

SAFETY DATA SHEET

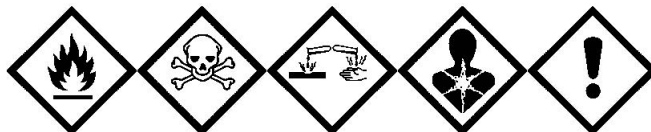
1. Identification

Other means of identification	None known.	
Product identifier	LACQUER THINNER LT-R	
Recommended use	ALL PROPER AND LEGAL PURPOSES	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	BW	
Address	1251 Frontenac Rd. Naperville, IL 60563	
Telephone	331-281-0154	
E-mail	support@shopbvv.com	
Emergency phone number	800-255-3924	Velocity EHS

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, inhalation	Category 3
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1A
	Reproductive toxicity	Category 1A
	Specific target organ toxicity, single exposure	Category 1
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 1
	Aspiration hazard	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye damage. Toxic if inhaled. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ACETIC ACID ETHYL ESTER		141-78-6	25.9106
2-PROPANONE		67-64-1	22.67
BENZENE, METHYL-		108-88-3	10.2118
2-BUTANONE		78-93-3	8.6
METHANOL		67-56-1	7.6628
2-PROPANOL		67-63-0	3.9204
BENZENE, DIMETHYL-		1330-20-7	3.2193
ETHANOL		64-17-5	2.7104
ACETIC ACID, BUTYL ESTER		123-86-4	2.59
CYCLOHEXANE		110-82-7	1.346
NAPHTHA (PETROLEUM), HYDROTREATED LIGHT		64742-49-0	1.3114
1-PROPANOL, 2-METHYL-		78-83-1	1.3087
ACETIC ACID, PROPYL ESTER		109-60-4	1.18
1-BUTANOL		71-36-3	0.9813
ACETIC ACID, METHYL ESTER		79-20-9	0.8736
BENZENE, ETHYL-		100-41-4	0.8141
2-PENTANONE, 4-METHYL-		108-10-1	0.74
1-PROPANOL		71-23-8	0.68
2-PROPANOL, 1-METHOXY-		107-98-2	0.3988
HEPTANE		142-82-5	0.3754
ACETIC ACID, 1,1-DIMETHYLETHYL ESTER		540-88-5	0.3483
FURAN, TETRAHYDRO-		109-99-9	0.25
2-PROPANOL, 1-METHOXY-, 2-ACETATE		108-65-6	0.2293
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPH.		64742-89-8	0.1643
HEXANE, 3-METHYL-		589-34-4	0.156
2-HEPTANONE		110-43-0	0.15
BENZENE, 1-CHLORO-4-(TRIFLUOROMETHY L)-		98-56-6	0.13
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.		64742-95-6	0.1165

Chemical name	Common name and synonyms	CAS number	%
CYCLOHEXANE, METHYL-		108-87-2	0.104
ETHANOL, 2-BUTOXY-		111-76-2	0.099
HEXANE, 2-METHYL-		591-76-4	0.0832
PENTANE, 2-METHYL-		107-83-5	0.0722
BENZENE, 1,2,4-TRIMETHYL-		95-63-6	0.0576
PENTANE, 2,3-DIMETHYL-		565-59-3	0.052
CYCLOHEXANONE		108-94-1	0.0499
HEXANE		110-54-3	0.0405
2-HEXANONE, 5-METHYL-		110-12-3	0.04
2-PROPANOL, 2-METHYL-		75-65-0	0.0294
PENTANE		109-66-0	0.008
BENZENE		71-43-2	0.0038
BENZENE, (1-METHYLETHYL)-		98-82-8	0.0021
ACETIC ACID		64-19-7	0.0013
1,2-ETHANEDIOL		107-21-1	0.001
2,2-DIMETHYLBUTANE		75-83-2	0.001
BUTANE, 2,3-DIMETHYL-		79-29-8	0.001
PENTANE, 3-METHYL-		96-14-0	0.001
PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-M ETHYL-		128-37-0	0.0001
Other components below reportable levels			0.3083

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor/physician.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

Highly flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist/vapors. Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Components	Type	Value
BENZENE (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
1-BUTANOL (CAS 71-36-3)	PEL	300 mg/m ³
		100 ppm
1-PROPANOL (CAS 71-23-8)	PEL	500 mg/m ³
		200 ppm
1-PROPANOL, 2-METHYL- (CAS 78-83-1)	PEL	300 mg/m ³
		100 ppm
2-BUTANONE (CAS 78-93-3)	PEL	590 mg/m ³
		200 ppm
2-HEPTANONE (CAS 110-43-0)	PEL	465 mg/m ³
		100 ppm
2-HEXANONE, 5-METHYL- (CAS 110-12-3)	PEL	475 mg/m ³
		100 ppm
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	PEL	410 mg/m ³
		100 ppm

