

# Safety Data Sheet

## x45 Clear

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(908432/SDS\_GEN\_US/EN)

### 1. Identification

#### Product identifier used on the label

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#### Recommended use of the chemical and restriction on use

Recommended use\*: Stereolithography; Monomer in ultraviolet ink jet application; In an enclosed system

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

##### Company:

Nexa3D  
1923 Eastman Ave., STE 200  
Ventura, CA 93003, USA

Telephone: +1-805-465-9001

#### Emergency telephone number

##### 24 Hour Emergency Response Information

ChemTel 1-800-255-3924 (US) / 1-813-248-0585 Contract MIS3892732  
BASF HOTLINE: 1-800-832-HELP (4357)

#### Other means of identification

Chemical family: photoinitiator

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### 2. Hazards Identification

#### According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Skin Sens.	1	Skin sensitization
Repr.	2 (fertility)	Reproductive toxicity
Repr.	2 (unborn child)	Reproductive toxicity
STOT RE	2	Specific target organ toxicity — repeated exposure

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Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

### Label elements

Pictogram:



Signal Word:

Warning

Hazard Statement:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P260	Do not breathe dust/gas/mist/vapours.
P273	Avoid release to the environment.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P308 + P311	IF exposed or concerned: Call a POISON CENTER or physician.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth
P332 + P313	If skin irritation occurs: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P337 + P311	If eye irritation persists: Call a POISON CENTER or physician.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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### Hazards not otherwise classified

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No specific dangers known, if the regulations/notes for storage and handling are considered.

### 3. Composition / Information on Ingredients

#### According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

2-Propen-1-one, 1-(4-morpholinyl)-

CAS Number: 5117-12-4

Content (W/W):  $\geq 50.0$  -  $< 75.0\%$

Synonym: No data available.

2-Propenoic acid, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester

CAS Number: 42594-17-2

Content (W/W):  $\geq 5.0$  -  $< 7.0\%$

Synonym: No data available.

4-(1,1-dimethylethyl)cyclohexyl acrylate

CAS Number: 84100-23-2

Content (W/W):  $\geq 1.0$  -  $< 5.0\%$

Synonym: No data available.

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

CAS Number: 75980-60-8

Content (W/W):  $\geq 0.3$  -  $< 1.0\%$

Synonym: Diphenyl(2,4,6-trimethylbenzoyl)phosphineoxide

Methanone, (1-hydroxycyclohexyl)phenyl-

CAS Number: 947-19-3

Content (W/W):  $\geq 0.3$  -  $< 3.0\%$

Synonym: No data available.

### 4. First-Aid Measures

#### Description of first aid measures

##### General advice:

Immediately remove contaminated clothing.

##### If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

##### If on skin:

Wash affected areas thoroughly with soap and water. Seek medical attention.

##### If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. Remove contact lenses, if present. Immediate medical attention required.

##### If swallowed:

Immediately rinse mouth and then drink 200 - 300 ml water, do not induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

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### Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

### Indication of any immediate medical attention and special treatment needed

#### Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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## 5. Fire-Fighting Measures

### Extinguishing media

Suitable extinguishing media:  
water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:  
water jet

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:  
harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

### Advice for fire-fighters

Protective equipment for fire-fighting:  
Wear a self-contained breathing apparatus.

### Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Keep people away and stay on the upwind side.

### Environmental precautions

Do not discharge into drains/surface waters/groundwater.

### Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

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## 7. Handling and Storage

### Precautions for safe handling

Keep away from sources of ignition - No smoking.

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Protection against fire and explosion:  
Heated containers should be cooled to prevent polymerization. Take precautionary measures against static discharges.

### Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Protect against heat. Protect from the effects of light. The stabilizer is only effective in the presence of oxygen.  
Protect from temperatures above: 40 °C

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## 8. Exposure Controls/Personal Protection

No occupational exposure limits known.

**Advice on system design:**  
Ensure adequate ventilation.

### Personal protective equipment

#### **Respiratory protection:**

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. A NIOSH-certified respirator with an APF of at least 50 is required. Observe OSHA regulations for respirator use (29 CFR 1910.134).

#### **Hand protection:**

Wear impervious gloves.

#### **Eye protection:**

Tightly fitting safety goggles (chemical goggles) and face shield.

#### **Body protection:**

Impermeable protective clothing

#### **General safety and hygiene measures:**

Handle in accordance with good industrial hygiene and safety practice.

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## 9. Physical and Chemical Properties

Form:	liquid
Odour:	acrylic-like
Odour threshold:	No applicable information available.
Colour:	slightly yellowish
pH value:	(approx. 10 g/l)
Freezing point:	not determined
Melting point:	not determined
Flash point:	> 100 °C
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.
Upper explosion limit:	For liquids not relevant for classification and labelling.

