

SAFETY DATA SHEET



1. Identification

Covestro LLC
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USA

TRANSPORTATION EMERGENCY

CALL CHEMTREC: (800) 424-9300
INTERNATIONAL: (703) 527-3887

NON-TRANSPORTATION

Emergency Phone: Call Chemtrec
Information Phone: (844) 646-0545

Product Name: DeSolite DP-1900
Material Number: 86700891
Chemical Family: Urethane Acrylate
Use: Raw material for coatings, inks, adhesives, sealants, or elastomers in industrial applications
Restrictions on use: Do-It-Yourself Applications

2. Hazards Identification

GHS Classification

Skin sensitisation: Category 1
Carcinogenicity: Category 2
Reproductive toxicity (Oral): Category 1B
Reproductive toxicity: Category 2
Specific target organ toxicity - repeated exposure (Inhalation): Category 1 (Liver)

GHS Label Elements

Hazard pictograms:



Signal word: Danger

Hazard statements: May cause an allergic skin reaction.
Suspected of causing cancer.
May damage fertility or the unborn child if swallowed.
Suspected of damaging fertility or the unborn child.
Causes damage to organs (Liver) through prolonged or repeated exposure if inhaled.

Precautionary statements: **Prevention:**
Obtain special instructions before use.

Material Name: DeSolite DP-1900

Material Number: 86700891

Do not handle until all safety precautions have been read and understood.
 Do not breathe dust, mist, gas, vapors or spray.
 Wash skin and face thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear permeation resistant protective gloves and clothing. Wear eye and face protection.

Response:

IF ON SKIN: Wash with plenty of soap and water.
 IF exposed or concerned: Get medical attention.
 If skin irritation or rash occurs: Get medical attention.
 Wash contaminated clothing before reuse.

Storage:

Store locked up.

Disposal:

Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

3. Composition/Information on Ingredients

Hazardous Components

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
1 - 5%	Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	75980-60-8
10 - 30%	2-phenoxyethyl acrylate	48145-04-6
1 - 5%	1-Vinylhexahydro-2H-azepin-2-one	2235-00-9
0.1 - 1%	1-Propanethiol, 3-(trimethoxysilyl)-	4420-74-0
0.1 - 1%	1,1,1-trimethylol propane triacrylate	15625-89-5
0.1 - 1%	Trimethylolpropane Tris(3-mercaptopropionate)	33007-83-9

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

4. First Aid Measures

Most Important Symptom(s)/Effect(s)

Acute: May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash.

Eye Contact

In case of contact, flush eyes with plenty of lukewarm water. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Get medical attention if irritation develops.

Skin Contact

In case of skin contact, wash affected areas with soap and water. Wash off immediately with plenty of water for at least 15 minutes. Immediately remove contaminated clothing and shoes. Call a physician if irritation develops or persists. Wash clothing and shoes before reuse.

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial

Material Name: DeSolite DP-1900

Material Number: 86700891

respiration. Get medical attention.

Ingestion

If ingested, do not induce vomiting unless directed to do so by medical personnel. If a person vomits when lying on his back, place him in the recovery position. Get medical attention.

5. Firefighting Measures

Suitable Extinguishing Media: All extinguishing media are suitable.

Unsuitable Extinguishing Media No Data Available

Fire Fighting Procedure

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon dioxide (CO₂), carbon monoxide (CO), dense black smoke., Acrylate monomers, Aldehydes, Organic acids

Unusual Fire/Explosion Hazards

Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

6. Accidental Release Measures

Spill and Leak Procedures

Cleanup personnel must use appropriate personal protective equipment. Dike or dam spilled material and control further spillage, if possible. Prevent from entering open drains and waterways. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal.

7. Handling and Storage

Handling/Storage Precautions

Avoid breathing dust, vapor, or mist. Avoid contact with skin or clothing. Avoid contact with eyes. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

Storage Temperature

Minimum: 15 °C (59 °F)

Maximum: 30 °C (86 °F)

Storage Conditions

Inhibitor only effective in the presence of oxygen. Exposure to light may cause product polymerization. Extreme heat will result in product polymerization. Protect against heat and direct sunlight.

