

# SAFETY DATA SHEET



## 1. Identification

**Covestro LLC**  
**1 Covestro Circle**  
**Pittsburgh, PA 15205**  
**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:** DeSolute DS-2900  
**Material Number:** 86700905  
**Chemical Family:** Acrylate Resin  
**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

Eye irritation: Category 2A  
Skin sensitisation: Category 1  
Reproductive toxicity (Oral): Category 1B  
Reproductive toxicity: Category 2  
Specific target organ toxicity - single exposure: Category 3 (Respiratory system)

### GHS Label Elements

Hazard pictograms:



Signal word: Danger

Hazard statements: May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause respiratory irritation.  
May damage fertility or the unborn child if swallowed.  
Suspected of damaging fertility or the unborn child.

Precautionary statements: **Prevention:**  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and

Material Name: DeSolute DS-2900

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understood.

Keep container tightly closed.

Avoid breathing dust, mist, gas, vapors or spray.

Wash skin 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.

**Response:**

IF ON SKIN: Wash with plenty of soap and water.

IF INHALED: Remove person to fresh air and keep at rest in a position 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 or concerned: Get medical attention.

Call a doctor or emergency medical facility (i.e. 911) if you feel unwell.

If skin irritation or rash occurs: Get medical attention.

If eye irritation persists: Get medical attention.

Wash contaminated clothing before reuse.

**Storage:**

Store in a well-ventilated place.

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

Concentration	Components	CAS-No.
30 - 60%	Epoxy Acrylate	55818-57-0
10 - 30%	Tripropylene Glycol Diacrylate	42978-66-5
3 - 7%	1,6-Hexanedioldiacrylate	13048-33-4
1 - 5%	Acrylate	CAS# is a trade secret
1 - 5%	Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	75980-60-8
0.1 - 1%	Siloxanes and Silicones, di-Me, Me hydrogen, reaction products with polyethylene-polypropylene glycol monoacetate allyl ether	68037-64-9

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., Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning., May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

**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 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 (CO<sub>2</sub>), 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)

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**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

<b>State of Matter:</b>	liquid
<b>Appearance:</b>	liquid
<b>Color:</b>	Clear
<b>Odor:</b>	characteristic
<b>Odor Threshold:</b>	No Data Available
<b>pH:</b>	No Data Available
<b>Freezing Point:</b>	No Data Available
<b>Setting Point:</b>	No Data Available
<b>Melting Point:</b>	No Data Available
<b>Boiling Point:</b>	No Data Available
<b>Flash Point:</b>	> 100 °C (> 212 °F) (closed cup)
<b>Evaporation Rate:</b>	No Data Available
<b>Lower explosion limit:</b>	No Data Available
<b>Upper Explosion Limit:</b>	No Data Available
<b>Vapor Pressure:</b>	No Data Available
<b>Vapor Density:</b>	No Data Available
<b>Density:</b>	1.13 g/cm <sup>3</sup> @ 20 °C (68 °F)
<b>Relative Vapor Density:</b>	No Data Available
<b>Specific Gravity:</b>	No Data Available
<b>Solubility in Water:</b>	No Data Available
<b>Partition Coefficient: n-octanol/water:</b>	No Data Available
<b>Auto-ignition Temperature:</b>	No Data Available
<b>Decomposition Temperature:</b>	Stable under recommended storage conditions. The product is chemically stable.
<b>Unblocking Temperature:</b>	No Data Available
<b>Softening point:</b>	No Data Available
<b>Dynamic Viscosity:</b>	6,000 mPa.s @ 20 °C (68 °F)
<b>Kinematic Viscosity:</b>	No Data Available
<b>Bulk Density:</b>	No Data Available
<b>Molecular Weight:</b>	No Data Available
<b>Pour point:</b>	No Data Available
<b>Self Ignition:</b>	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 (CO<sub>2</sub>), carbon monoxide (CO), dense black smoke., Acrylate monomers, Aldehydes, Organic acids

## 11. Toxicological Information

**Likely Routes of Exposure:** Skin Contact  
Eye Contact  
Ingestion  
Inhalation

### Health Effects and Symptoms

**Acute:** May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash., Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning., May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

**Chronic:** Repeated and prolonged contact may cause an allergic skin reaction in sensitive individuals., May damage fertility or the unborn child.

### Toxicity Data for: DeSolite DS-2900

Data on the product is not available.

