

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : Z-PLATE™ Aerosol

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Whitmore Manufacturing LLC

930 Whitmore Drive

Rockwall, Texas, 75087

USA

T 1.972.771.1000

Regulatory@whitmores.com - www.jetlube.com

1.4. Emergency telephone number

Emergency number : For Chemical Emergency Call CHEMTREC 24hr/day 7days/week
Within USA and Canada: 1.800.424.9300
Outside USA and Canada: +1.703.527.3887
(collect calls accepted)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable aerosol Category 1	H222	Extremely flammable aerosol
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Carcinogenicity Category 2	H351	Suspected of causing cancer
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: H222 - Extremely flammable aerosol
H319 - Causes serious eye irritation
H351 - Suspected of causing cancer
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 - Do not spray on an open flame or other ignition source.
P251 - Pressurized container: Do not pierce or burn, even after use.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P405 - Store locked up.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

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2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
acetone	CAS-No.: 67-64-1	10 – 20	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Methyl ethyl ketone	CAS-No.: 78-93-3	5 – 10	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
methyl propyl ketone	CAS-No.: 107-87-9	2 – 5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319
Aluminum (Note T)	CAS-No.: 7429-90-5	1 – 2	Acute Tox. 3 (Inhalation:dust,mist), H331 STOT RE 2, H373
Ethylbenzene	CAS-No.: 100-41-4	0.1640091 – 1.1290691	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:vapour), H332 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304

Note T : This substance may be marketed in a form which does not have the physical hazards as indicated by the classification in the entry in Part 3. If the results of the relevant method or methods in accordance with Part 2 of Annex I of this Regulation show that the specific form of substance marketed does not exhibit this physical property or these physical hazards, the substance shall be classified in accordance with the result or results of this test or these tests. Relevant information, including reference to the relevant test method(s) shall be included in the safety data sheet.

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: If exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after eye contact	: Eye irritation.
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4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
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5.2. Specific hazards arising from the chemical

Fire hazard	: Extremely flammable aerosol.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Exercise caution. Spill area may be slippery. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Z-PLATE™ Aerosol	
No additional information available	
Aluminum (7429-90-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Aluminum metal and insoluble compounds
ACGIH OEL TWA	1 mg/m³ (R - Respirable particulate matter)
Remark (ACGIH)	TLV® Basis: Pneumoconiosis; LRT irr; neurotoxicity. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Aluminum Metal (as Al)
OSHA PEL (TWA) [1]	15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
methyl propyl ketone (107-87-9)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methyl propyl ketone
ACGIH OEL STEL [ppm]	150 ppm
Remark (ACGIH)	TLV® Basis: Pulm func; eye irr

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methyl propyl ketone (107-87-9)	
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	2-Pentanone (Methyl propyl ketone)
OSHA PEL (TWA) [1]	700 mg/m ³
OSHA PEL (TWA) [2]	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Ethylbenzene (100-41-4)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethylbenzene
ACGIH OEL TWA [ppm]	20 ppm
Remark (ACGIH)	TLV® Basis: URT irr; kidney dam (nephropathy); cochlear impair. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl benzene
OSHA PEL (TWA) [1]	435 mg/m ³
OSHA PEL (TWA) [2]	100 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
acetone (67-64-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Acetone
ACGIH OEL TWA [ppm]	250 ppm
ACGIH OEL STEL [ppm]	500 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Acetone
OSHA PEL (TWA) [1]	2400 mg/m ³
OSHA PEL (TWA) [2]	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Methyl ethyl ketone (78-93-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methyl ethyl ketone (MEK)
ACGIH OEL TWA [ppm]	200 ppm
ACGIH OEL STEL [ppm]	300 ppm
Remark (ACGIH)	TLV® Basis: URT irr; CNS & PNS impair. Notations: BEI
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	2-Butanone (Methyl ethyl ketone)
OSHA PEL (TWA) [1]	590 mg/m ³