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
		100 ppm
2-PROPANOL (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm
2-PROPANOL, 2-METHYL- (CAS 75-65-0)	PEL	300 mg/m3
		100 ppm
2-PROPANONE (CAS 67-64-1)	PEL	2400 mg/m3
		1000 ppm
ACETIC ACID (CAS 64-19-7)	PEL	25 mg/m3
		10 ppm
ACETIC ACID ETHYL ESTER (CAS 141-78-6)	PEL	1400 mg/m3
		400 ppm
ACETIC ACID, 1,1-DIMETHYLETHYL ESTER (CAS 540-88-5)	PEL	950 mg/m3
		200 ppm
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	PEL	710 mg/m3
		150 ppm
ACETIC ACID, METHYL ESTER (CAS 79-20-9)	PEL	610 mg/m3
		200 ppm
ACETIC ACID, PROPYL ESTER (CAS 109-60-4)	PEL	840 mg/m3
		200 ppm
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	PEL	245 mg/m3
		50 ppm
BENZENE, DIMETHYL- (CAS 1330-20-7)	PEL	435 mg/m3
		100 ppm
BENZENE, ETHYL- (CAS 100-41-4)	PEL	435 mg/m3
		100 ppm
CYCLOHEXANE (CAS 110-82-7)	PEL	1050 mg/m3
		300 ppm
CYCLOHEXANE, METHYL- (CAS 108-87-2)	PEL	2000 mg/m3
		500 ppm
CYCLOHEXANONE (CAS 108-94-1)	PEL	200 mg/m3
		50 ppm
ETHANOL (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	PEL	240 mg/m3
		50 ppm
FURAN, TETRAHYDRO- (CAS 109-99-9)	PEL	590 mg/m3
		200 ppm
HEPTANE (CAS 142-82-5)	PEL	2000 mg/m3
		500 ppm
HEXANE (CAS 110-54-3)	PEL	1800 mg/m3
		500 ppm
METHANOL (CAS 67-56-1)	PEL	260 mg/m3
		200 ppm
PENTANE (CAS 109-66-0)	PEL	2950 mg/m3
		1000 ppm

US. OSHA Table Z-2 Permissible Exposure Limits (PEL) (29 CFR 1910.1000)

Components	Type	Value
BENZENE (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm
BENZENE, METHYL- (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
1,2-ETHANEDIOL (CAS 107-21-1)	STEL	10 mg/m3	Aerosol, inhalable.
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction
1-BUTANOL (CAS 71-36-3)	TWA	20 ppm	
1-PROPANOL (CAS 71-23-8)	TWA	100 ppm	
1-PROPANOL, 2-METHYL- (CAS 78-83-1)	TWA	50 ppm	
2,2-DIMETHYLBUTANE (CAS 75-83-2)	TWA	200 ppm	
2-BUTANONE (CAS 78-93-3)	STEL	150 ppm	
	TWA	75 ppm	
2-HEPTANONE (CAS 110-43-0)	TWA	50 ppm	
2-HEXANONE, 5-METHYL- (CAS 110-12-3)	STEL	50 ppm	
	TWA	20 ppm	
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	STEL	75 ppm	
	TWA	20 ppm	
2-PROPANOL (CAS 67-63-0)	STEL	400 ppm	
	TWA	200 ppm	

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
2-PROPANOL, 1-METHOXY- (CAS 107-98-2)	STEL	100 ppm	
	TWA	50 ppm	
2-PROPANOL, 2-METHYL- (CAS 75-65-0)	TWA	100 ppm	
2-PROPANONE (CAS 67-64-1)	STEL	500 ppm	
	TWA	250 ppm	
ACETIC ACID (CAS 64-19-7)	STEL	15 ppm	
	TWA	10 ppm	
ACETIC ACID ETHYL ESTER (CAS 141-78-6)	TWA	400 ppm	
ACETIC ACID, 1,1-DIMETHYLETHYL ESTER (CAS 540-88-5)	STEL	150 ppm	
	TWA	50 ppm	
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	STEL	150 ppm	
	TWA	50 ppm	
ACETIC ACID, METHYL ESTER (CAS 79-20-9)	STEL	250 ppm	
	TWA	200 ppm	
ACETIC ACID, PROPYL ESTER (CAS 109-60-4)	STEL	150 ppm	
	TWA	100 ppm	
BENZENE (CAS 71-43-2)	TWA	0.02 ppm	
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	TWA	5 ppm	
BENZENE, 1,2,4-TRIMETHYL- (CAS 95-63-6)	TWA	10 ppm	
BENZENE, DIMETHYL- (CAS 1330-20-7)	TWA	20 ppm	
BENZENE, ETHYL- (CAS 100-41-4)	TWA	20 ppm	
BENZENE, METHYL- (CAS 108-88-3)	TWA	20 ppm	
BUTANE, 2,3-DIMETHYL- (CAS 79-29-8)	TWA	200 ppm	
CYCLOHEXANE (CAS 110-82-7)	TWA	100 ppm	
CYCLOHEXANE, METHYL- (CAS 108-87-2)	TWA	100 ppm	
CYCLOHEXANONE (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
ETHANOL (CAS 64-17-5)	STEL	1000 ppm	
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	TWA	20 ppm	
FURAN, TETRAHYDRO- (CAS 109-99-9)	STEL	100 ppm	

