National Transportation Safety Board
Office of Highway Safety
Washington, DC 20594

HWY24MH013

HAZARDOUS MATERIALS ATTACHMENT

Safety Data Sheet (SDS) - Flammable Liquids, N.O.S. (Acetone, Toluene)

(17 Pages)

SAFETY DATA SHEET

BRENNTAG

1. Identification

Other means of identification None known.

Product identifier **BGL LACQUER THINNER LT-R**

Recommended use ALL PROPER AND LEGAL PURPOSES

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Brenntag Great Lakes, LLC

Address 4420 N. Harley Davidson Ave.
Wauwatosa, WI 53225

Telephone 262-252-3550

E-mail Not available.

Emergency phone number 800-424-9300 CHEMTREC

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 2A
	Reproductive toxicity	Category 1A
	Specific target organ toxicity, single exposure	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	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 irritation. Toxic if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. 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. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Keep cool. 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	1.4% of the mixture consists of component(s) of unknown acute oral toxicity. 24.8% of the mixture consists of component(s) of unknown acute dermal toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-PROPANONE		67-64-1	28
ACETIC ACID ETHYL ESTER		141-78-6	17
2-BUTANONE		78-93-3	15
METHANOL		67-56-1	8
2-PROPANOL		67-63-0	7
BENZENE, METHYL-		108-88-3	7
BENZENE, DIMETHYL-		1330-20-7	4
2-PROPANOL, 1-METHOXY-		107-98-2	3
ETHANOL		64-17-5	3
ACETIC ACID, BUTYL ESTER		123-86-4	1.4
HEPTANE		142-82-5	1.4
1-BUTANOL		71-36-3	1
1-PROPANOL		71-23-8	1
1-PROPANOL, 2-METHYL-		78-83-1	1
ACETIC ACID, METHYL ESTER		79-20-9	1
Other components below reportable levels			1.2

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 if irritation develops and persists.
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 and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. 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. 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. 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

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/m3
		100 ppm
1-PROPANOL (CAS 71-23-8)	PEL	500 mg/m3
		200 ppm
1-PROPANOL, 2-METHYL- (CAS 78-83-1)	PEL	300 mg/m3
		100 ppm
2-BUTANONE (CAS 78-93-3)	PEL	590 mg/m3
		200 ppm
2-PROPANOL (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm
2-PROPANONE (CAS 67-64-1)	PEL	2400 mg/m3
		1000 ppm
ACETIC ACID ETHYL ESTER (CAS 141-78-6)	PEL	1400 mg/m3
		400 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

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

Components	Type	Value
BENZENE, DIMETHYL- (CAS 1330-20-7)	PEL	435 mg/m3
		100 ppm
ETHANOL (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm
HEPTANE (CAS 142-82-5)	PEL	2000 mg/m3
		500 ppm
METHANOL (CAS 67-56-1)	PEL	260 mg/m3
		200 ppm

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

Components	Type	Value
BENZENE, METHYL- (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value
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-BUTANONE (CAS 78-93-3)	STEL	300 ppm
	TWA	200 ppm
2-PROPANOL (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
2-PROPANOL, 1-METHOXY- (CAS 107-98-2)	STEL	100 ppm
	TWA	50 ppm
2-PROPANONE (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
ACETIC ACID ETHYL ESTER (CAS 141-78-6)	TWA	400 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
BENZENE, DIMETHYL- (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm
BENZENE, METHYL- (CAS 108-88-3)	TWA	20 ppm
ETHANOL (CAS 64-17-5)	STEL	1000 ppm
HEPTANE (CAS 142-82-5)	STEL	500 ppm

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value
	TWA	400 ppm
METHANOL (CAS 67-56-1)	STEL	250 ppm
	TWA	200 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-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-PROPANONE (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
ACETIC ACID ETHYL ESTER (CAS 141-78-6)	TWA	1400 mg/m3
		400 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
BENZENE, DIMETHYL- (CAS 1330-20-7)	STEL	655 mg/m3
		150 ppm

