects:

Not Determined.

4. FIRST AID MEASURES

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Revision Date 05/10/2010
Supersedes 10/24/2002
Date Printed 06/10/2010

Inhalation:

Seek fresh air immediately. If breathing is difficult, seek medical advice.

Eye Contact:

Flush with water for at least 15 minutes. If irritation develops, get medical attention.

Skin Contact:

Remove contaminated clothing. Wash affected areas with plenty of soap and water. If irritation develops, seek medical advice.

Ingestion:

Drink lots of water to dilute substance. Get medical attention immediately or contact a poison control center for advice.

5. FIRE FIGHTING MEASURES

Suitable Fire Extinguishing Media:

Carbon dioxide, dry chemical, foam.

Unsuitable Fire Extinguishing Media:

If water must be used, use as a spray only.

Special Exposure Hazards:

No unusual fire or explosion hazards anticipated.

Hazardous Decomposition Products:

Carbon dioxide, carbon monoxide, acrid fumes.

Special Protective Equipment for Fire Fighters:

Standard turnout gear for combustible liquids.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Standard turnout gear for combustible liquids.

Environmental Precautions:

Do not allow the substance or solutions of the substance to be discharged into lakes, streams, ponds or public waters.

Cleanup Procedures:

Small spills should be absorbed by dirt, sand, vermiculate, or other suitable absorbent. Large spills may be pumped (if liquid) or scooped (if solid) into closed containers for recovery or disposal.

7. HANDLING AND STORAGE

Handling:

Wear safety glasses or goggles, rubber gloves and apron when handling material. If transferring to or from the container, use proper grounding procedures.

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Storage:

Do not store in close proximity to excessive heat, open flames, strong acids or strong bases. To minimize product degradation, avoid prolonged exposure of the substance to air. Keep container tightly closed when not in use.

Ventilation:

Mechanical exhaust may be needed in confined and poorly ventilated areas.

Safety Stations:

An eyewash station and a safety shower should be readily available and clearly marked.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

None found.

Exposure Controls:

Respiratory Protection:

A respirator is not normally required. If vapor concentration is suspected to be high, use a NIOSH approved organic vapor respirator

Eye Protection:

Wear safety glasses or goggles.

Hand Protection:

Wear standard industrial type rubber gloves.

Skin Protection:

A rubber apron is recommended when handling the material for extended periods of time.

Personal Hygiene:

Wash hands and other exposed areas of skin with soap and water after handling the material.

Environmental Controls:

No environmental exposure controls required under Community environmental protection laws.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information:

Property

Result

Appearance:

Clear, nearly colorless liquid.

Odor:

Floral.

Important Health, Safety and Environmental Information:

Property

Result

pH:

Not determined.

Boiling Point:

380F (193C) (Thermal Analyzer)

Flash Point:

167F (75C) (Tag Closed Cup)

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Melting Point: Not determined
Flammability: Not determined.
Explosive Properties: Not an explosive.
Oxidizing Properties: Not Determined.
Vapor Pressure: ca.0.25 mmHG @ 20 C
Solubility in Water (Weight%): Not determined
Solubility in Alcohol(Weight%): 100
Fat Solubility: Not Determined.
Partition Coefficient (n-Octanol/Water): Not determined
Viscosity: Not determined.
Vapor Density (air=1): ca.6.0
Evaporation Rate (Butyl Acetate=1): Not determined.
Autoignition Temperature: Not Determined.
Specific Gravity: 0.826

10. STABILITY AND REACTIVITY

Stability:

Substance is stable and unreactive under conditions of normal use.

Conditions to Avoid:

Prolonged or excessive heat and/or exposure to air may cause non-hazardous decomposition and/or oxidation of the substance.

Materials to Avoid:

Avoid contact of the substance with strong acids, strong bases, and materials that react with alcohol.

Hazardous Decomposition Products:

Carbon dioxide, carbon monoxide, acrid fumes.