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
HEPTANE (CAS 142-82-5)	TWA	50 ppm	Inhalable fraction and vapor.
	STEL	500 ppm	
HEXANE (CAS 110-54-3)	TWA	400 ppm	
	TWA	50 ppm	
HEXANE, 2-METHYL- (CAS 591-76-4)	STEL	500 ppm	
	TWA	400 ppm	
HEXANE, 3-METHYL- (CAS 589-34-4)	STEL	500 ppm	
	TWA	400 ppm	
METHANOL (CAS 67-56-1)	STEL	250 ppm	
	TWA	200 ppm	
NAPHTHA (PETROLEUM), HYDROTREATED LIGHT (CAS 64742-49-0)	TWA	100 ppm	
	TWA	100 ppm	
PENTANE (CAS 109-66-0)	TWA	1000 ppm	
PENTANE, 2,3-DIMETHYL- (CAS 565-59-3)	STEL	500 ppm	
	TWA	400 ppm	
PENTANE, 2-METHYL- (CAS 107-83-5)	TWA	200 ppm	
	TWA	200 ppm	
PENTANE, 3-METHYL- (CAS 96-14-0)	TWA	200 ppm	
	TWA	200 ppm	
PHENOL, 2,6-BIS(1,1-DIMETHYLETH YL)-4-METHYL-(CAS 128-37-0)	TWA	2 mg/m3	
	TWA	2 mg/m3	
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPH. (CAS 64742-89-8)	TWA	100 ppm	

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
1-BUTANOL (CAS 71-36-3)	IDLH	1.4 %
		1400 ppm
1-PROPANOL (CAS 71-23-8)	IDLH	2.2 %
		800 ppm
1-PROPANOL, 2-METHYL- (CAS 78-83-1)	IDLH	1.7 %
		1600 ppm
2-BUTANONE (CAS 78-93-3)	IDLH	1.4 %
		3000 ppm
2-HEPTANONE (CAS 110-43-0)	IDLH	1.1 %
		800 ppm
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	IDLH	500 ppm
		500 ppm
2-PROPANOL (CAS 67-63-0)	IDLH	2 %
		2000 ppm

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
2-PROPANOL, 2-METHYL- (CAS 75-65-0)	IDLH	2.4 % 1600 ppm
2-PROPANONE (CAS 67-64-1)	IDLH	2.5 % 2500 ppm
ACETIC ACID (CAS 64-19-7)	IDLH	4 % 50 ppm
ACETIC ACID ETHYL ESTER (CAS 141-78-6)	IDLH	2 % 2000 ppm
ACETIC ACID, 1,1-DIMETHYLETHYL ESTER (CAS 540-88-5)	IDLH	1.5 % 1500 ppm
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	IDLH	1.7 % 1700 ppm
ACETIC ACID, METHYL ESTER (CAS 79-20-9)	IDLH	3.1 % 3100 ppm
ACETIC ACID, PROPYL ESTER (CAS 109-60-4)	IDLH	1.7 % 1700 ppm
BENZENE (CAS 71-43-2)	IDLH	1.2 % 500 ppm
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	IDLH	0.9 % 900 ppm
BENZENE, ETHYL- (CAS 100-41-4)	IDLH	0.8 % 800 ppm
BENZENE, METHYL- (CAS 108-88-3)	IDLH	1.1 % 500 ppm
CYCLOHEXANE (CAS 110-82-7)	IDLH	1.3 % 1300 ppm
CYCLOHEXANE, METHYL- (CAS 108-87-2)	IDLH	1.2 % 1200 ppm
CYCLOHEXANONE (CAS 108-94-1)	IDLH	1.1 % 700 ppm
ETHANOL (CAS 64-17-5)	IDLH	3.3 % 3300 ppm
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	IDLH	1.1 % 700 ppm
FURAN, TETRAHYDRO- (CAS 109-99-9)	IDLH	2 %