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Substances to Avoid

Exothermic reaction with:, Free radical initiators, Peroxides, strong alkalis, Strong acids, Reactive metals

8. Exposure Controls/Personal Protection

The recommendations in this section should not be a substitute for a personal protective equipment (PPE) assessment performed by the employer as required by 29 CFR 1910 Subpart I.

Exposure Limits

Country specific exposure limits have not been established or are not applicable

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

Industrial Hygiene/Ventilation Measures

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines.

Respiratory Protection

Respiratory protection is recommended in insufficiently ventilated working areas and during heating or spraying. For components with occupational exposure limits, when workers are facing concentrations above those limits, they must use appropriate certified respirators.

Hand Protection

Ensure gloves remain in good condition during use and replace if any deterioration is observed. Permeation resistant gloves., Nitrile rubber gloves., Avoid natural rubber gloves., Do not wear PVC gloves, as PVC absorbs acrylates.

Eye Protection

Chemical safety goggles or safety glasses with side-shields.

Skin Protection

Permeation resistant clothing, Gloves, long sleeved shirts and pants.

Additional Protective Measures

Ultraviolet (UV) light source is used for curing this product. UV light can be hazardous to unprotected skin and eyes. Protective eyewear should always be worn when working in UV curing areas. Skin protection such as long sleeves, long pants, and gloves should be worn when UV lights are being used. Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

9. Physical and Chemical Properties

State of Matter:	liquid
Appearance:	liquid
Color:	Colorless
Odor:	characteristic
Odor Threshold:	No Data Available
pH:	No Data Available
Freezing Point:	No Data Available
Setting Point:	No Data Available
Melting Point:	No Data Available
Boiling Point:	No Data Available
Flash Point:	> 100 °C (> 212 °F) (closed cup)

Evaporation Rate:	No Data Available
Lower explosion limit:	No Data Available
Upper Explosion Limit:	No Data Available
Vapor Pressure:	No Data Available
Vapor Density:	No Data Available
Density:	1.06 g/cm ³ @ 20 °C (68 °F)
Relative Vapor Density:	No Data Available
Specific Gravity:	No Data Available
Solubility in Water:	No Data Available
Partition Coefficient: n-octanol/water:	No Data Available
Auto-ignition Temperature:	No Data Available
Decomposition Temperature:	Stable under recommended storage conditions. The product is chemically stable.
Unblocking Temperature:	No Data Available
Softening point:	No Data Available
Dynamic Viscosity:	6,500 mPa.s @ 20 °C (68 °F)
Kinematic Viscosity:	> 6132 cSt @ 20 °C (68 °F) > 20.5 cSt @ 40 °C (104 °F)
Bulk Density:	No Data Available
Molecular Weight:	No Data Available
Pour point:	No Data Available
Self Ignition:	not applicable

10. Stability and Reactivity

Hazardous Reactions

No hazardous reactions when stored and handled correctly.

Stability

Stable

Materials to Avoid

Exothermic reaction with:, Free radical initiators, Peroxides, strong alkalis, Strong acids, Reactive metals

Conditions to Avoid

Exposure to sunlight. Product contains an inhibitor system. Must be inhibited to prevent hazardous polymerization. Inhibitor only effective in the presence of oxygen. Heat, flames and sparks.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon dioxide (CO₂), carbon monoxide (CO), dense black smoke., Acrylate monomers, Aldehydes, Organic acids

11. Toxicological Information

Likely Routes of Exposure:	Skin Contact Eye Contact Ingestion Inhalation
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Health Effects and Symptoms

Acute: May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash.

Chronic: Repeated and prolonged contact may cause an allergic skin reaction in sensitive individuals.,

May damage fertility or the unborn child., May cause liver damage., Suspected of causing cancer.

Toxicity Data for: DeSolite DP-1900

Data on the product is not available.

Please find the data available for the components.