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

Components	Type	Value
	TWA	435 mg/m3
		100 ppm
BENZENE, METHYL- (CAS 108-88-3)	STEL	560 mg/m3
		150 ppm
	TWA	375 mg/m3
		100 ppm
ETHANOL (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
HEPTANE (CAS 142-82-5)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
		85 ppm
METHANOL (CAS 67-56-1)	STEL	325 mg/m3
		250 ppm
	TWA	260 mg/m3
		200 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-PROPANOL (CAS 67-63-0)	40 mg/l	Acetone	Urine	*
2-PROPANONE (CAS 67-64-1)	25 mg/l	Acetone	Urine	*
BENZENE, DIMETHYL- (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	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	*
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.
BENZENE, METHYL- (CAS 108-88-3)	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, METHYL- (CAS 108-88-3)	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.
METHANOL (CAS 67-56-1)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

METHANOL (CAS 67-56-1)	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.
METHANOL (CAS 67-56-1)	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 CLEAR TO HAZY

Odor HYDROCARBON

Odor threshold Not available.

pH Not available.

Melting point/freezing point -40 °F (-40 °C)

Initial boiling point and boiling range 169.78 °F (76.54 °C) estimated

Flash point 1.0 °F (-17.2 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) 2 % estimated

Explosive limit - upper (%) 10.15 % estimated

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 876.41 °F (469.12 °C) estimated

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density 6.84 lbs/gal

Explosive properties Not explosive.

Flammability class	Flammable IB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	95.6 % estimated
Specific gravity	0.82
VOC	66.4 % 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 and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
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 and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. 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		
Acute		
Inhalation		
Vapor		
ATEmix		2.298 mg/l

Components	Species	Test Results
1-BUTANOL (CAS 71-36-3)		
Acute		
Dermal		
LD50	Rabbit	3400 mg/kg
Oral		
LD50	Rat	790 mg/kg
1-PROPANOL (CAS 71-23-8)		
Acute		
Oral		
LD50	Rat	1.87 g/kg
1-PROPANOL, 2-METHYL- (CAS 78-83-1)		
Acute		
Dermal		
LD50	Rabbit	3392 mg/kg

Components	Species	Test Results
Oral		
LD50	Rat	2.46 g/kg
2-BUTANONE (CAS 78-93-3)		
Acute		
Dermal		
LD50	Rabbit	> 8000 mg/kg
Oral		
LD50	Rat	2300 - 3500 mg/kg
2-PROPANOL (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	12800 mg/kg
Oral		
LD50	Rat	4.7 g/kg
2-PROPANOL, 1-METHOXY- (CAS 107-98-2)		
Acute		
Dermal		
LD50	Rabbit	13 g/kg
Oral		
LD50	Rat	5.71 g/kg
2-PROPANONE (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20000 mg/kg
Oral		
LD50	Rat	5800 mg/kg
ACETIC ACID ETHYL ESTER (CAS 141-78-6)		
Acute		
Oral		
LD50	Rat	5.6 g/kg
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)		
Acute		
Oral		
LD50	Rat	14000 mg/kg
ACETIC ACID, METHYL ESTER (CAS 79-20-9)		
Acute		
Oral		
LD50	Rabbit	3.7 g/kg
BENZENE, DIMETHYL- (CAS 1330-20-7)		
Acute		
Dermal		
LD50	Rabbit	> 43 g/kg
Oral		
LD50	Rat	3523 - 8600 mg/kg
BENZENE, METHYL- (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	12120 mg/kg
Oral		
LD50	Rat	2.6 g/kg

Components	Species	Test Results
ETHANOL (CAS 64-17-5)		
Acute		
Oral		
LD50	Rat	6.2 g/kg
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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

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

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

IARC Monographs. Overall Evaluation of Carcinogenicity

BENZENE, DIMETHYL- (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.
BENZENE, METHYL- (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

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 respiratory irritation. May cause drowsiness and 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.

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-BUTANOL (CAS 71-36-3)			
Aquatic			
Acute			
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			
Acute			
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			
Acute			
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			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	>= 4025 - <= 6440 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	> 400 mg/l, 96 hours
2-PROPANOL (CAS 67-63-0)			
Aquatic			
Acute			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours
2-PROPANONE (CAS 67-64-1)			
Aquatic			
Acute			
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 ETHYL ESTER (CAS 141-78-6)			
Aquatic			
Acute			
Fish	LC50	Indian catfish (Heteropneustes fossilis)	>= 200.32 - <= 225.42 mg/l, 96 hours
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)			
Aquatic			
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	>= 17 - <= 19 mg/l, 96 hours
ACETIC ACID, METHYL ESTER (CAS 79-20-9)			
Aquatic			
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	>= 295 - <= 348 mg/l, 96 hours
BENZENE, DIMETHYL- (CAS 1330-20-7)			
Aquatic			
Acute			
Fish	LC50	Bluegill (Lepomis macrochirus)	>= 7.711 - <= 9.591 mg/l, 96 hours
BENZENE, METHYL- (CAS 108-88-3)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	>= 5.46 - <= 9.83 mg/l, 48 hours