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
		2000 ppm
HEPTANE (CAS 142-82-5)	IDLH	1.05 %
		750 ppm
HEXANE (CAS 110-54-3)	IDLH	1.1 %
		1100 ppm
METHANOL (CAS 67-56-1)	IDLH	6 %
		6000 ppm
PENTANE (CAS 109-66-0)	IDLH	1.5 %
		1500 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
1-BUTANOL (CAS 71-36-3)	Ceiling	150 mg/m3
		50 ppm
1-PROPANOL (CAS 71-23-8)	STEL	625 mg/m3
		250 ppm
	TWA	500 mg/m3
		200 ppm
1-PROPANOL, 2-METHYL- (CAS 78-83-1)	TWA	150 mg/m3
		50 ppm
2-BUTANONE (CAS 78-93-3)	STEL	885 mg/m3
		300 ppm
	TWA	590 mg/m3
		200 ppm
2-HEPTANONE (CAS 110-43-0)	TWA	465 mg/m3
		100 ppm
2-HEXANONE, 5-METHYL- (CAS 110-12-3)	TWA	240 mg/m3
		50 ppm
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	STEL	300 mg/m3
		75 ppm
	TWA	205 mg/m3
		50 ppm
2-PROPANOL (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm
2-PROPANOL, 1-METHOXY- (CAS 107-98-2)	STEL	540 mg/m3
		150 ppm
	TWA	360 mg/m3
		100 ppm
2-PROPANOL, 2-METHYL- (CAS 75-65-0)	STEL	450 mg/m3
		150 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
	TWA	300 mg/m3
		100 ppm
2-PROPANONE (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
ACETIC ACID (CAS 64-19-7)	STEL	37 mg/m3
		15 ppm
	TWA	25 mg/m3
		10 ppm
ACETIC ACID ETHYL ESTER (CAS 141-78-6)	TWA	1400 mg/m3
		400 ppm
ACETIC ACID, 1,1-DIMETHYLETHYL ESTER (CAS 540-88-5)	TWA	950 mg/m3
		200 ppm
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	STEL	950 mg/m3
		200 ppm
	TWA	710 mg/m3
		150 ppm
ACETIC ACID, METHYL ESTER (CAS 79-20-9)	STEL	760 mg/m3
		250 ppm
	TWA	610 mg/m3
		200 ppm
ACETIC ACID, PROPYL ESTER (CAS 109-60-4)	STEL	1050 mg/m3
		250 ppm
	TWA	840 mg/m3
		200 ppm
BENZENE (CAS 71-43-2)	STEL	1 ppm
	TWA	0.1 ppm
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	TWA	245 mg/m3
		50 ppm
BENZENE, 1,2,4-TRIMETHYL- (CAS 95-63-6)	TWA	125 mg/m3
		25 ppm
BENZENE, DIMETHYL- (CAS 1330-20-7)	STEL	655 mg/m3
		150 ppm
	TWA	435 mg/m3
		100 ppm
BENZENE, ETHYL- (CAS 100-41-4)	STEL	545 mg/m3
		125 ppm
	TWA	435 mg/m3
		100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
BENZENE, METHYL- (CAS 108-88-3)	STEL	560 mg/m3
		150 ppm
	TWA	375 mg/m3
CYCLOHEXANE (CAS 110-82-7)	TWA	100 ppm
		1050 mg/m3
	TWA	300 ppm
CYCLOHEXANE, METHYL- (CAS 108-87-2)	TWA	1600 mg/m3
		400 ppm
	TWA	100 mg/m3
CYCLOHEXANONE (CAS 108-94-1)	TWA	25 ppm
		1900 mg/m3
	TWA	1000 ppm
ETHANOL (CAS 64-17-5)	TWA	24 mg/m3
		5 ppm
	TWA	735 mg/m3
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	STEL	250 ppm
		590 mg/m3
	TWA	200 ppm
FURAN, TETRAHYDRO- (CAS 109-99-9)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
HEPTANE (CAS 142-82-5)	TWA	85 ppm
		180 mg/m3
	TWA	50 ppm
HEXANE (CAS 110-54-3)	STEL	325 mg/m3
		250 ppm
	TWA	260 mg/m3
METHANOL (CAS 67-56-1)	TWA	200 ppm
		1800 mg/m3
	Ceiling	610 ppm
PENTANE (CAS 109-66-0)	TWA	350 mg/m3
		120 ppm
	TWA	10 mg/m3
PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYL-(CAS 128-37-0)	TWA	10 mg/m3
		10 mg/m3
	TWA	10 mg/m3

US. OARS. Workplace Environmental Exposure Level (WEEL) Guide

Components	Type	Value
2-PROPANOL, 1-METHOXY-, 2-ACETATE (CAS 108-65-6)	TWA	50 ppm

Biological limit values**ACGIH Biological Exposure Indices (BEI)**

Components	Value	Determinant	Specimen	Sampling Time
2-BUTANONE (CAS 78-93-3)	2 mg/l	MEK	Urine	
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	1 mg/l	Methyl isobutyl ketone	Urine	
2-PROPANOL (CAS 67-63-0)	40 mg/l	Acetone	Urine	
2-PROPANONE (CAS 67-64-1)	25 mg/l	Acetone	Urine	
BENZENE (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	
BENZENE, DIMETHYL- (CAS 1330-20-7)	0.3 g/g	Methylhippuric acids	Creatinine in urine	
BENZENE, ETHYL- (CAS 100-41-4)	150 mg/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	
BENZENE, METHYL- (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	
	0.03 mg/l	Toluene	Urine	
	0.02 mg/l	Toluene	Blood	
CYCLOHEXANE (CAS 110-82-7)	50 mg/g	1,2-Cyclohexanediol, with hydrolysis	Creatinine in urine	
CYCLOHEXANONE (CAS 108-94-1)	80 mg/l	1,2-Cyclohexanediol, with hydrolysis	Urine	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	
FURAN, TETRAHYDRO- (CAS 109-99-9)	2 mg/l	Tetrahydrofuran	Urine	
HEXANE (CAS 110-54-3)	0.5 mg/l	2,5-Hexanedione, without hydrolysis	Urine	
METHANOL (CAS 67-56-1)	15 mg/l	Methanol	Urine	

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

1-BUTANOL (CAS 71-36-3)	Can be absorbed through the skin.
1-PROPANOL (CAS 71-23-8)	Can be absorbed through the skin.
2-PROPANOL, 1-METHOXY- (CAS 107-98-2)	Can be absorbed through the skin.
2-PROPANOL, 1-METHOXY-, 2-ACETATE (CAS 108-65-6)	Can be absorbed through the skin.
BENZENE (CAS 71-43-2)	Can be absorbed through the skin.
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	Can be absorbed through the skin.
BENZENE, METHYL- (CAS 108-88-3)	Can be absorbed through the skin.
CYCLOHEXANONE (CAS 108-94-1)	Can be absorbed through the skin.
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	Can be absorbed through the skin.
HEXANE (CAS 110-54-3)	Can be absorbed through the skin.
METHANOL (CAS 67-56-1)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

1-BUTANOL (CAS 71-36-3)	Skin designation applies.
1-PROPANOL (CAS 71-23-8)	Skin designation applies.
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	Skin designation applies.
BENZENE, METHYL- (CAS 108-88-3)	Skin designation applies.
CYCLOHEXANONE (CAS 108-94-1)	Skin designation applies.
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	Skin designation applies.
METHANOL (CAS 67-56-1)	Skin designation applies.

