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SDS Number: 146A
Revision Date:11/01/2024
Supersedes Date: 02/21/2018

SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Product Name: SERVICE CEMENT

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Type: Adhesive **Part Number(s): 10-302**

Emergency Contact: Chemtrec
Phone: (800)424-9300

1.2 Use of the substance/mixture **: Industrial Use**

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS US classification

Flammable liquids, Category 2	Highly flammable liquid and vapor.
Acute toxicity (inhalation:vapor) Category 4	Harmful if inhaled.
Skin corrosion/irritation, Category 2	Causes skin irritation
Serious eye damage/eye irritation, Category 2A	Causes serious eye irritation.
Skin sensitisation, Category 1	May cause an allergic skin reaction.
Reproductive toxicity, Category 2	Suspected of damaging fertility or the unborn child (Inhalation).
Specific target organ toxicity – Single exposure, Category 1	Causes damage to organs (central nervous system) (Inhalation).
Specific target organ toxicity – Single exposure, Category 3,	Narcosis May cause drowsiness or dizziness.

2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) : Highly flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child (Inhalation).
Causes damage to organs (central nervous system) (Inhalation).

Precautionary statements (GHS US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof lighting, ventilating, electrical equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe mist, vapors.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear eye protection, protective gloves, face shield, protective clothing.
If on skin: Wash with plenty of soap and water.
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: Call a poison center/doctor.
If exposed or concerned: Get medical advice/attention.
Call a POISON CENTER, a doctor if you feel unwell.

SECTION 2. HAZARDS IDENTIFICATION (Continued)

Specific treatment (see supplemental first aid instruction on this label).
If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use foam to extinguish.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to a hazardous or special waste collection point.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Ethyl Acetate	CAS-No.: 141-78-6	28 – 33	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
2-propanol	CAS-No.: 67-63-0	10 – 15	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Toluene	CAS-No.: 108-88-3	10 – 15	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 Asp. Tox. 1, H304
Butyl Acetate	CAS-No.: 123-86-4	5 – 10	Flam. Liq. 3, H226 STOT SE 3, H336
Acetone	CAS-No.: 67-64-1	5 – 10	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
Tricresyl Phosphates	CAS-No.: 1330-78-5	1 – 5	STOT SE 1, H370 Aquatic Acute 1, H400 Aquatic Chronic 4, H413
Colophony	CAS-No.: 8050-09-7	0.5 – 3	Skin Sens. 1, H317

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. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

SECTION 4. FIRST AID MEASURES (Continued)

First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

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 or a doctor if you feel unwell.

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

Symptoms/effects : May cause drowsiness or dizziness.

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

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.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire with normal precautions from a reasonable distance. Do not enter fire area without proper protective equipment, including respiratory protection.

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Evacuate area. Only qualified personnel equipped with suitable protective equipment may intervene. Notify fire brigade and environmental authorities. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

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

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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

SECTION 6. ACCIDENTAL RELEASE MEASURES (Continued)

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Keep only in original container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Always wash hands after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Packaging materials : Store always product in container of same material as original container.

SECTION 8. PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

8.1. Control parameters

2-propanol (67-63-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	2-Propanol
ACGIH OEL TWA	200 ppm
ACGIH OEL STEL	400 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Isopropyl alcohol
OSHA PEL TWA	980 mg/m³
	400 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Toluene (108-88-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Toluene
ACGIH OEL TWA	20 ppm
Remark (ACGIH)	TLV® Basis: CNS, visual & hearing impair; female repro system eff; pregnancy loss. Notations: OTO; A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Toluene
OSHA PEL TWA	200 ppm
OSHA PEL C	300 ppm
Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift	500 ppm 10 mins.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2

SECTION 8. PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION (CONT.)

Ethyl Acetate (141-78-6)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethyl acetate
ACGIH OEL TWA	400 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr

Ethyl Acetate (141-78-6)	
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl acetate
OSHA PEL TWA	1400 mg/m³
	400 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Butyl Acetate (123-86-4)	
USA - ACGIH - Occupational Exposure Limits	
Local name	n-Butyl acetate
ACGIH OEL TWA	50 ppm
ACGIH OEL STEL	150 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	n-Butyl-acetate
OSHA PEL TWA	710 mg/m³
	150 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	250 ppm
ACGIH OEL STEL	500 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Acetone
OSHA PEL TWA	2400 mg/m³
	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Colophony (8050-09-7)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Resin acids, as total Resin acids
ACGIH OEL TWA	0.001 mg/m³ (Inhalable fraction)
Remark (ACGIH)	TLV® Basis: Asthma; resp & eye irr; dermal & resp sens. Notations: DSEN; RSEN
Regulatory reference	ACGIH 2024

8.2 Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

SECTION 8. PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION (CONT.)