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Methyl ethyl ketone (78-93-3)				
OSHA PEL (TWA) [2]		200 ppm		
Regulatory reference (US-OSHA)		OSHA Annotated Table Z-1		
8.2. Appropriate engineering controls				
Appropriate engineering controls		: Ensure good ventilation of the work station.		
Environmental exposure controls		: Avoid release to the environment.		
8.3. Individual protection measures/Personal protective equipment				
Hand protection:				
Neoprene or nitrile rubber gloves				
Type	Material	Permeation	Thickness (mm)	Penetration
Disposable gloves	Nitrile rubber (NBR), Neoprene rubber (HNBR)	6 (> 480 minutes)	> 0.6 mm	
Eye protection:				
Chemical goggles or safety glasses				
Skin and body protection:				
Wear suitable protective clothing				
Respiratory protection:				
In case of insufficient ventilation, wear suitable respiratory equipment				

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Aerosols.
Color	: Gray
Odor	: solvent-like
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: -16 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Extremely flammable aerosol.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

VOC content	: 504 g/l
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SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Aluminum (7429-90-5)

LD50 oral rat	> 15900 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LC50 Inhalation - Rat	> 0.888 mg/l air Animal: rat, Animal sex: male, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
LC50 Inhalation - Rat (Dust/Mist)	> 0.888 mg/l Source: ECHA
ATE US (dust, mist)	0.5 mg/l/4h

methy propyl ketone (107-87-9)

LD50 oral rat	1600 – 3200 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LC50 Inhalation - Rat	> 25.5 mg/l air Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)
ATE US (oral)	1600 mg/kg body weight

Ethylbenzene (100-41-4)

LD50 oral rat	3500 mg/kg (Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	15432 mg/kg body weight (24 h, Rabbit, Male, Experimental value, Dermal)
LC50 Inhalation - Rat	17.8 mg/l (4 h, Rat, Male, Experimental value, Inhalation (vapours))
ATE US (oral)	3500 mg/kg body weight
ATE US (dermal)	15432 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	17.8 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

acetone (67-64-1)

LD50 oral rat	5800 mg/kg body weight Animal: rat, Animal sex: female
LD50 dermal rabbit	20000 mg/kg (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value, Dermal)
LC50 Inhalation - Rat	76 mg/l air Animal: rat, Animal sex: female, 95% CL: 65,2 - 88,4
LC50 Inhalation - Rat (Vapours)	76 mg/l Source: ECHA
ATE US (oral)	5800 mg/kg body weight
ATE US (dermal)	20000 mg/kg body weight

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Methyl ethyl ketone (78-93-3)	
LD50 oral rat	2193 mg/kg body weight (Equivalent or similar to OECD 423, Rat, Male / female, Read-across, Oral)
LD50 dermal rabbit	> 10 ml/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Male, Experimental value, Dermal)
LC50 Inhalation - Rat (Vapours)	34.5 mg/l/4h
ATE US (oral)	2193 mg/kg body weight
ATE US (vapors)	34.5 mg/l/4h
Skin corrosion/irritation	: Not classified
methyl propyl ketone (107-87-9)	
pH	No data available in the literature
acetone (67-64-1)	
pH	7 (10 g/l)
Serious eye damage/irritation	: Causes serious eye irritation.
methyl propyl ketone (107-87-9)	
pH	No data available in the literature
acetone (67-64-1)	
pH	7 (10 g/l)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Ethylbenzene (100-41-4)	
IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: Not classified
Aluminum (7429-90-5)	
NOAEL (animal/male, F0/P)	1000 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
acetone (67-64-1)	
LOAEL (animal/female, F0/P)	11298 mg/kg body weight Animal: mouse, Animal sex: female
NOAEL (animal/male, F0/P)	900 mg/kg body weight Animal: rat, Animal sex: male, Remarks on results: other:Generation not specified (migrated information)
STOT-single exposure	: Not classified
acetone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.
Methyl ethyl ketone (78-93-3)	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aluminum (7429-90-5)	
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.05 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

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Ethylbenzene (100-41-4)	
NOAEL (oral,rat,90 days)	75 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Aluminum (7429-90-5)	
Viscosity, kinematic	Not applicable (solid)

methyl propyl ketone (107-87-9)	
Viscosity, kinematic	No data available in the literature

Ethylbenzene (100-41-4)	
Viscosity, kinematic	0.773 mm²/s (20 °C, OECD 114: Viscosity of Liquids)

acetone (67-64-1)	
Viscosity, kinematic	0.417 mm²/s

Methyl ethyl ketone (78-93-3)	
Viscosity, kinematic	0.494 mm²/s

Symptoms/effects after eye contact : Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Aluminum (7429-90-5)	
EC50 72h - Algae [1]	1.05 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.2 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

methyl propyl ketone (107-87-9)	
LC50 - Fish [1]	1210 mg/l
EC50 - Crustacea [1]	> 110 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 150 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	> 150 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