US - Tennessee OELs: Skin designation

1-BUTANOL (CAS 71-36-3)	Can be absorbed through the skin.
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	Can be absorbed through the skin.
CYCLOHEXANONE (CAS 108-94-1)	Can be absorbed through the skin.
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	Can be absorbed through the skin.
METHANOL (CAS 67-56-1)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

2-BUTANONE (CAS 78-93-3)	Danger of cutaneous absorption
BENZENE (CAS 71-43-2)	Danger of cutaneous absorption
CYCLOHEXANONE (CAS 108-94-1)	Danger of cutaneous absorption
FURAN, TETRAHYDRO- (CAS 109-99-9)	Danger of cutaneous absorption
HEXANE (CAS 110-54-3)	Danger of cutaneous absorption
METHANOL (CAS 67-56-1)	Danger of cutaneous absorption
NAPHTHA (PETROLEUM), HYDROTREATED LIGHT (CAS 64742-49-0)	Danger of cutaneous absorption
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPH. (CAS 64742-89-8)	Danger of cutaneous absorption

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

1-BUTANOL (CAS 71-36-3)	Can be absorbed through the skin.
1-PROPANOL (CAS 71-23-8)	Can be absorbed through the skin.
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	Can be absorbed through the skin.
CYCLOHEXANONE (CAS 108-94-1)	Can be absorbed through the skin.
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	Can be absorbed through the skin.
METHANOL (CAS 67-56-1)	Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	Can be absorbed through the skin.
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	Can be absorbed through the skin.

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

The following are recommendations for Personnel Protective Equipment (PPE). The employer/user of this product must perform a Hazard Assessment of the workplace according to OSHA regulations 29 CFR 1910.132 to determine the appropriate PPE for use while performing any task involving potential exposure to this product.

Eye/face protection	Chemical respirator with organic vapor cartridge and full facepiece.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state	Liquid.
Form	Liquid.
Color	COLORLESS TO SLIGHTLY YELLOW
Odor	CHARACTERISTIC
Odor threshold	Not available.
pH	7.0
Melting point/freezing point	-40 °F (-40 °C)
Initial boiling point and boiling range	180.19 °F (82.33 °C) estimated
Flash point	1.0 °F (-17.2 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Highly flammable liquid
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)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	6.84 lbs/gal 0.82 g/ml
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	0.06 % estimated
Specific gravity	0.82
VOC	72.17 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidizing agents. Amines. Ammonia. Caustics. Chlorine. Halogens. Isocyanates. Nitrates.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Toxic if inhaled. May cause damage to organs by inhalation. May cause drowsiness or dizziness. Headache. Nausea, vomiting.
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Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Ingestion	Knowledge about health hazard is incomplete. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Toxic if inhaled.

Product	Species	Test Results
BGL LACQUER THINNER LT-R		
<u>Acute</u>		
Dermal		
ATEmix		19080 mg/kg bw
Inhalation		
<i>Vapor</i>		
ATEmix		2.784 mg/l
Oral		
ATEmix		5271 mg/kg bw

Components	Species	Test Results
1,2-ETHANEDIOL (CAS 107-21-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	9530 mg/kg
1-BUTANOL (CAS 71-36-3)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	3400 mg/kg
Oral		
LD50	Rat	0.79 - 4.36 g/kg
1-PROPANOL (CAS 71-23-8)		
<u>Acute</u>		
Oral		
LD50	Rat	1.87 g/kg
1-PROPANOL, 2-METHYL- (CAS 78-83-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	3392 mg/kg
Oral		
LD50	Rat	2.46 g/kg
2-BUTANONE (CAS 78-93-3)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 8000 mg/kg
Oral		
LD50	Rat	2900 mg/kg

Components	Species	Test Results
2-HEPTANONE (CAS 110-43-0)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	12600 mg/kg
Oral		
LD50	Rat	1.67 g/kg
2-HEXANONE, 5-METHYL- (CAS 110-12-3)		
<u>Acute</u>		
Oral		
LD50	Rat	2542 mg/kg
2-PENTANONE, 4-METHYL- (CAS 108-10-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 16000 mg/kg
Inhalation		
LC50	Rat	8.2 - 16.4 mg/l, 4 Hours
Oral		
LD50	Rat	2.08 g/kg
2-PROPANOL (CAS 67-63-0)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	12800 mg/kg
Oral		
LD50	Rat	4710 mg/kg
2-PROPANOL, 1-METHOXY- (CAS 107-98-2)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	13 - 14 g/kg
Oral		
LD50	Rat	5.71 g/kg
2-PROPANOL, 2-METHYL- (CAS 75-65-0)		
<u>Acute</u>		
Oral		
LD50	Rat	3500 mg/kg
2-PROPANONE (CAS 67-64-1)		
<u>Acute</u>		
Oral		
LD50	Rat	5800 mg/kg
ACETIC ACID (CAS 64-19-7)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	1060 mg/kg
Inhalation		
LC50	Rat	11.4 mg/l, 4 Hours
Oral		
LD50	Rat	3.31 g/kg