8.3 Individual protection measures/Personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection: Protective gloves

Eye protection: Safety glasses

Skin and body protection: Wear suitable protective clothing

Respiratory protection: [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state : Liquid

Appearance	: Liquid.
Color	: Colorless
Odor	: Characteristic odor
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 55.55 °C
Flash point	: -20 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 0.9644
Solubility	: Insoluble in water.
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
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2 Other information

No additional information available

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity
Highly flammable liquid and vapor.
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
Consult supplier(s) of these materials for specific recommendations.
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) : Inhalation:vapor: Harmful if inhaled.

ATE US (vapors)	10.571 mg/l/4h

2-propanol (67-63-0)	
LD50 oral rat	5840 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	16400 ml/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat [ppm]	> 10000 ppm (Equivalent or similar to OECD 403, 6 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	5840 mg/kg bodyweight
ATE US (dermal)	12890400 mg/kg bodyweight

Toluene (108-88-3)	
LD50 oral rat	5580 mg/kg bodyweight (Equivalent or similar to EU Method B.1, Rat, Male, Experimental value, Oral, 7 day(s))
LD50 dermal rabbit	> 5000 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal)

Toluene (108-88-3)	
LC50 Inhalation - Rat	28.1 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
ATE US (oral)	5580 mg/kg bodyweight

SECTION 11. TOXICOLOGICAL INFORMATION (Continued)

Ethyl Acetate (141-78-6)	
LD50 oral rat	10200 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 oral	4934 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 20000 mg/kg bodyweight (24 hour cuff method, 24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
ATE US (oral)	4934 mg/kg bodyweight

Butyl Acetate (123-86-4)	
LD50 oral rat	10760 – 12789 mg/kg bodyweight (Equivalent or similar to OECD 423, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 14112 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 21 mg/l
ATE US (oral)	10760 mg/kg bodyweight
ATE US (vapours)	0.74 mg/l/4h
ATE US (dust,mist)	0.74 mg/l/4h

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg (Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 15800 mg/kg bodyweight (24 h, Rabbit, Male, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	132 mg/l (3 h, Rat, Male, Experimental value, Inhalation (vapours))
ATE US (oral)	5800 mg/kg bodyweight
ATE US (vapours)	132 mg/l/4h
ATE US (dust,mist)	132 mg/l/4h

Colophony (8050-09-7)	
LD50 oral rat	> 2000 mg/kg (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal)

Skin corrosion/irritation : Causes skin irritation.

2-propanol (67-63-0)	
pH	No data available in the literature

Toluene (108-88-3)	
pH	No data available in the literature

Ethyl Acetate (141-78-6)	
pH	No data available in the literature

SECTION 11. TOXICOLOGICAL INFORMATION (Continued)

Butyl Acetate (123-86-4)	
pH	6.2 (0.53 %, 20 °C)

Acetone (67-64-1)	
pH	5 – 6 (20 °C)

Colophony (8050-09-7)	
pH	No data available in the literature

Serious eye damage/irritation : Causes serious eye irritation.

2-propanol (67-63-0)	
pH	No data available in the literature

Toluene (108-88-3)	
pH	No data available in the literature

Ethyl Acetate (141-78-6)	
pH	No data available in the literature

Butyl Acetate (123-86-4)	
pH	6.2 (0.53 %, 20 °C)

Acetone (67-64-1)	
pH	5 – 6 (20 °C)

Colophony (8050-09-7)	
pH	No data available in the literature

Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

2-propanol (67-63-0)	
IARC group	3 - Not classifiable

Toluene (108-88-3)	
IARC group	3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child (Inhalation).

Acetone (67-64-1)	
LOAEL (animal/female, F0/P)	11298 mg/kg bodyweight Animal: mouse, Animal sex: female
NOAEL (animal/male, F0/P)	900 mg/kg bodyweight Animal: rat, Animal sex: male

STOT-single exposure : Causes damage to organs (central nervous system) (Inhalation). May cause drowsiness or dizziness.

2-propanol (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.

Toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.

Ethyl Acetate (141-78-6)	
STOT-single exposure	May cause drowsiness or dizziness.

SECTION 11. TOXICOLOGICAL INFORMATION (Continued)

Butyl Acetate (123-86-4)	
STOT-single exposure	May cause drowsiness or dizziness.

Acetone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.

Tricresyl Phosphates (1330-78-5)	
STOT-single exposure	Causes damage to organs.

