

SAFETY DATA SHEET



SDS-00060 [Carlton Low-VOC Solvent Cement for PVC Plastic Pipe]

Section 1. Identification

GHS product identifier : SDS-00060 [Carlton Low-VOC Solvent Cement for PVC Plastic Pipe]
Product code : VC9964, VC9963, VC9963C, VC9962, VC9961P, VC9924-24, VC9923, VC9922, VC9941P, VC9LV4-24, VC9LV2, VC9LV3
Other means of identification : Not available.
Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Cements.
Area of application : Consumer applications.
Manufacturer : ABB Installation Products Inc.
860 Ridge Lake Blvd.
Memphis, TN 38120, US
Telephone no.: 1-888-862-3289

Emergency telephone number (with hours of operation) : INFOTRAC – 24 Hours 1-800-535-5053
+1 352-323-3500 (Outside USA)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : H225 FLAMMABLE LIQUIDS - Category 2
H332 ACUTE TOXICITY (inhalation) - Category 4
H319 EYE IRRITATION - Category 2A
H351 CARCINOGENICITY - Category 2
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

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Section 2. Hazards identification

Hazard statements	: H225 - Highly flammable liquid and vapor. H319 - Causes serious eye irritation. H332 - Harmful if inhaled. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness. H351 - Suspected of causing cancer.
<u>Precautionary statements</u>	
Prevention	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves, protective clothing and eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
Response	: P308 + P313 - IF exposed or concerned: Get medical advice or attention. P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: P405 - Store locked up. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Avoid contact with skin and clothing. Wash thoroughly after handling.
Hazards not otherwise classified	: Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

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

Ingredient name	Other names	%	Identifiers
tetrahydrofuran	-	≥20 - ≤40	CAS: 109-99-9
butanone	-	≥10 - ≤30	CAS: 78-93-3
cyclohexanone	-	≥10 - ≤30	CAS: 108-94-1
acetone	-	≥10 - ≤30	CAS: 67-64-1
Ethene, chloro-, homopolymer	-	≥10 - ≤30	CAS: 9002-86-2

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

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

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

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Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First aid measures

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Foam
Carbon dioxide.
dry chemical powder

- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Class 1B Flammable liquid. Vapors can travel to a source of ignition and flashback.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

- Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures

: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
tetrahydrofuran	ACGIH TLV (United States, 1/2024) A3. Absorbed through skin. TWA 8 hours: 50 ppm. STEL 15 minutes: 100 ppm. NIOSH REL (United States, 10/2020) TWA 10 hours: 200 ppm. TWA 10 hours: 590 mg/m³. STEL 15 minutes: 250 ppm.

Section 8. Exposure controls/personal protection

butanone

STEL 15 minutes: 735 mg/m³.
OSHA PEL (United States, 5/2018)
 TWA 8 hours: 200 ppm.
 TWA 8 hours: 590 mg/m³.
CAL OSHA PEL (United States, 5/2018)
 STEL 15 minutes: 735 mg/m³.
 STEL 15 minutes: 250 ppm.
 TWA 8 hours: 590 mg/m³.
 TWA 8 hours: 200 ppm.
ACGIH TLV (United States, 1/2024) Absorbed through skin.
 TWA 8 hours: 75 ppm.
 STEL 15 minutes: 150 ppm.
NIOSH REL (United States, 10/2020)
 TWA 10 hours: 200 ppm.
 TWA 10 hours: 590 mg/m³.
 STEL 15 minutes: 300 ppm.
 STEL 15 minutes: 885 mg/m³.
OSHA PEL (United States, 5/2018)
 TWA 8 hours: 200 ppm.
 TWA 8 hours: 590 mg/m³.
CAL OSHA PEL (United States, 5/2018)
 STEL 15 minutes: 885 mg/m³.
 STEL 15 minutes: 300 ppm.
 TWA 8 hours: 590 mg/m³.
 TWA 8 hours: 200 ppm.

cyclohexanone

ACGIH TLV (United States, 1/2024) A3. Absorbed through skin.
 TWA 8 hours: 20 ppm.
 STEL 15 minutes: 50 ppm.
NIOSH REL (United States, 10/2020) Absorbed through skin.
 TWA 10 hours: 25 ppm.
 TWA 10 hours: 100 mg/m³.
OSHA PEL (United States, 5/2018)
 TWA 8 hours: 50 ppm.
 TWA 8 hours: 200 mg/m³.

