

Section 1: Identification

1.1. Product identifier

Product form	: Mixture
Product Identifier(s)	: Dimer Solution CV2 Dimer Solution Dimer Co-Product
Other means of identification	: 1,3-Butadiene, homopolymer, distn. by-products Residue from the polymerization of butadiene. It consists primarily of hydrocarbons having a carbon number of C8 such as 1,5-cyclooctadiene and 4-vinylcyclohexene. It may also contain some benzene and cyclohexane.
CAS-No.	: 68608-57-1

1.2. Recommended use of the chemical and restrictions on use

Use of the substance/mixture	: Fuel Fuel additives
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1.3. Details of the supplier of the safety data sheet

Resin Solutions, LLC
665 Stockton Drive, Suite 100
Exton, PA 19341

For non-emergency product information:
Phone: +1-484-284-8998
Email: product.stewardship@resinsolutions.com

1.4. Emergency telephone number

Emergency number	: CHEMTREC: 1-800-424-9300 (Toll Free USA & Canada) / 703-527-3887 (Multiple languages) Resin Solutions, LLC: +1-484-284-8989 (Language: English only)
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Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flammable liquids Category 2
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 1
Skin sensitization, Category 1
Germ cell mutagenicity Category 1B
Carcinogenicity Category 1A
Reproductive toxicity Category 2
Specific target organ toxicity (single exposure) Category 3 - Narcotic effects
Specific target organ toxicity (repeated exposure) Category 2
Aspiration hazard Category 1

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS-US)



Signal word (GHS US)	: Danger
Hazard statements (GHS-US)	: Highly flammable liquid and vapor May be fatal if swallowed and enters airways Causes skin irritation May cause an allergic skin reaction Causes serious eye damage May cause drowsiness or dizziness May cause genetic defects (inhalation)

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Precautionary statements (GHS-US)

May cause cancer

Suspected of damaging fertility or the unborn child

May cause damage to organs (blood, blood forming organs, reproductive organs) through prolonged or repeated exposure

- : 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 electrical equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Do not breathe mist, spray, vapors.
- Wash hands, forearms and face thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing must not be allowed out of the workplace.
- Wear eye protection, face protection, protective clothing, protective gloves.
- Specific treatment (see Section 4.1 of SDS or information on this label).
- If swallowed: Immediately call doctor, a POISON CENTER.
- Do NOT induce vomiting.
- If on skin: Wash with plenty of water.
- If skin irritation or rash occurs: Get medical advice/attention.
- 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.
- Get medical advice/attention if you feel unwell.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call poison control center or doctor.
- If exposed or concerned: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.
- Wash contaminated clothing before reuse.
- In case of fire: Use water spray or fog, dry chemical to extinguish.
- Store in a well-ventilated place. Keep cool.
- Store locked up.
- Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Hazards not otherwise classified

Other hazards which do not result in classification

- : Product can accumulate electrostatic charges that may cause fire by electrical discharges
- Repeated exposure may cause skin dryness or cracking.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

2.5. Additional information

Based on professional judgment, inconclusive testing, or sensitive individuals

- : May cause mild respiratory irritation.

Section 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Where concentrations in this product are displayed as ranges, it is due to batch-to-batch variability.

Name	CAS-No.	% (Weight Percent)
4-vinylcyclohexene	100-40-3	0 - 100
Water	7732-18-5	0 - 100
propan-2-ol, isopropyl alcohol, isopropanol	67-63-0	0 – 50
n-Propanol	71-23-8	0 – 20
1,3-Butadiene	106-99-0	0 – 20
Acetone	67-64-1	0 – 5
1,5-Cyclooctadiene	111-78-4	0 – 5

Section 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation

- : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

First-aid measures after skin contact

- : Wash with plenty of soap and water. If irritation persists, consult a doctor.

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First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking, tears or redness persist.
First-aid measures after ingestion	: Do NOT induce vomiting. Rinse mouth out with water. Obtain emergency medical attention.
4.2. Most important symptoms and effects, both acute and delayed	
Symptoms/effects	: Suspected of damaging fertility or the unborn child.
Symptoms/effects after inhalation	: May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.
Chronic symptoms	: May cause cancer. May cause genetic defects. May cause damage to organs through prolonged or repeated exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray or fog. Carbon dioxide. Foam. Dry chemical. Dry powder. Sand.
Unsuitable extinguishing media	: Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the chemical