#### Acute Dermal Toxicity

Acute toxicity estimate: 3,010 mg/kg (Calculation method)

### Toxicity Data for: Epoxy Acrylate

#### Acute Oral Toxicity

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

### Toxicity Data for: Tripropylene Glycol Diacrylate

#### Acute Oral Toxicity

LD50: 6,200 mg/kg (rat)

#### Acute Dermal Toxicity

LD50: > 2,000 mg/kg (rabbit, male/female) (OECD Test Guideline 402)

#### Skin Irritation

rabbit, OECD Test Guideline 404, Non-irritating

#### Eye Irritation

rabbit, OECD Test Guideline 405, irritating

#### Sensitization

dermal: ambiguous (Guinea pig)

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

#### Repeated Dose Toxicity

90 d, dermal: NOAEL: 67 mg/kg, (rat)

10 d, dermal: LOAEL: 500 mg/kg, (rat, male/female, daily)

#### Mutagenicity

Genetic Toxicity in Vitro:

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

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Mammalian cell - gene mutation assay: positive (Mouse lymphoma cells (L5178Y/TK), Metabolic Activation: with/without)  
Positive and negative results were reported.

Genetic Toxicity in Vivo:  
Micronucleus Assay: negative (Mouse, male, intraperitoneal)  
negative

#### **Carcinogenicity**

Mouse, dermal, 80 wNo carcinogenic effects observed at the doses tested.

#### **Developmental Toxicity/Teratogenicity**

rat, female, oral, NOAEL (teratogenicity): Not Established (<250 mg/kg), NOAEL (maternal): Not Established (<250 mg/kg) rat, female, oral, GD 6-15, daily, NOAEL (teratogenicity): 250 mg/kg, NOAEL (maternal): 250 mg/kg,

#### **Other Relevant Toxicity Information**

May cause irritation of respiratory tract.

#### **Toxicity Data for: 1,6-Hexanedioldiacrylate**

##### **Acute Oral Toxicity**

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

##### **Acute Dermal Toxicity**

LD50: 3,650 mg/kg (rabbit) (OECD Test Guideline 402)

##### **Skin Irritation**

rabbit, OECD Test Guideline 404, Exposure Time: 4 h, irritating

##### **Eye Irritation**

rabbit, OECD Test Guideline 405, Irritation to eyes, reversing within 7 days

##### **Sensitization**

Maximisation Test: positive (Guinea pig, OECD Test Guideline 406)

##### **Mutagenicity**

Genetic Toxicity in Vitro:

Bacterial - gene mutation assay: negative

Mammalian cell - gene mutation assay: negative (Mouse lymphoma cells (L5178Y/TK))

Genetic Toxicity in Vivo:

In vivo micronucleus test: negative (Mouse, )

negative

##### **Toxicity to Reproduction/Fertility**

Oral, (rat) NOAEL (parental): 250 mg/kg,

##### **Developmental Toxicity/Teratogenicity**

rat, female, Oral, GD 6-15, daily, NOAEL (teratogenicity): 750 mg/kg, Did not show teratogenic effects in animal experiments.

#### **Toxicity Data for: Acrylate**

##### **Acute Oral Toxicity**

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

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

**Acute Inhalation Toxicity**

no data available

**Acute Dermal Toxicity**

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

**Skin Irritation**

rabbit, non-irritant

**Eye Irritation**

rabbit, Non-irritating

**Sensitization**

Maximisation Test: sensitizer (Guinea pig)

**Repeated Dose Toxicity**

90 d, oral: NOAEL: 350 mg/kg, (rat)

**Mutagenicity**

Genetic Toxicity in Vitro:

gene mutation test: negative (Bacteria)

gene mutation test: negative (mammalian cell)

Chromosome aberration test: negative (Human lymphocytes)

**Toxicity to Reproduction/Fertility**

Oral, (rat) NOAEL (parental): 100 mg/kg,

**Developmental Toxicity/Teratogenicity**

rat, oral, NOAEL (maternal): 600 mg/kg,

**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)

Material Name: DeSolute DS-2900

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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: Siloxanes and Silicones, di-Me, Me hydrogen, reaction products with polyethylene-polypropylene glycol monoacetate allyl ether**

**Acute Oral Toxicity**

LD50: 28,200 mg/kg (rat)

**Acute Dermal Toxicity**

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

**Carcinogenicity:**

No carcinogenic substances as defined by IARC, NTP and/or OSHA

**12. Ecological Information**

**Ecological Data for: DeSolute DS-2900**

Data on the product is not available.