STOT-repeated exposure : Not classified

Toluene (108-88-3)	
LOAEL (oral, rat, 90 days)	1250 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	625 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, vapour, 90 days)	2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)

Ethyl Acetate (141-78-6)	
LOAEL (oral, rat, 90 days)	3600 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 795.2600 (Subchronic Oral Toxicity Test)
NOAEL (oral, rat, 90 days)	900 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 795.2600 (Subchronic Oral Toxicity Test)

Butyl Acetate (123-86-4)	
LOAEL (oral, rat, 90 days)	500 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 798.2650 (90-Day Oral Toxicity in Rodents)
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 798.2650 (90-Day Oral Toxicity in Rodents)

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

2-propanol (67-63-0)	
Viscosity, kinematic	2.66 mm²/s (25 °C, Estimated value)

Toluene (108-88-3)	
Viscosity, kinematic	No data available in the literature

Ethyl Acetate (141-78-6)	
Viscosity, kinematic	No data available in the literature

Butyl Acetate (123-86-4)	
Viscosity, kinematic	0.831 mm²/s (20 °C, ASTM D445: Capillary viscometer)

Acetone (67-64-1)	
Viscosity, kinematic	No data available in the literature

Colophony (8050-09-7)	
Viscosity, kinematic	Not applicable (solid)

Symptoms/effects : May cause drowsiness or dizziness.
Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

2-propanol (67-63-0)	
LC50 - Fish [1]	9640 – 10000 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
LC50 - Fish [2]	9640 mg/l Test organisms (species): Pimephales promelas
Toluene (108-88-3)	
LC50 - Fish [1]	5.5 mg/l (96 h, Oncorhynchus kisutch, Flow-through system, Fresh water, Experimental value, Lethal)
LOEC (chronic)	2.76 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC (chronic)	0.74 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC chronic fish	1.39 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d'
Ethyl Acetate (141-78-6)	
LC50 - Fish [1]	230 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	165 mg/l (48 h, Daphnia cucullata, Fresh water, Experimental value)
NOEC (chronic)	2.4 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
Butyl Acetate (123-86-4)	
LC50 - Fish [1]	18 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	44 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia sp., Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	397 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	246 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
ErC50 algae	397 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Read-across, GLP)
LOEC (chronic)	47.6 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	23.2 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
Acetone (67-64-1)	
LC50 - Fish [1]	6210 – 8120 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Measured 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'
Colophony (8050-09-7)	
LC50 - Fish [1]	1.7 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 72h - Algae [1]	39.6 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

SECTION 12. ECOLOGICAL INFORMATION (Continued)

12.2. Persistence and degradability

Persistence and degradability	Rapidly degradable
2-propanol (67-63-0)	
Persistence and degradability	Biodegradable in the soil, Biodegradable in the soil under anaerobic conditions, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.19 g O_2/g substance
Chemical oxygen demand (COD)	2.23 g O_2/g substance
ThOD	2.4 g O_2/g substance
Toluene (108-88-3)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	2.15 g O_2/g substance
Chemical oxygen demand (COD)	2.52 g O_2/g substance
ThOD	3.13 g O_2/g substance
Ethyl Acetate (141-78-6)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.293 g O_2/g substance
Chemical oxygen demand (COD)	1.69 g O_2/g substance
ThOD	1.82 g O_2/g substance
Butyl Acetate (123-86-4)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.21 g O_2/g substance
Acetone (67-64-1)	
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
Tricresyl Phosphates (1330-78-5)	
Persistence and degradability	Readily biodegradable in water.
Colophony (8050-09-7)	
Persistence and degradability	Readily biodegradable in water.
Colophony (8050-09-7)	
Chemical oxygen demand (COD)	2.6 g O_2/g substance

12.3. Bioaccumulative potential

2-propanol (67-63-0)	
BCF - Fish [1]	1015 (BCFBAF v3.01, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	0.05 (Weight of evidence approach, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

SECTION 12. ECOLOGICAL INFORMATION (Continued)

Toluene (108-88-3)	
BCF - Fish [1]	90 (3 day(s), Leuciscus idus, Static renewal, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	2.73 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Ethyl Acetate (141-78-6)	
BCF - Fish [1]	30 (3 day(s), Leuciscus idus, Static renewal, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	0.68 (Experimental value, EPA OPPTS 830.7560, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Butyl Acetate (123-86-4)	
Partition coefficient n-octanol/water (Log Pow)	2.3 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Acetone (67-64-1)	
BCF - Fish [1]	0.69 (Pisces, Literature study)
Partition coefficient n-octanol/water (Log Pow)	-0.23 (Test data)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Tricresyl Phosphates (1330-78-5)	
Partition coefficient n-octanol/water (Log Pow)	5.11 (Experimental value)
Colophony (8050-09-7)	
BCF - Fish [1]	23 – 129 (30 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	1.9 – 6 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

2-propanol (67-63-0)	
Surface tension	No data available (test not performed)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.185 – 0.541 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.
Toluene (108-88-3)	
Surface tension	27.73 mN/m (25 °C, 0.05 %)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.3 (log Koc, Calculated value)
Ecology - soil	Low potential for adsorption in soil.
Ethyl Acetate (141-78-6)	
Surface tension	No data available in the literature
Ecology - soil	Low potential for adsorption in soil.