Fire hazard	: Highly flammable liquid and vapor. Releases flammable vapors at normal ambient temperatures. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.
Explosion hazard	: May form flammable/explosive vapor-air mixture.
Hazardous decomposition products in case of fire	: Carbon oxides (CO, CO ₂). Toxic fumes.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire from safe distance and protected location. Use water spray or fog for cooling exposed containers. Avoid direct personal contact with liquid even after fire is out to prevent potentially serious burns. Use of heavy stream of water may spread fire. Apply aqueous extinguishing media carefully to prevent frothing/steam explosion. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Complete protective clothing. Self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Emergency procedures for non-emergency personnel	: Avoid contact with skin and eyes. Ensure adequate ventilation. Evacuate unnecessary personnel. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures for emergency responders	: No additional requirement.

6.2. Methods and material for containment and cleaning up

For containment	: Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Keep recovered product for subsequent disposal.
Methods for cleaning up	: Wash away residue with large amounts of water. Gather the product and place it in a spare container that has been suitably labeled.

6.3. Reference to other sections

See section 8. Exposure controls/personal protection.

Section 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Obtain special instructions before use. Ensure good ventilation of the work station. Wear personal protective equipment. Keep away from ignition sources (including static discharges). Ground/bond container and receiving equipment. 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. Contaminated work clothing must not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Electrical equipment should conform to the National Electric Code.
Storage conditions	: Keep container tightly closed in a cool, well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Store locked up.

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Section 8: Exposure controls/personal protection

8.1. Occupational Exposure Limits

The following constituents are the only constituents of the product which have a PEL, TLV, or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

4-vinylcyclohexene (100-40-3)		
USA ACGIH	ACGIH OEL TWA [ppm]	0.1 ppm
USA ACGIH	Remark (ACGIH)	TLV® Basis: Female & male repro dam. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Mexico	OEL TWA [2]	0.1 ppm
Mexico	Remark (MX)	Daño a órgano reproductor femenino y masculino; A3 (Carcinógeno confirmado en animales con desconocimiento relevante para humanos El agente es carcinógeno en animales de experimentación a dosis relativamente altas por vías de administración en sitios o tipos histológicos o por mecanismos que no son considerados relevantes para el personal ocupacionalmente expuesto. Los estudios epidemiológicos disponibles no confirman un aumento en el riesgo de cáncer en humanos expuestos. La evidencia sugiere que no es probable que el agente cause cáncer en humanos excepto bajo vías o niveles de exposición poco comunes e improbables)

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)		
USA ACGIH	ACGIH OEL TWA [ppm]	200 ppm
USA ACGIH	ACGIH OEL STEL [ppm]	400 ppm
USA ACGIH	Remark (ACGIH)	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
USA OSHA	OSHA PEL (TWA) [1]	980 mg/m ³
USA OSHA	OSHA PEL (TWA) [2]	400 ppm
IDLH	IDLH [ppm]	2000 ppm (10% LEL)
Mexico	OEL TWA [2]	200 ppm
Mexico	OEL STEL	400 ppm
Mexico	Remark (MX)	Irritación del tracto respiratorio superior y ojos; daño a sistema nervioso central; A4 (No clasificado como carcinógeno en humano Agente que puede ser cancerígeno para humanos pero que no puede ser concluyentemente asegurado por falta de datos. Estudios in vitro o animales no proveen indicaciones de carcinogenicidad suficientes para clasificar al agente en una de las otras categorías); IBE (Índice Biológico de Exposición recomendados por sustancia química)

n-Propanol (71-23-8)		
USA ACGIH	ACGIH OEL TWA [ppm]	100 ppm
USA OSHA	OSHA PEL (TWA) [1]	500 mg/m ³
USA OSHA	OSHA PEL (TWA) [2]	200 ppm
IDLH	IDLH [ppm]	800 ppm
Mexico	OEL TWA [2]	100 ppm

1,3-Butadiene (106-99-0)		
USA ACGIH	ACGIH OEL TWA [ppm]	2 ppm
USA ACGIH	Remark (ACGIH)	TLV® Basis: Cancer. Notations: A2 (Suspected Human Carcinogen)
USA OSHA	OSHA PEL (TWA) [2]	1 ppm
USA OSHA	OSHA PEL (STEL) [2]	5 ppm
USA OSHA	Remark (OSHA)	See OSHA Butadiene Standard 29 CFR 1910.1051
IDLH	IDLH [ppm]	2000 ppm (10% LEL)
Mexico	OEL TWA [2]	2 ppm
Mexico	Remark (MX)	Cáncer; A2 (Carcinógeno sospechoso en humanos Los estudios aceptados como adecuados en calidad)