**Ecological Data for Tripropylene Glycol Diacrylate**

**Biodegradation**

> 90 %, i.e. readily biodegradable

40 - 50 %, i.e. not readily degradable

**Bioaccumulation**

Does not bioaccumulate.

**Acute and Prolonged Toxicity to Fish**

LC50: > 4.5 - < 10 mg/l (Golden orfe (*Leuciscus idus*), 96 h)

**Acute Toxicity to Aquatic Invertebrates**

EC50: 88.7 mg/l (Water flea (*Daphnia magna*), 48 h)

**Toxicity to Aquatic Plants**

EC50: > 28 mg/l, (Green algae (*Scenedesmus subspicatus*), 72 h)

**Toxicity to Microorganisms**

EC50: > 10,000 mg/l, (*Pseudomonas putida*, 0.5 h)

**Ecological Data for 1,6-Hexanedioldiacrylate**

**Biodegradation**

80 - 90 %, i.e. readily biodegradable

Material Name: DeSolute DS-2900

Material Number: 86700905

**Acute and Prolonged Toxicity to Fish**

LC50: > 4.6 - < 10 mg/l (Golden orfe (Leuciscus idus), 96 h)

**Acute Toxicity to Aquatic Invertebrates**

EC50: 2.59 mg/l (Water flea (Daphnia magna), 48 h)

**Toxicity to Aquatic Plants**

1.47 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

**Toxicity to Microorganisms**

EC10: 405 mg/l, (Pseudomonas putida, 0.5 h)

**Ecological Data for Acrylate****Acute and Prolonged Toxicity to Fish**

LC50: 10 mg/l (Fish, 96 h)

**Acute Toxicity to Aquatic Invertebrates**

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

**Toxicity to Aquatic Plants**

EC50: 4.44 mg/l, (algae, 72 h)

**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 Siloxanes and Silicones, di-Me, Me hydrogen, reaction products with polyethylene-polypropylene glycol monoacetate allyl ether****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)**

Material Name: DeSolute DS-2900

Material Number: 86700905

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Bisphenol A diglycidyl diacrylate, Tripropylene glycol diacrylate, Hexane-1,6-diol diacrylate)  
**Hazard Class or Division:** 9  
**UN number:** UN3082  
**Packaging Group:** III  
**Hazard Label(s):** MISCELLANEOUS  
**Marine pollutant:** Marine pollutant

**Air transport (ICAO/IATA)**

**Proper Shipping Name:** Environmentally hazardous substance, liquid, n.o.s. (contains Bisphenol A diglycidyl diacrylate, Tripropylene glycol diacrylate, Hexane-1,6-diol diacrylate)  
**Hazard Class or Division:** 9  
**UN number:** UN3082  
**Packaging Group:** III  
**Hazard Label(s):** MISCELLANEOUS  
**Marine pollutant:** Marine pollutant

**Additional Transportation Information**

IATA/IMDG: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5kg.

**15. Regulatory Information**

**United States Federal Regulations**

**US. Toxic Substances Control Act:** On Active Portion of TSCA Inventory.

**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:**

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:**

Material Name: DeSolute DS-2900

Material Number: 86700905

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
30 - 60%	Epoxy Acrylate	55818-57-0
10 - 30%	Tripropylene Glycol Diacrylate	42978-66-5
>=1%	Polymer	CAS# is a trade secret
3 - 7%	1,6-Hexanedioldiacrylate	13048-33-4
>=1%	Polymer	CAS# is a trade secret
1 - 5%	Acrylate	CAS# is a trade secret
1 - 5%	Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-	75980-60-8

**New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:**

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	2-Phenoxyethanol	122-99-6

**Massachusetts Right to Know Extraordinarily Hazardous Substance List:**

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<100 ppm	Phenol	108-95-2

**California Proposition 65 List:**

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<0.1%	Toluene	108-88-3

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: 12/05/2023  
 SDS Version: 1.1

Information contained in this Safety Data Sheet (SDS) is believed to be accurate but is furnished without warranty, express or implied, including warranties of merchantability or fitness for a particular purpose. The information relates only to the specific material designated herein. Covestro LLC assumes no legal responsibility for use of or reliance upon the information in this SDS and such information shall in no case be considered a part of our terms and conditions of sale. The user is responsible for determining whether the Covestro product is suitable for user's method of use or application. Covestro is not liable for any failure to observe the precautionary measures described in this SDS or for any misuse of the product.