Acute Oral Toxicity

Acute toxicity estimate: > 5,000 mg/kg (Calculation method)

Acute Dermal Toxicity

Acute toxicity estimate: > 5,000 mg/kg (Calculation method)

Toxicity Data for: Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

Acute Oral Toxicity

LD50: > 5,000 mg/kg (rat) (OECD Test Guideline 401)

Acute Dermal Toxicity

LD50: > 2,000 mg/kg (rat) (OECD Test Guideline 402)

Skin Irritation

rabbit, Non-irritating

Eye Irritation

rabbit, Non-irritating

Sensitization

Skin sensitization (local lymph node assay (LLNA)):: sensitizer (Mouse, OECD Test Guideline 429)

Repeated Dose Toxicity

90 Days, oral: NOAEL: 100 mg/kg, (Rat)

Mutagenicity

Genetic Toxicity in Vitro:

gene mutation test: negative (Bacteria, Metabolic Activation: with/without)

In vitro mammalian cell gene mutation test: negative (Chinese hamster lung cells)

Chromosome aberration test in vitro: negative (Chinese hamster lung cells)

Toxicity to Reproduction/Fertility

oral, (Rat) NOAEL (parental): 200 mg/kg, NOAEL (F2): 60 mg/kg, Reproductive effects have been observed in animal studies.

Paternal Effects - Spermatogenesis (including genetic material, sperm morphology, motility, and count), testes, epididymis, sperm duct

Developmental Toxicity/Teratogenicity

Rat, NOAEL (maternal): 150 mg/kg,

Toxicity Data for: 2-phenoxyethyl acrylate

Acute Oral Toxicity

LD50: > 5,000 mg/kg (rat, male/female) (OECD Test Guideline 401)

Acute Inhalation Toxicity

Material Name: DeSolite DP-1900

Material Number: 86700891

no data available

Acute Dermal Toxicity

LD50: > 2,000 mg/kg (rat)

Skin Irritation

rabbit, non-irritant

Eye Irritation

rabbit, Non-irritating

Sensitization

Skin sensitisation according to Magnusson/Kligmann (maximizing test):: positive (Guinea pig, OECD Test Guideline 406)

Repeated Dose Toxicity

Oral: NOAEL: 300 mg/kg, (rat, male/female)

Oral: NOAEL: 350 mg/kg, (rat, male/female)

Mutagenicity

Genetic Toxicity in Vitro:

Ames test: negative (Escherichia coli, Metabolic Activation: with/without)

Ames test: negative (Salmonella typhimurium, Metabolic Activation: with/without)

In vitro mammalian cell gene mutation test: negative (Mouse lymphoma cells, Metabolic Activation: with/without)

Chromosome aberration test in vitro: negative (Human lymphocytes, Metabolic Activation: with/without)

Toxicity to Reproduction/Fertility

Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test, Oral, (rat, male/female)

Developmental Toxicity/Teratogenicity

rat, Oral, NOAEL (teratogenicity): 600, NOAEL (maternal): 600

Toxicity Data for: 1-Vinylhexahydro-2H-azepin-2-one

Acute Oral Toxicity

LD50: 1,114 mg/kg (rat)

Acute Inhalation Toxicity

LC50: > 1.6 mg/l, 8 h, vapour (rat)

Acute Dermal Toxicity

LD50: 1,700 mg/kg (rabbit)

Skin Irritation

rabbit, Non-irritating

Eye Irritation

rabbit, Irritating to eyes.