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		pero que son contradictorios e insuficientes para clasificar el agente como confirmado en humanos expuestos, o bien, el agente es carcinógeno en animales de experimentación, a dosis por rutas de exposición en sitios de tipo histológico o por mecanismos considerados relevantes a la exposición del personal ocupacionalmente expuesto. El A2 es usado principalmente cuando la evidencia de carcinogenicidad en humanos es limitada y existe suficiente evidencia de carcinogenicidad en animales de experimentación con relevancia al humano)
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Acetone (67-64-1)		
USA ACGIH	ACGIH OEL TWA [ppm]	250 ppm
USA ACGIH	ACGIH OEL STEL [ppm]	500 ppm
USA ACGIH	Remark (ACGIH)	ACGIH TWA and STEL for acetone were changed in 2015.
USA OSHA	OSHA PEL (TWA) [1]	2400 mg/m ³
USA OSHA	OSHA PEL (TWA) [2]	1000 ppm
IDLH	IDLH [ppm]	2500 ppm (10% LEL)
Mexico	OEL TWA [2]	500 ppm
Mexico	OEL STEL	750 ppm

8.2. Exposure controls

Appropriate engineering controls	: Provide readily accessible eye wash stations and safety showers. Ensure good ventilation of the work station.
Hand protection	: Impermeable protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Eye protection	: Safety glasses with side shields. Chemical goggles or face shield.
Skin and body protection	: Wear fire/flame resistant/retardant clothing.
Respiratory protection	: An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Colorless to pale yellow liquid.
Color	: Colorless to light yellow.
Odor	: Pungent.
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: < 0 °C
Initial boiling point and boiling range	: 55 °C
Flash point	: ~ -85 °C (based on component with lowest flash point, 1,3-butadiene)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Water: Some components are water soluble and others are not. When water is part of this mixture, the mixture separates into two phases.
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available

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9.2. Other information

No additional information available

Section 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

High temperature. Direct sunlight. 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

Likely routes of exposure : Inhalation. Ingestion. Skin and eye contact.

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

4-vinylcyclohexene (100-40-3)	
LD50 oral rat	2560 mg/kg body weight (pre-guideline, pre-GLP investigation)
LD50 dermal rabbit	≥ 20 ml/kg (pre-guideline, pre-GLP investigation)
LC50 Inhalation - Rat [ppm]	< 8000 ppmV/4h (pre-guideline, pre-GLP investigation)

Water (7732-18-5)	
LD50 oral rat	> 90 ml/kg (Source: FOOD_JOURN)

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
LD50 oral rat	1870 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	4059 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation - Rat [ppm]	16000 ppm (Exposure time: 8 h)

n-Propanol (71-23-8)	
LD50 oral rat	1870 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	4049 mg/kg (Source: NZ_CCID)
LC50 inhalation rat	> 33.8 mg/l/4h

1,3-Butadiene (106-99-0)	
LD50 oral rat	5480 mg/kg
LC50 inhalation rat	285 g/m ³
LC50 Inhalation - Rat [ppm]	129000 ppm/4h

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 15700 mg/kg (Source: OECD_SIDS)
LC50 inhalation rat	50100 mg/m ³ (Exposure time: 8 h Source: OECD_SIDS)

1,5-Cyclooctadiene (111-78-4)	
LD50 oral rat	1900 mg/kg
LD50 dermal rat	> 10000 mg/kg (Source: ECHA_API)
LC50 inhalation rat	11.9 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.

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Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: May cause genetic defects (inhalation).
Carcinogenicity	: May cause cancer. Butadiene is suspected of causing cancers of the lymphatic and hematopoietic (blood-forming) organs.

4-vinylcyclohexene (100-40-3)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Not listed

1,3-Butadiene (106-99-0)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Known Human Carcinogens
OSHA Carcinogen Status	In OSHA Specifically Regulated Carcinogen list

Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: May cause damage to organs (blood, blood forming organs, reproductive organs) through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.