Components		Species	Test Results
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours
ETHANOL (CAS 64-17-5)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	>= 7.7 - <= 11.2 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
HEPTANE (CAS 142-82-5)			
Aquatic			
Acute			
Fish	LC50	Mozambique tilapia (Tilapia mossambica)	375 mg/l, 96 hours
METHANOL (CAS 67-56-1)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours

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

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

1-BUTANOL	0.88
1-PROPANOL	0.25
1-PROPANOL, 2-METHYL-	0.76
2-BUTANONE	0.29
2-PROPANOL	0.05
2-PROPANONE	-0.24
ACETIC ACID ETHYL ESTER	0.73
ACETIC ACID, BUTYL ESTER	1.78
ACETIC ACID, METHYL ESTER	0.18
BENZENE, DIMETHYL-	3.12 - 3.2
BENZENE, METHYL-	2.73
ETHANOL	-0.31
HEPTANE	4.66
METHANOL	-0.77

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 Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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
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).

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

UN proper shipping name	FLAMMABLE LIQUIDS, N.O.S. (ACETONE, TOLUENE)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
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.

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)

1-BUTANOL (CAS 71-36-3)	Listed.
1-PROPANOL, 2-METHYL- (CAS 78-83-1)	Listed.
2-BUTANONE (CAS 78-93-3)	Listed.
2-PROPANONE (CAS 67-64-1)	Listed.
ACETIC ACID ETHYL ESTER (CAS 141-78-6)	Listed.
ACETIC ACID, BUTYL ESTER (CAS 123-86-4)	Listed.
BENZENE, DIMETHYL- (CAS 1330-20-7)	Listed.
BENZENE, METHYL- (CAS 108-88-3)	Listed.
METHANOL (CAS 67-56-1)	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) Acute toxicity (any route of exposure) Skin corrosion or irritation Serious eye damage or eye irritation Reproductive toxicity Specific target organ toxicity (single or repeated exposure) Aspiration hazard Hazard not otherwise classified (HNOC)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
1-BUTANOL	71-36-3	1
BENZENE, DIMETHYL-	1330-20-7	4
BENZENE, METHYL-	108-88-3	7
METHANOL	67-56-1	8

Other federal regulations

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

BENZENE, DIMETHYL- (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
METHANOL (CAS 67-56-1)

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

Not regulated.

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-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-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-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-PROPANOL (CAS 67-63-0)	Low priority
2-PROPANONE (CAS 67-64-1)	Low 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
ETHANOL (CAS 64-17-5)	Low priority

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1-BUTANOL (CAS 71-36-3)
1-PROPANOL, 2-METHYL- (CAS 78-83-1)
2-BUTANONE (CAS 78-93-3)
2-PROPANOL (CAS 67-63-0)
2-PROPANOL, 1-METHOXY- (CAS 107-98-2)
2-PROPANONE (CAS 67-64-1)
ACETIC ACID ETHYL ESTER (CAS 141-78-6)
BENZENE, DIMETHYL- (CAS 1330-20-7)
BENZENE, METHYL- (CAS 108-88-3)
HEPTANE (CAS 142-82-5)
METHANOL (CAS 67-56-1)

California Proposition 65

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

California Proposition 65 - CRT: Listed date/Developmental toxin

BENZENE, METHYL- (CAS 108-88-3)	Listed: January 1, 1991
METHANOL (CAS 67-56-1)	Listed: March 16, 2012

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
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 06-04-2023

Version # 18

HMIS® ratings Health: 4*
Flammability: 3
Physical hazard: 0

NFPA ratings Health: 2
Flammability: 3
Instability: 0

Disclaimer While Brenntag believes the information contained herein to be accurate, Brenntag makes no representation or warranty, express or implied, regarding, and assumes no liability for, the accuracy or completeness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with applicable federal, state, and local law. This SDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.

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