11. TOXICOLOGICAL INFORMATION

Primary Target Organs: Eyes, skin.
Primary Entry Route(s): Eyes, Skin.
Medical Conditions Aggravated by Overexposure No known conditions.

Acute Toxicity:

<u>Parameter</u>	<u>Result</u>
Acute Oral Toxicity:	LD50 (rat): > 5000 mg/kg.
Acute Inhalation Toxicity:	Not determined.
Acute Dermal Toxicity:	LD50 (rabbit): >5000 mg/kg
Eye Irritancy:	Contact with the undiluted substance may cause irritation.
Dermal Irritancy:	Applied full strength to intact or abraded rabbit skin for 24 hours under occlusion was not irritating. Closed patch test (48H,4% in petrolatum): No irritation.
Skin Sensitization:	Maximization test (4% in petrolatum): No sensitization on 24 human subjects.
Mutagenicity:	Not determined
Teratogenicity:	Not determined.

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12. ECOLOGICAL INFORMATION

Ecotoxicity:	Not determined.
Mobility:	Not determined.
Persistence and Degradability:	Not determined.
Bioaccumulation Potential:	Not determined.
Ozone Depleting Substances:	None.

13. DISPOSAL CONSIDERATIONS

Disposal Methods:	This material, if discarded, is not considered a hazardous waste by EPA regulations 40 CFR 261.
Safe Handling of Wastes:	Refer to Section 8 for information pertaining to personal protective equipment and exposure controls when handling this material for disposal.
Community Provisions:	Dispose of this material at a local, state or federally approved landfill, incinerator or recovery facility.

14. TRANSPORT INFORMATION

Label Codes:	None.
DOT Proper Shipping Name (Bulk):	NA1993, Combustible Liquid, n.o.s.(Tetrahydrolinalool,Tetrahydromyrcenol), PGIII
DOT Proper Shipping Name (Non-Bulk):	Chemicals n.o.i.(Tetrahydrolinalool, Tetrahydromyrcenol)
ERG:	128

15. REGULATORY INFORMATION

Chemical Inventories Status:

USA (TSCA):	Compliant
European Community (EINECS):	Compliant
Canada (DSL):	Compliant
Australia (AICS):	Compliant
Japan (IEC):	Compliant
Korea (KECI/ECL):	Not determined
Philippines (PICCS):	Compliant
China (SEPA/CICS):	Compliant
USA: Federal:	
SARA Title III Section 302/304:	None.
SARA Title III Section 311/312:	Yes
SARA Title III Section 313:	None.
Hazardous Air Pollutants:	None.

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USA: States:

None.

International:

Not Determined.

16. OTHER INFORMATION

EU Classifications:

Symbol Code(s):

Xi

Symbol Phrase(s):

IRRITANT

Risk Phrase Codes:

R36/38

Risk Phrases:

Irritating to eyes and skin.

Safety Phrase Codes:

S24/25

Safety Phrases:

Avoid contact with eyes and skin.

U.S. NPCA/HMIS Hazardous Materials Information System

Health	Flammability	Reactivity	Personal Protection*
1	2	1	C

0 - Minimal Hazard: No significant risk to health.

1 - Slight Hazard: Irritation or minor reversible injury possible.

2 - Moderate Hazard: Temporary or minor injury may occur.

3 - Serious Hazard: Major injury likely unless prompt action is taken and medical treatment is given.

4 - Severe Hazard: Life-threatening, major or permanent damage may result from single or repeated exposures.

* This rating will generally suffice for normal operating conditions. Please note however, that the type of personal protection utilized may change based on specific use conditions (refer to Section 8).

Reason(s) for (Re)issue:

Legal entity change.

Technical Contact(s):

Environmental and Regulatory Affairs Dept.

References:

RIFM - Research Institute for Fragrance Materials RTECS- Registry of Toxic Effects of Chemical Substances

Acronyms:

NTP(National Toxicology Program); IARC (International Agency for Research on Cancer); OSHA (Occupational Health and Safety Administration); DOT (U.S. Dept. of Transportation)