Section 12: Ecological information

12.1. Toxicity

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
LC50 - Fish [1]	9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 - Other aquatic organisms [1]	> 1000 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)
LC50 - Fish [2]	11130 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)
EC50 - Other aquatic organisms [2]	> 1000 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)

Acetone (67-64-1)	
LC50 - Fish [1]	4.74 – 6.33 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss Source: EPA)
EC50 - Crustacea [1]	10294 – 17704 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 - Fish [2]	6210 – 8120 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: IUCLID)
EC50 - Crustacea [2]	12600 – 12700 mg/l (Exposure time: 48 h - Species: Daphnia magna)

4-vinylcyclohexene (100-40-3)	
LC50 - Fish [1]	1.23 mg/l (freshwater fish, 96 hrs -- ECOSAR calculation)
EC50 - Crustacea [1]	1.51 mg/l (Daphnia magna, 48 hrs -- ECOSAR calculation)
EC50 - Other aquatic organisms [1]	1.05 mg/l (freshwater green algae growth, 96 hrs -- ECOSAR calculation)
LC50 - Fish [2]	0.22 mg/l (freshwater fish, chronic survival/growth, 30 days -- ECOSAR calculation)
EC50 - Crustacea [2]	0.18 mg/l (Daphnia magna, chronic reproduction, 16 days -- ECOSAR calculation)
EC50 - Other aquatic organisms [2]	0.32 mg/l (freshwater green algae growth, chronic, 96 hrs -- ECOSAR calculation)

n-Propanol (71-23-8)	
LC50 - Fish [1]	4480 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	3642 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 - Crustacea [2]	3339 – 3977 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

1,3-Butadiene (106-99-0)	
LC50 - Fish [1]	71.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	24.8 mg/l (Exposure time: 96 h - Species: Daphnia magna)

12.2. Persistence and degradability

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1,3-Butadiene (106-99-0)	
Persistence and degradability	Product released into the atmosphere is expected to undergo degradation in the presence of sunlight.

12.3. Bioaccumulative potential

propan-2-ol, isopropyl alcohol, isopropanol (67-63-0)	
Partition coefficient n-octanol/water (Log Pow)	0.05 (25 °C)

Acetone (67-64-1)	
BCF - Fish [1]	(0.69 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	-0.24

4-vinylcyclohexene (100-40-3)	
BCF - Fish [1]	83 – 211 (Cyprinus carpio @ 100 mg/L -- OECD 305 C)
BCF - Fish [2]	110 – 208 (Cyprinus carpio @ 10 mg/L -- OECD 305 C)
Partition coefficient n-octanol/water (Log Pow)	3.93

n-Propanol (71-23-8)	
Partition coefficient n-octanol/water (Log Pow)	0.2 (at 25 °C (at pH 7)

1,5-Cyclooctadiene (111-78-4)	
Partition coefficient n-octanol/water (Log Pow)	3.16

1,3-Butadiene (106-99-0)	
BCF - Fish [1]	13 – 19.1
Partition coefficient n-octanol/water (Log Pow)	1.85 (23 °C)

12.4. Mobility in soil

1,3-Butadiene (106-99-0)	
Mobility in soil	Volatilization is suspected to be the major fate for butadiene in soil & water.

12.5. Other adverse effects

No additional information available

Section 13: Disposal considerations

13.1. Waste treatment methods

- Waste treatment methods : Transfer to a safe disposal area in accordance with federal, state, and local regulations.
Product/Packaging disposal recommendations : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 14: Transport information

US Transport (DOT) for Bulk Shipments (Non-Bulk Shipments May Differ)

- Transport document description (DOT) : UN1993, Flammable liquids, n.o.s. (4-Vinylcyclohexene, Isopropanol), 3 , PGII
UN or NA Number : UN1993
Proper Shipping Name : Flammable liquids, n.o.s.
Primary Hazard Class : 3 - Flammable liquid
Packing Group : PGII
Reportable Quantities (RQ)* : 1,3-Butadiene 10 lbs (4.54 kg), Acetone 5000 lbs (2270 kg)

*It is the shipper's responsibility to determine whether an RQ must be reported for each individual shipment.

Hazard labels :



Emergency Response Guide (ERG) Number : 128

Transport by sea (IMDG)

- Transport document description (IMDG) : UN 1993 FLAMMABLE LIQUID, N.O.S. (4-Vinylcyclohexene, Isopropanol), 3, II (-85°C c.c.)
UN Number : UN1993
Proper Shipping Name : FLAMMABLE LIQUID, N.O.S.

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Primary Hazard Class : 3 - Flammable liquids
Packing Group : PGII
Hazard labels (IMDG) :



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
Flash point (IMDG) : -85°C c.c.

