

SAFETY DATA SHEET

266LV Citrol[®] Low VOC (Bulk)

Section 1. Identification

GHS product identifier	: 266LV Citrol [®] Low VOC (Bulk)		
Other means of identification	: Not available.		
Product type	: Liquid.		
Relevant identified uses of the substance or mixture and uses advised against			
Identified uses	: Water soluble degreaser.		
Supplier's details	: Schaeffer Mfg. Company 102 Barton Street Saint Louis, Missouri 63104 Tel: 314-865-4100 Fax: 314-865-4107 Toll Free: 1-800-325-9962 E-Mail: safety@schaefferoil.com		

Emergency telephone	: +1 314 865-4105 (24-hour response number)
number (with hours of	
operation)	

Web: http://www.schaefferoil.com

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	 FLAMMABLE LIQUIDS - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2
GHS label elements	
Hazard pictograms	
Signal word	: Warning
Hazard statements	 Combustible liquid. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.
Precautionary statements	
Prevention	: Wear protective gloves. Wear eye or face protection. Keep away from flames and hot surfaces No smoking. Avoid release to the environment. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Section 2. Hazards identification

Response	: Collect spillage. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store in a well-ventilated place. Keep cool.
Disposal	 Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

CAS number/other identifiers

CAC	numbei	
CAJ	number	

: Not applicable.

Ingredient name	%	CAS number
(R)-p-mentha-1,8-diene	≥2 - ≤6 ≥1 - ≤3 ≥1 - ≤2.5	1356964-77-6 5989-27-5 141-43-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures		
Eye contact	 Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention. 	
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.	
Skin contact	: Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.	
Ingestion	: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.	

Section 4. First aid measures

Most important symptoms/e	effects, acute and delayed	
Potential acute health effe	<u>cts</u>	
Eye contact	: Causes serious eye irritation.	
Inhalation	: No known significant effects or critical hazards.	
Skin contact	: Causes skin irritation. May cause an allergic skin reaction.	
Ingestion	: No known significant effects or critical hazards.	
Over-exposure signs/symptoms		
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness	
Inhalation	: No known significant effects or critical hazards.	
Skin contact	: Adverse symptoms may include the following: irritation redness	
Ingestion	: No known significant effects or critical hazards.	
Indication of immediate medical attention and special treatment needed, if necessary		
Notes to physician	 In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. 	
Specific treatments	: No specific treatment.	
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.	

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet or water-based fire extinguishers.
Specific hazards arising from the chemical	: Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
Special protective actions for fire-fighters	: Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures		
For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.	
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".	
Environmental precautions	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to all applicable Federal, State, Provincial and local authorities and/or the United States National Response Center at (800) 424-8802 as appropriate or required.	
Methods and materials for co	ntainment and cleaning up	
Small spill	: Stop leak if without risk. Move containers from spill area. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.	
Large spill	: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.	
Section 7. Handling and storage		

Precautions for safe handling	L	
Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Do not reuse container.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	-	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from acids. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits	
9-Decenamide, N,N-dimethyl- (R)-p-mentha-1,8-diene 2-Aminoethanol	None. None. ACGIH TLV (United States, 3/2015). TWA: 3 ppm 8 hours. TWA: 7.5 mg/m ³ 8 hours. STEL: 6 ppm 15 minutes. STEL: 15 mg/m ³ 15 minutes. NIOSH REL (United States, 10/2013). TWA: 3 ppm 10 hours. TWA: 8 mg/m ³ 10 hours. STEL: 6 ppm 15 minutes. STEL: 15 mg/m ³ 15 minutes. OSHA PEL (United States, 2/2013). TWA: 3 ppm 8 hours. TWA: 6 mg/m ³ 8 hours.	

Appropriate engineering controls	:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
Individual protection measur	<u>'es</u>	
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	1	Wear eye protection such as safety glasses, chemical goggles, or face shields if engineering controls or work practices are not adequate to prevent eye contact.
Skin protection		
Hand protection	1	Use nitrile or oil resistant gloves.
Body protection	:	Personal protective clothing such as gloves, aprons, boots and complete facial protection should be selected based on the task being performed and the risks involved. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing.
Other skin protection	1	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.
Respiratory protection	:	If a risk assessment indicates that respiratory protection is required, use a properly fitted, air-purifying or supplied air respirator that complies with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	: Liquid. [Clear.]
Color	: Clear to light yellow.
Odor	: Citrus.
Odor threshold	: Not available.
рН	: 10.4 to 11.5
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Closed cup: 63.9°C (147°F)
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	Not available.
Relative density	: 1.029
Solubility	: Emulsifiable.
Partition coefficient: n- octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Volatility	: Negligible.
Viscosity	: Not applicable.
VOC content	: 3 to 4 % (w/w)