Components	Species	Test Results
ACETIC ACID ETHYL ESTER (CAS 141-78-6)		
<u>Acute</u>		
Oral		
LD50	Rabbit	4.9 g/kg
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Inhalation		
LC50	Rat	1.36 - 2.38 mg/l, 4 Hours
Oral		
LD50	Rat	> 3200 mg/kg
ACETIC ACID, METHYL ESTER (CAS 79-20-9)		
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Rat	6482 mg/kg
ACETIC ACID, PROPYL ESTER (CAS 109-60-4)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	9370 mg/kg
BENZENE (CAS 71-43-2)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 8260 mg/kg
Oral		
LD50	Rat	3306 mg/kg
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)		
<u>Acute</u>		
Dermal		
LD50	Rat	10.6 g/kg
Oral		
LD50	Rat	1400 mg/kg
BENZENE, 1,2,4-TRIMETHYL- (CAS 95-63-6)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 3160 mg/kg
Oral		
LD50	Rat	3280 mg/kg
BENZENE, 1-CHLORO-4-(TRIFLUOROMETHYL)- (CAS 98-56-6)		
<u>Acute</u>		
Oral		
LD50	Rat	13000 mg/kg

Components	Species	Test Results
BENZENE, DIMETHYL- (CAS 1330-20-7)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 43 g/kg
Oral		
LD50	Rat	3523 - 8600 mg/kg
BENZENE, ETHYL- (CAS 100-41-4)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	17800 mg/kg
Oral		
LD50	Rat	3500 mg/kg
BENZENE, METHYL- (CAS 108-88-3)		
<u>Acute</u>		
Dermal		
LD50	Rat	12000 mg/kg
Oral		
LD50	Rat	2.6 - 7.5 g/kg
CYCLOHEXANE (CAS 110-82-7)		
<u>Acute</u>		
Oral		
LD50	Rabbit	> 5000 mg/kg
ETHANOL (CAS 64-17-5)		
<u>Acute</u>		
Oral		
LD50	Rat	6.2 g/kg
ETHANOL, 2-BUTOXY- (CAS 111-76-2)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	400 mg/kg
Oral		
LD50	Rat	470 mg/kg
FURAN, TETRAHYDRO- (CAS 109-99-9)		
<u>Acute</u>		
Oral		
LD50	Rat	1650 mg/kg
HEPTANE (CAS 142-82-5)		
<u>Acute</u>		
Inhalation		
LC50	Rat	103 mg/m3, 4 Hours
HEXANE (CAS 110-54-3)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	3000 mg/kg
Oral		
LD50	Rat	28710 mg/kg

Components	Species	Test Results
METHANOL (CAS 67-56-1)		
Acute		
Dermal		
LD50	Rabbit	15800 mg/kg
Inhalation		
LC50	Cat	85.41 mg/l, 4.5 Hours
	Rat	64000 ppm, 4 Hours
		87.5 mg/l, 6 Hours
Oral		
LD50	Dog	8000 mg/kg
	Monkey	2 g/kg
	Mouse	7300 mg/kg
	Rabbit	14.4 g/kg
	Rat	5628 mg/kg

PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYL- (CAS 128-37-0)

Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Rat	890 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Due to partial or complete lack of data the classification is not possible.

Skin sensitization Due to partial or complete lack of data the classification is not possible.

Germ cell mutagenicity May cause genetic defects.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-PENTANONE, 4-METHYL- (CAS 108-10-1)	2B Possibly carcinogenic to humans.
BENZENE (CAS 71-43-2)	1 Carcinogenic to humans.
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	2B Possibly carcinogenic to humans.
BENZENE, 1-CHLORO-4-(TRIFLUOROMETHYL)- (CAS 98-56-6)	2B Possibly carcinogenic to humans.
BENZENE, DIMETHYL- (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.
BENZENE, ETHYL- (CAS 100-41-4)	2B Possibly carcinogenic to humans.
BENZENE, METHYL- (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.
CYCLOHEXANONE (CAS 108-94-1)	3 Not classifiable as to carcinogenicity to humans.
ETHANOL, 2-BUTOXY- (CAS 111-76-2)	3 Not classifiable as to carcinogenicity to humans.
FURAN, TETRAHYDRO- (CAS 109-99-9)	2B Possibly carcinogenic to humans.
PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYL- (CAS 128-37-0)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

BENZENE (CAS 71-43-2)	Cancer
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US. National Toxicology Program (NTP) Report on Carcinogens

BENZENE (CAS 71-43-2)	Known To Be Human Carcinogen.
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Possible reproductive hazard. Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. May damage fertility or the unborn child.

Specific target organ toxicity - single exposure	Causes damage to organs. May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful. Causes damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.
Further information	Acetone has increased the liver toxicity of chemicals, such as, carbon tetrachloride, chloroform and trichloroethylene. Acetone has also increased the lung toxicity of styrene and the toxicity of acrylonitrile and 2,5 hexanedione in laboratory animals. Acetone also appears to inhibit the metabolism and elimination of ethyl alcohol, thereby potentiating its toxicity. Acetone can increase or decrease the toxicity of 1,2-dichlorobenzene, depending on the concentration of Acetone.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
1,2-ETHANEDIOL (CAS 107-21-1)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	8050 mg/l, 96 hours
1-BUTANOL (CAS 71-36-3)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	1897 - 2072 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	100 - 500 mg/l, 96 hours
1-PROPANOL (CAS 71-23-8)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	3339 - 3977 mg/l, 48 hours
Fish	LC50	Bleak (Alburnus alburnus)	3000 - 4000 mg/l, 96 hours
1-PROPANOL, 2-METHYL- (CAS 78-83-1)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia pulex)	950 - 1200 mg/l, 48 hours
Fish	LC50	Bleak (Alburnus alburnus)	1000 - 3000 mg/l, 96 hours
2-BUTANONE (CAS 78-93-3)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	4025 - 6440 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	> 400 mg/l, 96 hours
2-HEPTANONE (CAS 110-43-0)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	126 - 137 mg/l, 96 hours