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Autoignition:	not determined	
Vapour pressure:	not determined	
Density:	approx. 1.118 g/cm <sup>3</sup> ( 20 °C)	(ISO 2811-3)
Relative density:	No data available.	
Vapour density:	not determined	
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures	
Self-ignition temperature:	not self-igniting	
Thermal decomposition:	189.18 °C, 363.61 kJ/kg	
Viscosity, dynamic:	approx. 360 mPa.s ( 23 °C)	
Solubility in water:	( 20 °C) partly soluble	
Solubility (qualitative):	soluble	
Evaporation rate:	solvent(s): alcohols, esters, ketones, not determined	

## 10. Stability and Reactivity

### Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:  
not fire-propagating

### Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### Possibility of hazardous reactions

The product is stabilized against spontaneous polymerization prior to despatch.  
The product can polymerize if the shelf life or storage temperature are greatly exceeded. Heat develops during polymerization. Reacts with peroxides and other radical components.

### Conditions to avoid

Avoid UV-light and other radiation with high energy. Avoid heat.

### Incompatible materials

peroxides, oxidizable substances, strong oxidizing agents, free radical initiators, initiators

### Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:  
189.18 °C, 4 K/min

## 11. Toxicological information

### Primary routes of exposure

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Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

#### Acute toxicity

Assessment of acute toxicity: Harmful if swallowed. Virtually nontoxic after a single skin contact. The product has not been tested. The statement has been derived from the properties of the individual components.

#### Oral

Type of value: LD50

Species: rat

Value: 300 - 2,000 mg/kg

The product has not been tested. The statement has been derived from the properties of the individual components. Result of analysis for GOAL end points expected (see date)

#### Dermal

Type of value: ATE

Value: > 5,000 mg/kg

#### Assessment other acute effects

No data available.

#### Irritation / corrosion

Assessment of irritating effects: Irritating to eyes and skin. The product has not been tested. The statement has been derived from the properties of the individual components.

#### Skin

Species: rabbit

Result: Irritant.

The product has not been tested. The statement has been derived from the properties of the individual components.

#### Eye

Species: rabbit

Result: Irritant.

The product has not been tested. The statement has been derived from the properties of the individual components.

#### Sensitization

Assessment of sensitization: May cause allergic skin reaction. The product has not been tested. The statement has been derived from the properties of the individual components.

Result: sensitizing

The product has not been tested. The statement has been derived from the properties of the individual components.

#### Aspiration Hazard

No aspiration hazard expected.

### Chronic Toxicity/Effects

#### Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated oral exposure to large quantities may affect certain organs.

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### Genetic toxicity

Assessment of mutagenicity: Based on the ingredients, there is no suspicion of a mutagenic effect.

### Carcinogenicity

Assessment of carcinogenicity: None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP, OSHA or ACGIH as a carcinogen.

### Reproductive toxicity

Assessment of reproduction toxicity: Contains a suspected reproductive toxin.

### Teratogenicity

Assessment of teratogenicity: Based on the ingredients, there is no suspicion of a teratogenic effect.

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## 12. Ecological Information

### Toxicity

#### Aquatic toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. The product has not been tested. The statement has been derived from the properties of the individual components.

#### Toxicity to fish

LC50 (96 h) > 1 - 10 mg/l, Fish

The product has not been tested. The statement has been derived from the properties of the individual components.

#### Aquatic invertebrates

LC50 (48 h), daphnia (other)  
not determined

#### Aquatic plants

EC50 (72 h), algae (other)  
not determined

#### Chronic toxicity to fish

No data available.

#### Chronic toxicity to aquatic invertebrates

No data available.

### Microorganisms/Effect on activated sludge

#### Toxicity to microorganisms

other  
bacteria/EC50 (0.5 h):  
not determined

### Persistence and degradability

#### Assessment biodegradation and elimination (H2O)

Not readily biodegradable (by OECD criteria).

### Bioaccumulative potential



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### Assessment bioaccumulation potential

The product has not been tested.

### **Mobility in soil**

### Assessment transport between environmental compartments

No data available.

### **Additional information**

Add. remarks environm. fate & pathway:

Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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## 13. Disposal considerations

### **Waste disposal of substance:**

Dispose of in accordance with national, state and local regulations. Do not discharge into drains/surface waters/groundwater.

### **Container disposal:**

Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Dispose of in accordance with national, state and local regulations.

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## 14. Transport Information

### **Land transport**

USDOT

Not classified as a dangerous good under transport regulations

### **Sea transport**

IMDG

Not classified as a dangerous good under transport regulations

### **Air transport**

IATA/ICAO

Not classified as a dangerous good under transport regulations

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## 15. Regulatory Information

### **Federal Regulations**

#### **Registration status:**

Chemical TSCA, US released; restriction on use / listed

TSCA §5. Based on EPA's assessment that includes analogue data, a substance in this product has the potential to cause:

Carcinogenicity;

Genetic toxicity;

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Specific target organ toxicity.  
Hazard(s) not classifiable under GHS criteria.  
This product contains a substance (CASRN 5117-12-4) which may cause internal organ and reproductive effects.  
When using this product, use skin protection.  
TSCA § 5(a) final Significant New Use Restriction (SNUR)  
40 CFR 721.5185

**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

### Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

**WARNING:** This product can expose you to chemicals including TOLUENE, 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).

### NFPA Hazard codes:

Health: 2      Fire: 1      Reactivity: 0      Special:

## 16. Other Information

### SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2021/01/05

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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