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: Strong oxidizing agents.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
(R)-p-mentha-1,8-diene	LD50 Dermal		>5000 mg/kg	-
	LD50 Oral	Rat	4400 mg/kg	-
2-Aminoethanol	LD50 Oral	Rat	1720 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
(R)-p-mentha-1,8-diene 2-Aminoethanol	Skin - Mild irritant Eyes - Severe irritant Skin - Moderate irritant	Rabbit Rabbit Rabbit	- -	24 hours 10 % 250 μg 505 mg	- -

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Name		Route of exposure	Target organs
9-Decenamide, N,N-dimethyl- 2-Aminoethanol	0 7		Respiratory tract irritation Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely : Dermal contact. Eye contact. Inhalation. Ingestion.

routes of exposure

Potential acute health effects

Eye contact	: Causes serious eye irritation.	
Inhalation	: No known significant effects or critical hazards.	
Skin contact	: Causes skin irritation. May cause an allergic skin reaction.	
Ingestion	: No known significant effects or critical hazards.	

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: No known significant effects or critical hazards.
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No known significant effects or critical hazards.

Section 11. Toxicological information

Delayed and immediate effect	ts and also chronic effects from short and long term exposure
<u>Short term exposure</u>	
Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.
Long term exposure	
Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.
Potential chronic health effe	ects
General	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity	estimates
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Route	ATE value
Oral	8824.9 mg/kg
Dermal	74074.1 mg/kg
Inhalation (vapors)	740.7 mg/L

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
(R)-p-mentha-1,8-diene	Acute EC50 421 μg/L Fresh water Acute EC50 688 μg/L Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours
2-Aminoethanol	Acute EC50 8.42 mg/L Fresh water Acute LC50 >100000 μg/L Marine water Acute LC50 170000 μg/L Fresh water	Algae - Desmodesmus subspicatus Crustaceans - Crangon crangon - Adult Fish - Carassius auratus	72 hours 48 hours 96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
(R)-p-mentha-1,8-diene	4.38	1022	high
2-Aminoethanol	-1.31	-	Iow

Mobility in soil

Soil/water partition coefficient (Koc) : Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	ΙΑΤΑ
UN number	NA1993	UN3082	UN3082
UN proper shipping name	COMBUSTIBLE LIQUID, N.O.S. ((R)-p- mentha-1,8-diene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((R)-p- mentha-1,8-diene, 2-Aminoethanol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((R)-p- mentha-1,8-diene, 2-Aminoethanol)
Transport hazard class(es)	Combustible liquid.	9	9
Packing group	Ш	Ш	Ш
Environmental hazards	No.	Yes.	Yes.
Additional information	Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials.	This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

AERG : 128

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations	TSCA 8(a) CDR Exempt/Partial exemption: Not determined United States inventory (TSCA 8b): All components are listed or exempted.	
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	Listed	
Clean Air Act Section 602 Class I Substances	Not listed	
Clean Air Act Section 602 Class II Substances	Not listed	
DEA List I Chemicals (Precursor Chemicals)	Not listed	

Section 15. Regulatory information

DEA List II Chemicals	: Not listed
(Essential Chemicals)	

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ	: Not applicable.
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SARA 311/312

Classification

: Fire hazard

Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure		Immediate (acute) health hazard	Delayed (chronic) health hazard
9-Decenamide, N,N-dimethyl-	≥3 - ≤5	No.	No.	No.	Yes.	No.
(R)-p-mentha-1,8-diene	≥1 - ≤3	Yes.		No.	Yes.	No.
2-Aminoethanol	≥1 - ≤2.5	Yes.		No.	Yes.	No.

SARA 313

There is no data available.

State regulations

Massachusetts	: The following components are listed: 2-Aminoethanol
New York	: None of the components are listed.
New Jersey	: The following components are listed: 2-Aminoethanol

- : The following components are listed: 2-Aminoethanol
 - : The following components are listed: 2-Aminoethanol

California Prop. 65

Pennsylvania

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

li	ngredient name	Cancer	•	level	Maximum acceptable dosage level
2	,2'-Iminodiethanol	Yes.	No.	No.	No.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * Flammability : **Physical hazards :** 2 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

0 Health : Flammability : Instability : 2 2

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 AQUATIC HAZARD (ACUTE) - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2	On basis of test data Expert judgment Expert judgment Calculation method Calculation method Calculation method
US Tariff Heading Number : 3402.90.5030 Schedule B Code : 3402.90.5030	

Schedule D Code	. 3402.90.3030
<u>History</u>	
Date of issue mm/dd/yyyy	: 05/15/2016
Version	: 1
Prepared by	: KMK Regulatory Services Inc.

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