Components		Species	Test Results
2-HEXANONE, 5-METHYL- (CAS 110-12-3)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	159 mg/l, 96 hours
2-PENTANONE, 4-METHYL- (CAS 108-10-1)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	492 - 593 mg/l, 96 hours
2-PROPANOL (CAS 67-63-0)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours
2-PROPANOL, 2-METHYL- (CAS 75-65-0)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	4607 - 6577 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	6130 - 6700 mg/l, 96 hours
2-PROPANONE (CAS 67-64-1)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
ACETIC ACID (CAS 64-19-7)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	65 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	75 mg/l, 96 hours
ACETIC ACID ETHYL ESTER (CAS 141-78-6)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Indian catfish (Heteropneustes fossilis)	200.32 - 225.42 mg/l, 96 hours
ACETIC ACID, 1,1-DIMETHYLETHYL ESTER (CAS 540-88-5)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	296 - 362 mg/l, 96 hours
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	17 - 19 mg/l, 96 hours
ACETIC ACID, METHYL ESTER (CAS 79-20-9)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	295 - 348 mg/l, 96 hours

Components		Species	Test Results
ACETIC ACID, PROPYL ESTER (CAS 109-60-4)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	56 - 64 mg/l, 96 hours
BENZENE (CAS 71-43-2)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	8.76 - 15.6 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5.9 mg/l, 96 hours
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Brine shrimp (Artemia sp.)	3.55 - 11.29 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.7 mg/l, 96 hours
BENZENE, 1,2,4-TRIMETHYL- (CAS 95-63-6)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	7.19 - 8.28 mg/l, 96 hours
BENZENE, DIMETHYL- (CAS 1330-20-7)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	6.702 - 10.032 mg/l, 96 hours
BENZENE, ETHYL- (CAS 100-41-4)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	1.37 - 4.4 mg/l, 48 hours
Fish	LC50	Atlantic silverside (Menidia menidia)	4.4 - 5.7 mg/l, 96 hours
BENZENE, METHYL- (CAS 108-88-3)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5.89 - 7.81 mg/l, 96 hours
CYCLOHEXANE (CAS 110-82-7)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Striped bass (Morone saxatilis)	8.3 mg/l, 96 hours
CYCLOHEXANE, METHYL- (CAS 108-87-2)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Striped bass (Morone saxatilis)	5.8 mg/l, 96 hours

Components		Species	Test Results
CYCLOHEXANONE (CAS 108-94-1)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours
ETHANOL (CAS 64-17-5)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	7.7 - 11.2 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	42 mg/l, 4 days
ETHANOL, 2-BUTOXY- (CAS 111-76-2)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
FURAN, TETRAHYDRO- (CAS 109-99-9)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	1970 - 2360 mg/l, 96 hours
HEPTANE (CAS 142-82-5)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours
HEXANE (CAS 110-54-3)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours
METHANOL (CAS 67-56-1)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYL- (CAS 128-37-0)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia pulex)	1.44 mg/l, 48 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

1,2-ETHANEDIOL	-1.36
1-BUTANOL	0.88
1-PROPANOL	0.25
1-PROPANOL, 2-METHYL-	0.76
2,2-DIMETHYLBUTANE	3.82
2-BUTANONE	0.29
2-HEPTANONE	1.98
2-HEXANONE, 5-METHYL-	1.88

Partition coefficient n-octanol / water (log Kow)

2-PENTANONE, 4-METHYL-	1.31
2-PROPANOL	0.05
2-PROPANOL, 1-METHOXY-	-0.49
2-PROPANOL, 2-METHYL-	0.35
2-PROPANONE	-0.24
ACETIC ACID	-0.17
ACETIC ACID ETHYL ESTER	0.73
ACETIC ACID, 1,1-DIMETHYLETHYL ESTER	1.76
ACETIC ACID, BUTYL ESTER	1.78
ACETIC ACID, METHYL ESTER	0.18
ACETIC ACID, PROPYL ESTER	1.24
BENZENE	2.13
BENZENE, (1-METHYLETHYL)-	3.66
BENZENE, 1,2,4-TRIMETHYL-	3.78
BENZENE, 1-CHLORO-4-(TRIFLUOROMETHYL)-	3.6
BENZENE, DIMETHYL-	3.12 - 3.2
BENZENE, ETHYL-	3.15
BENZENE, METHYL-	2.73
BUTANE, 2,3-DIMETHYL-	3.42
CYCLOHEXANE	3.44
CYCLOHEXANE, METHYL-	3.61
CYCLOHEXANONE	0.81
ETHANOL	-0.31
ETHANOL, 2-BUTOXY-	0.83
FURAN, TETRAHYDRO-	0.46
HEPTANE	4.66
HEXANE	3.9
METHANOL	-0.77
PENTANE	3.39
PENTANE, 2-METHYL-	3.21
PENTANE, 3-METHYL-	3.6
PHENOL, 2,6-BIS(1,1-DIMETHYLETHYL)-4-METHYL-	5.1

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F
D018: Waste Benzene
D035: Waste Methyl ethyl ketone
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1993

Material name: BGL LACQUER THINNER LT-R

291240 Version #: 19 Revision date: 01-10 2025 Issue date: 04 04 2015

SDS US

26 / 30

UN proper shipping name FLAMMABLE LIQUIDS, N.O.S. (ACETONE, TOLUENE)

Transport hazard class(es)

Class 3

Subsidiary hazard

Packing group II

Environmental hazards

Marine pollutant No.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

ERG number 128

Transport information on packaging may be different from that listed. Transportation information on packaging may be different from that listed. Information is for reference purposes only. The shipper is legally required to provide, certify, and receive training on, the transportation data for any shipment. Transportation information on packaging may be different from that listed.