Ethylbenzene (100-41-4)	
LC50 - Fish [1]	3.7 mg/l
EC50 - Crustacea [1]	0.42 mg/l
EC50 72h - Algae [1]	4.9 mg/l Test organisms (species): Skeletonema costatum
EC50 72h - Algae [2]	5.4 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	7.7 mg/l Test organisms (species): Skeletonema costatum
EC50 96h - Algae [2]	3.6 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC (chronic)	0.96 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'

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Ethylbenzene (100-41-4)	
NOEC chronic crustacea	0.956 mg/l
acetone (67-64-1)	
LC50 - Fish [1]	5540 mg/l (EU Method C.1, 96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 96h - Algae [1]	> 7000 mg/l (Selenastrum capricornutum, Static system, Fresh water, Experimental value, Nominal concentration)
LOEC (chronic)	> 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
Methyl ethyl ketone (78-93-3)	
LC50 - Fish [1]	2993 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	308 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	1972 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	2029 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	1972 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
NOEC chronic algae	93 mg/l
12.2. Persistence and degradability	
Aluminum (7429-90-5)	
Not rapidly degradable	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
methyl propyl ketone (107-87-9)	
Not rapidly degradable	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Ethylbenzene (100-41-4)	
Not rapidly degradable	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.44 g O ₂ /g substance
Chemical oxygen demand (COD)	2.1 g O ₂ /g substance
ThOD	3.17 g O ₂ /g substance
acetone (67-64-1)	
Not rapidly degradable	
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.43 g O ₂ /g substance
Chemical oxygen demand (COD)	1.92 g O ₂ /g substance
ThOD	2.2 g O ₂ /g substance
BOD (% of ThOD)	0.872 (20 day(s), Literature study)

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Methyl ethyl ketone (78-93-3)	
Persistence and degradability	Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	2.03 g O ₂ /g substance
Chemical oxygen demand (COD)	2.31 g O ₂ /g substance
ThOD	2.44 g O ₂ /g substance
12.3. Bioaccumulative potential	
methyl propyl ketone (107-87-9)	
Partition coefficient n-octanol/water (Log Pow)	0.857 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Ethylbenzene (100-41-4)	
BCF - Fish [1]	1 – 2.4 (Other, 6 week(s), Oncorhynchus kisutch, Flow-through system, Salt water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3.6 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
acetone (67-64-1)	
BCF - Fish [1]	0.69 (Pisces)
BCF - Other aquatic organisms [1]	3 (BCFWIN, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	-0.24 (Test data)
Bioaccumulative potential	Not bioaccumulative.
Methyl ethyl ketone (78-93-3)	
Partition coefficient n-octanol/water (Log Pow)	0.3 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 40 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
12.4. Mobility in soil	
Aluminum (7429-90-5)	
Surface tension	900 mN/m (700 °C)
Ecology - soil	Adsorbs into the soil.
methyl propyl ketone (107-87-9)	
Surface tension	23.87 mN/m (20 °C, 100 %, EU Method A.5: Surface tension)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.915 – 1.624 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.
Ethylbenzene (100-41-4)	
Surface tension	0.071 N/m (23 °C, 0.0582 g/l, EU Method A.5: Surface tension)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.71 (log Koc, PCKOCWIN v1.66, QSAR)
Ecology - soil	Low potential for adsorption in soil. Toxic to soil organisms.
acetone (67-64-1)	
Surface tension	0.0237 N/m
Ecology - soil	No (test)data on mobility of the substance available.

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Methyl ethyl ketone (78-93-3)	
Surface tension	0.024 N/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.53 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil. Slightly harmful to plants.