acetone

CAL OSHA PEL (United States, 5/2018) Absorbed through skin.
 TWA 8 hours: 100 mg/m³.
 TWA 8 hours: 25 ppm.
ACGIH TLV (United States, 1/2024) A4.
 TWA 8 hours: 250 ppm.
 STEL 15 minutes: 500 ppm.
NIOSH REL (United States, 10/2020)
 TWA 10 hours: 250 ppm.
 TWA 10 hours: 590 mg/m³.
OSHA PEL (United States, 5/2018)
 TWA 8 hours: 1000 ppm.
 TWA 8 hours: 2400 mg/m³.
CAL OSHA PEL (United States, 5/2018)
 STEL 15 minutes: 1780 mg/m³.
 STEL 15 minutes: 750 ppm.
 C: 3000 ppm.
 TWA 8 hours: 1200 mg/m³.
 TWA 8 hours: 500 ppm.
ACGIH TLV (United States, 1/2024) A4.

Ethene, chloro-, homopolymer

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Section 8. Exposure controls/personal protection

TWA 8 hours: 1 mg/m³. Form: Respirable fraction.

Biological exposure indices

Ingredient name	Exposure indices
tetrahydrofuran	ACGIH BEI (United States, 1/2024) BEI: 2 mg/l, tetrahydrofuran [in urine]. Sampling time: end of shift.
butanone	ACGIH BEI (United States, 1/2024) BEI: 2 mg/l, methyl ethyl ketone [in urine]. Sampling time: end of shift.
cyclohexanone	ACGIH BEI (United States, 1/2024) BEI: 80 mg/l [Semi-quantitative: The determinant is an indicator of exposure to the chemical, but the quantitative interpretation of the measurement is ambiguous. These determinants should be used as a screening test if a quantitative test is not practical or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question.], 1,2-cyclohexanediol [in urine]. Sampling time: end of shift at end of workweek. BEI: 8 mg/l [Semi-quantitative: The determinant is an indicator of exposure to the chemical, but the quantitative interpretation of the measurement is ambiguous. These determinants should be used as a screening test if a quantitative test is not practical or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question.], cyclohexanol [in urine]. Sampling time: end of shift.
acetone	ACGIH BEI (United States, 1/2024) BEI: 25 mg/l, acetone [in urine]. Sampling time: end of shift.

- Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Recommended: Rubber gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Clear. Gray. White.
- Odor** : Ether-like.
- Odor threshold** : 0.88 ppm
- pH** : Not available.
- Melting point/freezing point** : -108.5°C (-163.3°F)
- Boiling point or initial boiling point and boiling range** : 56°C (132.8°F)
- Flash point** : Closed cup: -20°C (-4°F)
- Evaporation rate** : >1 (butyl acetate = 1)
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Lower: 1.8%
Upper: 12.8%
- Vapor pressure** : 25.3 kPa (190 mm Hg)
- Relative vapor density** : 2.5 [Air = 1]
- Relative density** : 0.925
- Density** : Not available.
- Solubility(ies)** : Not available.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** :

Section 9. Physical and chemical properties

Ingredient name	°C	°F	Method
tetrahydrofuran	215	419	DIN 51794

Decomposition temperature : Not available.
SADT : Not available.
Viscosity : Dynamic (room temperature): Not available.
 Kinematic (room temperature): Not available.
 Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Other information

Physical/chemical properties comments : No additional information.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
 Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
 oxidizing materials, acids, Bases.

Hazardous decomposition products : Hydrogen chloride, carbon oxides (CO, CO₂), hydrocarbons.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
tetrahydrofuran	Rat - Oral - LD50 1650 mg/kg Rat - Male, Female - Dermal - LD50 OECD [Acute Dermal Toxicity] >2000 mg/kg
butanone	Rabbit - Dermal - LD50 6480 mg/kg Rat - Oral - LD50 2737 mg/kg Rat - Inhalation - LC50 Vapor 33.36 mg/l [4 hours]

Section 11. Toxicological information

cyclohexanone	Rat - Oral - LD50 1800 mg/kg Rabbit - Dermal - LD50 950 mg/kg Rat - Inhalation - LC50 Gas. 8000 ppm [4 hours]	<u>Toxic effects:</u> Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Tremor
acetone	Rat - Oral - LD50 5800 mg/kg Rabbit - Dermal - LD50 20000 mg/kg Rat - Female - Inhalation - LC50 Vapor 76 mg/l [4 hours]	