DOT



General information IMDG Regulated Marine Pollutant.

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)

BENZENE (CAS 71-43-2)

Cancer
Central nervous system
Blood
Aspiration
Skin
Eye
respiratory tract irritation
Flammability

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) Acute toxicity (any route of exposure) Skin corrosion or irritation Serious eye damage or eye irritation Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single or repeated exposure) Aspiration hazard Hazard not otherwise classified (HNOC)
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SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
2-PENTANONE, 4-METHYL-	108-10-1	0.74
2-PROPANOL	67-63-0	3.9204
BENZENE, DIMETHYL-	1330-20-7	3.2193
BENZENE, ETHYL-	100-41-4	0.8141
BENZENE, METHYL-	108-88-3	10.2118
CYCLOHEXANE	110-82-7	1.346
METHANOL	67-56-1	7.6628

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

1,2-ETHANEDIOL (CAS 107-21-1)
2-PENTANONE, 4-METHYL- (CAS 108-10-1)
BENZENE (CAS 71-43-2)
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)
BENZENE, DIMETHYL- (CAS 1330-20-7)
BENZENE, ETHYL- (CAS 100-41-4)
BENZENE, METHYL- (CAS 108-88-3)
HEXANE (CAS 110-54-3)
METHANOL (CAS 67-56-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

PENTANE (CAS 109-66-0)

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

2-BUTANONE (CAS 78-93-3)	6714
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	6715
2-PROPANONE (CAS 67-64-1)	6532
BENZENE, METHYL- (CAS 108-88-3)	6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

2-BUTANONE (CAS 78-93-3)	35 %WV
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	35 %WV
2-PROPANONE (CAS 67-64-1)	35 %WV
BENZENE, METHYL- (CAS 108-88-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

2-BUTANONE (CAS 78-93-3)	6714
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	6715
2-PROPANONE (CAS 67-64-1)	6532
BENZENE, METHYL- (CAS 108-88-3)	594

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

1-BUTANOL (CAS 71-36-3)	Low priority
1-PROPANOL (CAS 71-23-8)	Low priority
1-PROPANOL, 2-METHYL- (CAS 78-83-1)	Low priority
2-BUTANONE (CAS 78-93-3)	Low priority
2-HEPTANONE (CAS 110-43-0)	Other Flavoring Substances with OSHA PEL's
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	Low priority
2-PROPANOL (CAS 67-63-0)	Low priority

2-PROPANONE (CAS 67-64-1)	Low priority
ACETIC ACID (CAS 64-19-7)	High priority
ACETIC ACID ETHYL ESTER (CAS 141-78-6)	Low priority
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	Low priority
ACETIC ACID, METHYL ESTER (CAS 79-20-9)	Low priority
ACETIC ACID, PROPYL ESTER (CAS 109-60-4)	Low priority
CYCLOHEXANONE (CAS 108-94-1)	Low priority
ETHANOL (CAS 64-17-5)	Low priority

US state regulations

California Proposition 65



WARNING: This product can expose you to chemicals including 2-PENTANONE, 4-METHYL-, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

2-PENTANONE, 4-METHYL- (CAS 108-10-1)	Listed: November 4, 2011
BENZENE (CAS 71-43-2)	Listed: February 27, 1987
BENZENE, (1-METHYLETHYL)- (CAS 98-82-8)	Listed: April 6, 2010
BENZENE, 1-CHLORO-4-(TRIFLUOROMETHYL)- (CAS 98-56-6)	Listed: June 28, 2018
	Listed: June 28, 2019
BENZENE, ETHYL- (CAS 100-41-4)	Listed: June 11, 2004
FURAN, TETRAHYDRO- (CAS 109-99-9)	Listed: December 17, 2021

California Proposition 65 - CRT: Listed date/Developmental toxin

1,2-ETHANEDIOL (CAS 107-21-1)	Listed: June 19, 2015
2-PENTANONE, 4-METHYL- (CAS 108-10-1)	Listed: March 28, 2014
BENZENE (CAS 71-43-2)	Listed: December 26, 1997
BENZENE, METHYL- (CAS 108-88-3)	Listed: January 1, 1991
METHANOL (CAS 67-56-1)	Listed: March 16, 2012

California Proposition 65 - CRT: Listed date/Male reproductive toxin

BENZENE (CAS 71-43-2)	Listed: December 26, 1997
HEXANE (CAS 110-54-3)	Listed: December 15, 2017

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	04-04-2015
Revision date	01-10-2025
Version #	19

HMIS® ratings

Health: 4*
Flammability: 3
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 3
Instability: 0

Disclaimer

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.