Sensitization

Local lymph node assay (LLNA): sensitizer

Repeated Dose Toxicity

Material Name: DeSolute DP-1900

Material Number: 86700891

28 d, oral: NOAEL: 50 mg/kg, (Rat)

28 d, Inhalation: NOAEL: 58 mg/m³, (Rat)

Mutagenicity

Genetic Toxicity in Vitro:

gene mutation test: negative (Bacteria)

Chromosome aberration test: negative (Chinese hamster fibroblasts)

gene mutation test: negative (Chinese hamster fibroblasts)

Toxicity to Reproduction/Fertility

Two-generation study, oral, (Rat) NOAEL (parental): 500 mg/kg,

Developmental Toxicity/Teratogenicity

Rat, oral, NOAEL (teratogenicity): 1,000 mg/kg, NOAEL (maternal): 100 mg/kg,

Toxicity Data for: 1-Propanethiol, 3-(trimethoxysilyl)-

Acute Oral Toxicity

LD50: 2,380 mg/kg (rat)

Acute Dermal Toxicity

LD50: 2,137.86 mg/kg (rabbit)

Skin Irritation

rabbit, non-irritant

Eye Irritation

Slightly irritating

Sensitization

Skin sensitisation:: positive (Guinea pig, OECD Test Guideline 406)

Toxicity Data for: 1,1,1-trimethylol propane triacrylate

Acute Oral Toxicity

LD50: > 5,000 mg/kg (rat)

Acute Inhalation Toxicity

LC50: 0.55 mg/l, 6 h, vapour (rat, male/female)

Acute Dermal Toxicity

LD50: 5,170 mg/kg (rabbit)

assuming density = 1.1 g/cm³

Skin Irritation

rabbit, OECD Test Guideline 404, irritating

Eye Irritation

rabbit, Draize, irritating

Sensitization

Skin sensitisation:: positive (Guinea pig)

Skin sensitisation:: positive (Guinea pig)

Repeated Dose Toxicity

Oral: NOAEL: 300 mg/kg, (rat, male/female, daily)

Dermal: LOAEL: 0.3 mg/kg, (rat, male/female, 5 days/week)

Dermal: NOAEL: 0.3 mg/kg, (Mouse, male/female, 5 days/week)

Mutagenicity

Genetic Toxicity in Vitro:

Mammalian cell - gene mutation assay: positive (Mouse lymphoma cells (L5178Y/TK), Metabolic

Activation: with/without)

Chromosome aberration test: positive (other mammalian peripheral blood lymphocytes, Metabolic

Activation: with/without)

Ames test: ambiguous (Salmonella typhimurium, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:

Micronucleus Assay: negative (Mouse, male/female, oral)

negative

Carcinogenicity

Mouse, male, Dermal, 80, 2 times/week

NOAEL: 50mg/kg body weight/day

Toxicity to Reproduction/Fertility

Oral, daily, (rat, male/female) NOAEL (parental): 300 mg/kg, NOAEL (F1): 300 mg/kg,

Developmental Toxicity/Teratogenicity

rabbit, male and female, Oral, daily, NOAEL (teratogenicity): \geq 130 mg/kg, NOAEL (maternal): \geq 130 mg/kg,

Toxicity Data for: Trimethylolpropane Tris(3-mercaptopropionate)**Acute Oral Toxicity**

LD50: 1,000 - 2,000 mg/kg (rat)

Acute Inhalation Toxicity

LC50: $>$ 3,363, 4 h, aerosol (rat)

Acute Dermal Toxicity

no data available

Skin Irritation

rabbit, non-irritant

Eye Irritation

rabbit, Non-irritating

Sensitization

Local lymph node assay (LLNA): sensitizer

Repeated Dose Toxicity

90 d, Oral: NOAEL: 20 mg/kg, (rat)

Mutagenicity

Material Name: DeSolute DP-1900

Material Number: 86700891

Genetic Toxicity in Vitro:
gene mutation test: negative (Bacteria)
Chromosome aberration test: negative (Chinese hamster fibroblasts)
gene mutation test: negative (mouse lymphoma cells)

Toxicity to Reproduction/Fertility

Oral, (rat) NOAEL (parental): 20 mg/kg,

Developmental Toxicity/Teratogenicity

rat, Oral, NOAEL (maternal): 15 mg/kg,

Carcinogenicity:

1,1,1-trimethylol propane triacrylate **IARC** - Overall evaluation: 2B Possibly carcinogenic to humans.

12. Ecological Information

Ecological Data for: DeSolute DP-1900

Data on the product is not available. Please find below the ecotoxicological data available to us for the components.