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result
butanone	Rabbit - Skin - Mild irritant Duration of treatment/exposure: 24 hours Amount/concentration applied: 14 mg Rabbit - Skin - Mild irritant Duration of treatment/exposure: 24 hours Amount/concentration applied: 402 mg Rabbit - Skin - Moderate irritant Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg
cyclohexanone	Rabbit - Skin - Mild irritant Amount/concentration applied: 500 mg
acetone	Rabbit - Skin - Mild irritant Duration of treatment/exposure: 24 hours Amount/concentration applied: 500 mg Rabbit - Skin - Mild irritant Amount/concentration applied: 395 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
cyclohexanone	Rabbit - Eyes - Severe irritant Duration of treatment/exposure: 24 hours Amount/concentration applied: 250 ug Rabbit - Eyes - Severe irritant Amount/concentration applied: 20 mg
acetone	Rabbit - Eyes - Mild irritant Amount/concentration applied: 10 uL Rabbit - Eyes - Moderate irritant

Section 11. Toxicological information

Duration of treatment/exposure: 24 hours
 Amount/concentration applied: 20 mg
Rabbit - Eyes - Severe irritant
 Amount/concentration applied: 20 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
tetrahydrofuran	-	2B	-
cyclohexanone	-	3	-
Ethene, chloro-, homopolymer	-	3	-

Reproductive toxicity

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
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Section 11. Toxicological information

tetrahydrofuran	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
butanone	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
cyclohexanone	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
butanone	ASPIRATION HAZARD - Category 1
cyclohexanone	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact	: Defatting to the skin. May cause skin dryness and irritation.
Ingestion	: Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Adverse symptoms may include the following: irritation dryness cracking
Ingestion	: No specific data.

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral(mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
SDS-00060 [Carlton Low-VOC Solvent Cement for PVC Plastic Pipe]	2506.3	2732.3	24000	N/A	1.5
tetrahydrofuran	1650	2500	N/A	N/A	N/A
butanone	2737	6480	N/A	33.36	N/A
cyclohexanone	1800	950	8000	N/A	N/A
acetone	5800	20000	N/A	76	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name

tetrahydrofuran

Result

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 34 days; Size: 18.6 mm; Weight: 0.111 g

2160 mg/l [96 hours]

Chronic - NOEC - Fresh water

Fish - Fathead minnow - *Pimephales promelas* - Embryo

Age: <24 hours

367 mg/l [33 days]

Effect: Mortality

Effect: Growth

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butanone	Acute - EC50 - Fresh water	<u>Effect</u> : Intoxication
	Daphnia - Water flea - <i>Daphnia magna</i> - Larvae	
	<u>Age</u> : <24 hours	
	5091 mg/l [48 hours]	
	Acute - LC50 - Fresh water	<u>Effect</u> : Mortality
	Fish - Fathead minnow - <i>Pimephales promelas</i>	
	<u>Age</u> : 31 days; <u>Size</u> : 22 mm; <u>Weight</u> : 0.167 g	
	3220 mg/l [96 hours]	
	Acute - EC50 - Marine water	<u>Effect</u> : Population
	Algae - Diatom - <i>Skeletonema costatum</i> >500 mg/l [96 hours]	
cyclohexanone	Acute - NOEC - Fresh water	OECD 203 [Fish, Acute Toxicity Test]
	Fish	
	1170 mg/l [96 hours]	
	Acute - NOEC - Fresh water	OECD 202 [Daphnia sp. Acute Immobilization Test and Reproduction Test]
	Daphnia - Daphnia	
	68 mg/l [48 hours]	
	Acute - NOEC - Fresh water	OECD 201 [Alga, Growth Inhibition Test]
	Algae - Algae	
	566 mg/l [72 hours]	
	Acute - LC50 - Fresh water	<u>Effect</u> : Mortality
acetone	Fish - Fathead minnow - <i>Pimephales promelas</i>	
	<u>Age</u> : 30 days; <u>Size</u> : 20.2 mm; <u>Weight</u> : 0.127 g	
	527 mg/l [96 hours]	
	Chronic - EC10	<u>Effect</u> : Population
	Algae - Green algae - <i>Chlamydomonas reinhardtii</i> - Exponential growth phase	
	<u>Age</u> : 7 days	
	3.56 mg/l [72 hours]	
	Acute - EC50	<u>Effect</u> : Population
	Algae - Green algae - <i>Chlamydomonas reinhardtii</i> - Exponential growth phase	
	<u>Age</u> : 7 days	
acetone	32.9 mg/l [72 hours]	
	Acute - LC50 - Fresh water	<u>Effect</u> : Mortality
	Daphnia - Water flea - <i>Daphnia magna</i>	
	10 mg/l [48 hours]	
	Acute - EC50 - Marine water	<u>Effect</u> : Reproduction
	Algae - Green algae - <i>Ulva pertusa</i>	
	20.565 mg/l [96 hours]	
	Chronic - NOEC - Marine water	<u>Effect</u> : Reproduction
	Algae - Green algae - <i>Ulva pertusa</i>	
	4.95 mg/l [96 hours]	
acetone	Chronic - NOEC - Fresh water	<u>Effect</u> : Population
	Crustaceans - Daphnia - <i>Daphniidae</i>	
	0.016 ml/l [21 days]	
	Acute - LC50 - Fresh water	<u>Effect</u> : Mortality
	Fish - Guppy - <i>Poecilia reticulata</i>	
	<u>Age</u> : 4 to 12 months; <u>Size</u> : 2 to 10 cm; <u>Weight</u> : 0.5 to 14 g	
acetone	5600 ppm [96 hours]	

