

# SAFETY DATA SHEET

United States



DeSolite® DP-1021

## Section 1. Identification

**GHS product identifier** : DeSolite® DP-1021  
**Other means of identification** : Not available.  
**Product type** : Liquid.  
**Material uses** : UV-curable coatings, inks and matrix materials.  
**Supplier** : Covestro Desotech Inc.  
1122 St Charles Street  
Elgin IL 60120  
Tel: +1 (847) 697-0400  
**e-mail address of person responsible for this SDS** : [resins.SDS@covestro.com](mailto:resins.SDS@covestro.com)  
**Emergency telephone number** : 1-800-424-9300

## 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** : SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1  
TOXIC TO REPRODUCTION - Category 1B

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H360 - May damage fertility or the unborn child.

### Precautionary statements

**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.  
P261 - Avoid breathing vapor.  
P264 - Wash hands thoroughly after handling.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
**Response** : P308 + P313 - IF exposed or concerned: Get medical advice or attention.  
P362 + P364 - Take off contaminated clothing and wash it before reuse.  
P363 - Wash contaminated clothing before reuse.  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.  
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.  
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.  
**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.



Hazards not otherwise classified : None known.

### Section 3. Composition/information on ingredients

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

CAS number : Not applicable.

Ingredient name	%	CAS number
Ethoxylated nonyl phenol acrylate	25 - 50	678991-31-6
Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)-	1 - 5	75980-60-8

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 as hazardous to health or the environment and hence require reporting in this section.**

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

### 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 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 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 with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. 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** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

##### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness



- Inhalation** : Adverse symptoms may include the following:  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

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

- 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

**Extinguishing media**

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 phosphorus oxides  
 sulfur oxides (SO<sub>2</sub>, SO<sub>3</sub> etc.)  
 silicium oxides  
 (dense) black smoke  
 aldehydes  
 organic acids

**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.

**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. 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).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry 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. 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. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. 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. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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 between the following temperatures: 15 to 30°C (59 to 86°F). Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store in original container, protected from direct sunlight. Store locked up. 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. Keep away from heat and direct sunlight. Inhibitor only effective in the presence of oxygen.



## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Ethoxylated nonyl phenol acrylate	None.
Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)-	None.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- 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.
- 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. < 1 hour (breakthrough time): (0.12 mm) Nitrile gloves.
- 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.
- 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.
- Remarks** : ☒ Do not use PVC gloves. PVC absorbs acrylics. Do not use natural rubber gloves. Replace damaged gloves.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Colorless to light yellow.
- Odor** : typical
- Odor threshold** : Not available.
- pH** : Not available.



<b>Melting point</b>	: Not available.
<b>Boiling point</b>	: Not available.
<b>Flash point</b>	: Closed cup: >212°F (>100°C) [(estimate)]
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Not available.
<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: 1 (Water = 1)
<b>Density (g/cm³)</b>	: 1 g/cm³ (23°C)
<b>Bulk density</b>	: Not available.
<b>Solubility</b>	: Insoluble in the following materials: cold water and hot water.
<b>Solubility in water</b>	: Not available.
<b>Solubility at room temperature</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Dynamic (room temperature): 4800 to 6200 mPa·s (4800 to 6200 cP) Kinematic (room temperature): >48 cm²/s (>4800 cSt) Kinematic (40°C (104°F)): >0.205 cm²/s (>20.5 cSt)
<b>Remarks</b>	: Soluble in the following materials: organic solvents

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable. Stable under storage conditions (see section 7).
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Keep away from heat and direct sunlight. Keep away from flames or sparks. May polymerize on exposure to light. During heating, spontaneous polymerisation can occur.
<b>Incompatible materials</b>	: Free radical initiators, peroxides, strongly alkaline and strongly acidic materials or reactive metals. Contact with these could result in uncontrolled exothermic polymerization.
<b>Hazardous decomposition products</b>	: No specific data.
<b>Remarks</b>	: Keep away from heat and direct sunlight. Keep away from flames or sparks. Keep away from: Free radical initiators, peroxides, strongly alkaline and strongly acidic materials or reactive metals. Contact with these could result in uncontrolled exothermic polymerization.



## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Methanone, (diphenylphosphinyl) (2,4,6-trimethylphenyl)-	LD50 Dermal	Rat - Male, Female	>2000 mg/kg ( LD0 = 2000 mg/ kg )	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg ( LD0 = 5000 mg/ kg )	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Methanone, (diphenylphosphinyl) (2,4,6-trimethylphenyl)-	Eyes - Non-irritating	Rabbit	0	-	-
	Skin - Non-irritating	Rabbit	0	-	-

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
Methanone, (diphenylphosphinyl) (2,4,6-trimethylphenyl)-	skin	Mouse	Sensitizing

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

#### Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Ingestion	: No known significant effects or critical hazards.

#### 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:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

#### 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

Product/ingredient name	Result	Species	Dose	Exposure
Methanone, (diphenylphosphinyl) (2,4,6-trimethylphenyl)-	Sub-acute NOAEL Oral	Rat - Male, Female	50 mg/kg day	-

**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : May damage fertility or the unborn child.

#### 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)
DeSolite® DP-1021	190841.7	190841.7	N/A	N/A	N/A





## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Methanone, (diphenylphosphinyl) (2,4,6-trimethylphenyl)-	Acute EC50 1.56 mg/l Fresh water	Algae	72 hours
	Acute EC50 3.53 mg/l Fresh water	Daphnia	48 hours
	Acute LC50 1.4 mg/l	Fish	96 hours

### Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methanone, (diphenylphosphinyl) (2,4,6-trimethylphenyl)-	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Methanone, (diphenylphosphinyl) (2,4,6-trimethylphenyl)-	3.1	53 to 72	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-



Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

**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) CDR Exempt/Partial exemption:** See remarks  
**United States inventory (TSCA 8b):** See remarks

	Product/ingredient name	CAS #	%
<b>Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)</b>	Glycol ether acrylate methanol	- 67-56-1	14.506 0.0081

**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 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	Glycol ether acrylate	-	10 - 25
<b>Supplier notification</b>	Glycol ether acrylate	-	10 - 25

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

**Massachusetts** : None of the components are listed.

**New York** : None of the components are listed.

**New Jersey** : None of the components are listed.

**Pennsylvania** : None of the components are listed.

### California Prop. 65

**⚠ WARNING:** This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol	-	Yes.

**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

Ingredient name	List name	Status
Not listed.		

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Ingredient name	List name	Status
Not listed.		

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Ingredient name	List name	Status
Not listed.		

**Remarks** : Relevant declarations related to this product are available on request.

## Section 16. Other information

**History**

Code : 015883WW41159

Date of printing : 8/27/2021

Date of issue/Date of revision : 8/27/2021

Date of previous issue : 4/5/2021

Version : 6

**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  
 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  
 UN = United Nations

**Procedure used to derive the classification**

Classification	Justification
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
TOXIC TO REPRODUCTION - Category 1B	Calculation method

**References** : Not available.



✔ Indicates information that has changed from previously issued version.

**Notice to reader**

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