SECTION 12. ECOLOGICAL INFORMATION (Continued)

Butyl Acetate (123-86-4)	
Surface tension	61.3 mN/m (20 °C, 0.1 %, OECD 115: Surface Tension of Aqueous Solutions)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.268 – 1.844 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.
Acetone (67-64-1)	
Surface tension	23.3 mN/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.374 – 0.988 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.
Colophony (8050-09-7)	
Surface tension	78 mN/m (20 °C, EU Method A.5: Surface tension)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.9 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

No additional information available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Regional waste regulation : Law No. 12.305 on the National Policy on Solid Waste Management, 02 August 2010.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers. Flammable vapors may accumulate in the container.

SECTION 14. TRANSPORT INFORMATION

In accordance with DOT / IMDG / IATA

14.1. UN number

UN-No.(DOT) : UN1263
UN-No. (IMDG) : 1263
UN-No. (IATA) : 1263

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Paint
Proper Shipping Name (IMDG) : PAINT RELATED MATERIAL
Proper Shipping Name (IATA) : Paint related material

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 3
Hazard labels (DOT) : 3

SECTION 14. TRANSPORT INFORMATION (CONT.)

IMDG

Transport hazard class(es) (IMDG) : 3
Danger labels (IMDG) : 3

IATA

Transport hazard class(es) (IATA) : 3
Danger labels (IATA) : 3

14.4. Packing group

Packing group (DOT) : II
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1263

DOT Special Provisions (49 CFR 172.102)

: 149 - When transported as a limited quantity or a consumer commodity, the maximum net capacity specified in 173.150(b)(2) of this subchapter for inner packagings may be increased to 5 L (1.3 gallons).
367 - For the purposes of documentation and package marking: a. The proper shipping name “Paint related material” may be used for consignments of packages containing “Paint” and “Paint related material” in the same package; b. The proper shipping name “Paint related material, corrosive, flammable” may be used for consignments of packages containing “Paint, corrosive, flammable” and “Paint related material, corrosive, flammable” in the same package; c. The proper shipping name “Paint related material, flammable, corrosive” may be used for consignments of packages containing “Paint, flammable, corrosive” and “Paint related material, flammable, corrosive” in the same package; and d. The proper shipping name “Printing ink related material” may be used for consignments of packages containing “Printing ink” and “Printing ink related material” in the same package.
B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / (1 + a (tr - tf)) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F).
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

SECTION 14. TRANSPORT INFORMATION (CONT.)

DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 173
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

IMDG

Special provisions (IMDG)	: 163, 367
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP8, TP28
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: Miscibility with water depends upon the composition.

IATA

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3, A72, A192
ERG code (IATA)	: 3L

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

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
2-propanol	67-63-0	Present	Active	
Toluene	108-88-3	Present	Active	
Ethyl Acetate	141-78-6	Present	Active	
Butyl Acetate	123-86-4	Present	Active	
Acetone	67-64-1	Present	Active	
Tricresyl Phosphates	1330-78-5	Present	Active	TP
Colophony	8050-09-7	Present	Active	

2-propanol (67-63-0)
Subject to reporting requirements of United States SARA Section 313

Toluene (108-88-3)	
Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb

Ethyl Acetate (141-78-6)	
Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb

Butyl Acetate (123-86-4)	
Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb

Acetone (67-64-1)	
Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb

SECTION 15. REGULATORY INFORMATION (CONT.)

15.2. International regulations

CANADA

2-propanol (67-63-0)
Listed on the Canadian DSL (Domestic Substances List)
Toluene (108-88-3)
Listed on the Canadian DSL (Domestic Substances List)
Ethyl Acetate (141-78-6)
Listed on the Canadian DSL (Domestic Substances List)
Butyl Acetate (123-86-4)
Listed on the Canadian DSL (Domestic Substances List)
Acetone (67-64-1)
Listed on the Canadian DSL (Domestic Substances List)
Tricresyl Phosphates (1330-78-5)
Listed on the Canadian DSL (Domestic Substances List)
Colophony (8050-09-7)
Listed on the Canadian DSL (Domestic Substances List)

No additional information available

EU-Regulations

National regulations

2-propanol (67-63-0)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Toluene (108-88-3)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Ethyl Acetate (141-78-6)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Butyl Acetate (123-86-4)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Acetone (67-64-1)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Tricresyl Phosphates (1330-78-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Colophony (8050-09-7)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

U.S. - California - Proposition 65 List

Toluene (108-88-3)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		7000 µg/day

SECTION 16. OTHER INFORMATION

GC Electronics believes that the information contained herein is accurate and reliable as of the date of this material safety data sheet, but no representation guarantee or warranty, express or implied, is made as to the accuracy, reliability or completeness of the information. Persons receiving information are encouraged to make their own determination as to the information's suitability and completeness for their particular application.
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