Section 12. Ecological information

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Product/ingredient name	Result	
tetrahydrofuran	82% [28 days]	Ready Biodegradability - Manometric Respirometry Test
butanone	Aerobic 98% [28 days] - Readily	OECD [Ready Biodegradability - Closed Bottle Test]

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
tetrahydrofuran	-	-	Inherent
butanone	-	-	Readily
cyclohexanone	-	-	Readily
acetone	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
tetrahydrofuran	0.45	-	Low
butanone	0.3	-	Low
cyclohexanone	0.86	-	Low
acetone	-0.23	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations




Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA Toxic hazardous waste "U" List

Section 13. Disposal considerations

Ingredient	CAS #	Status	Reference number
Tetrahydrofuran (I)	109-99-9	Listed	U213
Methyl ethyl ketone (MEK) (I,T)	78-93-3	Listed	U159
Cyclohexanone (I)	108-94-1	Listed	U057
Acetone (I)	67-64-1	Listed	U002

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN1133	UN1133	UN1133
UN proper shipping name	Adhesives	ADHESIVES	Adhesives
Transport hazard class(es)	3 	3 	3 
Packing group	II	II	II
Environmental hazards	No.	No.	No.

Additional information

DOT Classification	<p>: Reportable quantity 2500 lbs / 1135 kg [324.15 gal / 1227 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p>Limited quantity Yes.</p> <p>Packaging instruction Exceptions: 150. Non-bulk: 173. Bulk: 242.</p> <p>Quantity limitation Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.</p> <p>Special provisions 149, B52, IB2, T4, TP1, TP8</p>
IMDG	: Emergency schedules F-E, S-D
IATA	<p>: Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.</p> <p>Special provisions A3</p>
Special precautions for user	: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in bulk according to IMO instruments	: Not available.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) PAIR: tetrahydrofuran
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 United States inventory (TSCA 8b): All components are active or exempted.

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
 ACUTE TOXICITY (inhalation) - Category 4
 EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 HNOC - Defatting irritant

Composition/information on ingredients

Name	%	Classification
tetrahydrofuran	≥20 - ≤40	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
butanone	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant

Date of revision

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Date of previous issue

: 18- June 2024

Version : H

17/19

Section 15. Regulatory information

cyclohexanone	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
acetone	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A HNOC - Defatting irritant
Ethene, chloro-, homopolymer	≥10 - ≤30	COMBUSTIBLE DUSTS


SARA 313

Not applicable.

State regulations

Massachusetts	: The following components are listed: TETRAHYDROFURAN; METHYL ETHYL KETONE; CYCLOHEXANONE; ACETONE
New York	: The following components are listed: Tetrahydrofuran; Methyl ethyl ketone; Cyclohexanone; Acetone
New Jersey	: The following components are listed: TETRAHYDROFURAN; METHYL ETHYL KETONE; CYCLOHEXANONE; ACETONE; PVC
Pennsylvania	: The following components are listed: FURAN, TETRAHYDRO-; 2-BUTANONE; CYCLOHEXANONE; 2-PROPANONE

California Prop. 65

 **WARNING:** This product can expose you to tetrahydrofuran, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
tetrahydrofuran	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

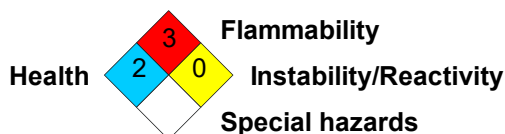
Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

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



Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (inhalation) - Category 4	Expert judgment
EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method

History

Date of issue/Date of revision	: 03/25/2025
Date of previous issue	: No previous validation
Version	: 1
Prepared by	: Sphera Solutions
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group TDG = Transportation of Dangerous Goods UN = United Nations

References : HCS (U.S.A.) - Hazard Communication Standard
International transport regulations

Indicates information that has changed from previously issued version.

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