Ecological Data for 2-phenoxyethyl acrylate

Acute and Prolonged Toxicity to Fish

LC50: 10 mg/l (Leuciscus idus (Golden orfe), 96 h)

Acute Toxicity to Aquatic Invertebrates

EC50: 1.21 mg/l (Daphnia magna (Water flea), 48 h)

Toxicity to Aquatic Plants

EC50: 4.4 mg/l, (Desmodemus subspicatus (Green algae), 72 h)

EC10: 0.71 mg/l, (Desmodemus subspicatus (Green algae), 72 h)

Toxicity to Microorganisms

EC50: 177 mg/l, (activated sludge)

Ecological Data for Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-

Acute and Prolonged Toxicity to Fish

LC50: 10 - 100 mg/l (Golden orfe (Leuciscus idus), 96 h)

Acute Toxicity to Aquatic Invertebrates

EC50: 10 - 100 mg/l (Water flea (Daphnia magna), 48 h)

Toxicity to Aquatic Plants

EC50: 10 - 100 mg/l, (72 h)

Toxicity to Microorganisms

EC50: > 500 mg/l, (Wastewater bacteria, 17 h)

Ecological Data for 1,1,1-trimethylol propane triacrylate

Biodegradation

aerobic, 82 - 90 %, Exposure time: 28 d, i.e. readily biodegradable

Bioaccumulation

123 BCF

Accumulation in aquatic organisms is unlikely.

Acute and Prolonged Toxicity to Fish

LC50: 0.87 mg/l (Danio rerio (zebra fish), 96 h)

Acute Toxicity to Aquatic Invertebrates

LC50: 19.9 mg/l (Daphnia magna (Water flea), 48 h)

Toxicity to Aquatic Plants

ErC50: 4.86 mg/l, (scenedesmus subspicatus, 72 h)

EC50: 18.8 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

EC10: 1.9 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

Toxicity to Microorganisms

EC20: 625 mg/l, (activated sludge, 0.5 h)

13. Disposal Considerations**Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions

Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous. Do not reuse empty container.

14. Transportation Information**Land transport (DOT)**

Non-Regulated

Sea transport (IMDG)

Non-Regulated

Air transport (ICAO/IATA)

Non-Regulated

15. Regulatory Information**United States Federal Regulations****US. Toxic Substances Control Act:** Listed on the Active Portion of the TSCA Inventory.

No substances are subject to TSCA 12(b) export notification requirements.

US. EPA CERCLA Hazardous Substances (40 CFR 302.4) Components:

Acrylate Included in the regulation but with no data values. See regulation for further details

SARA Section 311/312 Hazard Categories:

Material Name: DeSolute DP-1900

Material Number: 86700891

Refer to hazard classification information in Section 2.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components:

None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components:

None

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Oligomer	CAS# is a trade secret
10 - 30%	2-phenoxyethyl acrylate	48145-04-6
1 - 5%	Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	75980-60-8
1 - 5%	1-Vinylhexahydro-2H-azepin-2-one	2235-00-9
>=1%	Phenol, 2-methyl-4,6-bis[(octylthio)methyl]-	110553-27-0
0.1 - 1%	1,1,1-trimethylol propane triacrylate	15625-89-5

Massachusetts Right to Know Extraordinarily Hazardous Substance List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<100 ppm	Furan	110-00-9
<100 ppm	Phenol	108-95-2
<100 ppm	Propylene Oxide	75-56-9
<100 ppm	Hydrogen chloride	7647-01-0
<100 ppm	Acetaldehyde	75-07-0

California Proposition 65 List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	1,1,1-trimethylol propane triacrylate	15625-89-5
<100 ppm	Furan	110-00-9
<100 ppm	Methanol	67-56-1
<100 ppm	Propylene Oxide	75-56-9
<100 ppm	Acetaldehyde	75-07-0

CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals

To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27).

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

16. Other Information

Contact: Product Safety Department
Telephone: (412) 413-2835
Version Date: 04/02/2024
SDS Version: 1.3

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