Air transport (IATA)

Transport document description (IATA) : UN 1993 Flammable liquid, n.o.s. (4-Vinylcyclohexene, Isopropanol), 3, II
UN Number : UN1993
Proper Shipping Name : Flammable liquid, n.o.s.
Primary Hazard Class : 3 - Flammable Liquids
Packing Group : PGII
Hazard labels (IATA) :



Section 15: Regulatory information

15.1. US Federal regulations

EPA TSCA Status

All components of this product are listed or exempt from listing on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) Active inventory. This product has no special requirements under TSCA, such as significant new use rules (SNUR), consent orders, test rules, or sections 4, 5, 6, 8(a), 8(d), 12(b) requirements.

This product is a substance under TSCA (CAS No. 68608-57-1; 1,3-Butadiene, homopolymer, distillation by-products).

SARA Section 313 Supplier Notification

This product contains the following toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:

CAS number	Chemical name	Concentration
100-40-3	4-vinylcyclohexene	0 - 100%
106-99-0	1,3-Butadiene	0 – 20%

This information must be included in all Safety Data Sheets that are copied and distributed for this product. For additional information, see 40 CFR §372.45 Notification About Toxic Chemicals.

SARA Section 311/312 Hazard Classes

Health hazard - Skin corrosion or Irritation
Health hazard - Serious eye damage or eye irritation
Physical hazard - Flammable (gases, aerosols, liquids, or solids)
Health hazard - Carcinogenicity
Health hazard - Germ cell mutagenicity
Health hazard - Reproductive toxicity
Health hazard - Respiratory or skin sensitization
Health hazard - Specific target organ toxicity (single or repeated exposure)
Health hazard - Aspiration hazard
Physical hazard - Hazard Not Otherwise Classified (HNOC)

Export Control Classification Number (ECCN): EAR99 (No License Required)

15.2. International regulations

CANADA

No additional information available

National inventories

No additional information available

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15.3. US State regulations

California Proposition 65 - This product contains a substance or substances known to the state of California to cause cancer and/or reproductive toxicity, not limited to any that may be listed below.

4-vinylcyclohexene (100-40-3)	
U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Yes

1,3-Butadiene (106-99-0)	
U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Yes
No significant risk level (NSRL)	0.4 µg/day

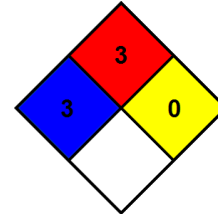
Section 16: Other information

Other information

: Dimer Solution at the site of manufacture may contain a variable concentration of water. The aqueous phase is removed by decantation. The remaining mixture, to be used as a fuel additive or fuel, typically contains very little water in order to meet fuel specifications (business specifications should be obtained from your sales contact). Other components are also variable within the given concentration ranges and may not always be present. This Safety Data Sheet is intended to describe Dimer Solution of any composition, including the water-rich and hydrocarbon-rich mixtures following decantation, and some or all of the hazards described on this SDS are applicable to all compositions of Dimer Solution.

NFPA (National Fire Protection Association)

NFPA health hazard : 3
NFPA fire hazard : 3
NFPA reactivity : 0



Hazard System Rating

Health : 3*
Flammability : 3
Physical Hazard : 0
Personal protection : See section 8 of SDS

Dimer Solution

Safety Data Sheet

US OSHA LABEL as specified under 29 CFR §1910.1200 (f). The label shown may include supplemental information in addition to required elements.

Dimer Solution

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Danger

Highly flammable liquid and vapor

May be fatal if swallowed and enters airways

Causes skin irritation

May cause an allergic skin reaction

Causes serious eye damage

May cause drowsiness or dizziness

May cause genetic defects (inhalation)

May cause cancer

Suspected of damaging fertility or the unborn child

May cause damage to organs (blood, blood forming organs, reproductive organs) through prolonged or repeated exposure

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 electrical equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe mist, spray, vapors.

Wash hands, forearms and face thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Wear eye protection, face protection, protective clothing, protective gloves.

Specific treatment (see Section 4.1 of SDS or information on this label).

If swallowed: Immediately call doctor, a POISON CENTER.

Do NOT induce vomiting.

If on skin: Wash with plenty of water.

If skin irritation or rash occurs: Get medical advice/attention.

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.

Get medical advice/attention if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call poison control center or doctor.

If exposed or concerned: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

In case of fire: Use water spray or fog, dry chemical to extinguish.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents and container in accordance with all local, regional, national and international regulations.

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SDS REFERENCE NUMBER: FP17156

SDS Template - Resin Solutions LLC US Version 1.0

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