12.5. Other adverse effects

No additional information available





SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
1950	UN1950	1950	1950
14.2. Proper Shipping Name			
Aerosols, flammable, n.o.s.	AEROSOLS	AEROSOLS	Aerosols, flammable
Transport document description			
UN1950 Aerosols, flammable, n.o.s., 2.1	UN1950 AEROSOLS, 2.1	UN 1950 AEROSOLS, 2.1	UN 1950 Aerosols, flammable, 2.1
14.3. Transport hazard class(es)			
2.1	2.1	2.1	2.1
			
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

DOT

UN-No.(DOT)	: UN1950
DOT Special Provisions (49 CFR 172.102)	: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 306
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 304
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 150 kg
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 25 - Protected from sources of heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials

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TDG

UN-No. (TDG)	: UN1950
TDG Special Provisions	: 80 - Despite section 1.17 of Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases), a person must not offer for transport or transport these dangerous goods unless they are in a means of containment that is in compliance with the requirements for transporting gases in Part 5 (Means of Containment), 107 - (1) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of UN1950, AEROSOLS, and UN2037, GAS CARTRIDGES, that contain dangerous goods included in Class 2.1 or Class 2.2 and that are transported on a road vehicle, a railway vehicle or a vessel on a domestic voyage, if the aerosols or gas cartridges have a capacity less than or equal to 50 mL. (2) Subsection (1) does not apply to self-defence spray.
Explosive Limit and Limited Quantity Index	: 1 L
Excepted quantities (TDG)	: E0
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 75 L

IMDG

Special provision (IMDG)	: 63, 190, 277, 327, 344, 381, 959
Limited quantities (IMDG)	: SP277
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P207, LP200
Packing provisions (IMDG)	: PP87, L2
EmS-No. (Fire)	: F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES
EmS-No. (Spillage)	: S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE)
Stowage category (IMDG)	: None
Stowage and handling (IMDG)	: SW1, SW22
Segregation (IMDG)	: SG69

IATA

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Y203
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 203
PCA max net quantity (IATA)	: 75kg
CAO packing instructions (IATA)	: 203
CAO max net quantity (IATA)	: 150kg
Special provision (IATA)	: A145, A167, A802
ERG code (IATA)	: 10L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Aluminum	CAS-No. 7429-90-5	1 – 2%
Zinc	CAS-No. 7440-66-6	20 – 40%
Xylene	CAS-No. 1330-20-7	17.9157987 – 19.8459187%
Ethylbenzene	CAS-No. 100-41-4	0.1640091 – 1.1290691%

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Ethylbenzene (100-41-4)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	1000 lb
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acetone (67-64-1)

CERCLA RQ	5000 lb
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Methyl ethyl ketone (78-93-3)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
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15.2. International regulations

CANADA

Aluminum (7429-90-5)

Listed on the Canadian DSL (Domestic Substances List)

methyl propyl ketone (107-87-9)

Listed on the Canadian DSL (Domestic Substances List)

Ethylbenzene (100-41-4)

Listed on the Canadian DSL (Domestic Substances List)

acetone (67-64-1)

Listed on the Canadian DSL (Domestic Substances List)

Methyl ethyl ketone (78-93-3)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

methyl propyl ketone (107-87-9)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Ethylbenzene (100-41-4)

Listed on IARC (International Agency for Research on Cancer)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

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acetone (67-64-1)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Methyl ethyl ketone (78-93-3)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

15.3. US State regulations



WARNING:

This product can expose you to Methyl isobutyl ketone, 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.

Component	State or local regulations
Aluminum(7429-90-5)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Zinc(7440-66-6)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
calcium oxide(1305-78-8)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
magnesium oxide(1309-48-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
calcium sulfate(7778-18-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
quartz, 1%≤conc respirable crystalline silica<10%(14808-60-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
methyl propyl ketone(107-87-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Xylene(1330-20-7)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Methyl isobutyl ketone(108-10-1)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Ethylbenzene(100-41-4)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

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Component	State or local regulations
toluene(108-88-3)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Cumene(98-82-8)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
butyl glycolether(111-76-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
cyclohexane(110-82-7)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
N-methyl-2-pyrrolidone(872-50-4)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
2-ethyl hexanoic acid(149-57-5)	U.S. - New Jersey - Right to Know Hazardous Substance List
Diethylene glycol(111-46-6)	U.S. - Pennsylvania - RTK (Right to Know) List
acetone(67-64-1)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List
Methyl ethyl ketone(78-93-3)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Revision date : 12/09/2022

Full text of H-phrases	
H222	Extremely flammable aerosol
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.