

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 10/29/2020

Reviewed on 10/05/2020

**1 Identification**

**- Product identifier**

- **Trade name:** Vibra-TITE® 3D Printing, E-UA40
- **Synonyms:** Flexible 3D Printing Resin - A40
- **Part number:** UV3DA40, VT253
- **Application of the substance / the mixture**  
Adhesives

**- Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**  
ND Industries, Inc  
1000 North Crooks Road  
Clawson, MI 48017  
USA  
Telephone: +1-248-288-0000  
Email: info@ndindustries.com  
Website: www.ndindustries.com
- **Information department:** Product Safety Department
- **Emergency telephone number:**  
United States: 1-800-424-9300

**2 Hazard(s) identification**

**- Classification of the substance or mixture**



GHS08 Health hazard

Repr. 1B H360 May damage fertility or the unborn child.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.  
Skin Sens. 1 H317 May cause an allergic skin reaction.  
STOT SE 3 H335 May cause respiratory irritation.

**- Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

**- Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger

**- Hazard-determining components of labeling:**

Urethane Acrylate  
dodecyl acrylate  
isodecyl acrylate  
diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide

**- Hazard statements**

H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H317 May cause an allergic skin reaction.  
H360 May damage fertility or the unborn child.  
H335 May cause respiratory irritation.

**- Precautionary statements**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray  
P264 Wash thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing must not be allowed out of the workplace.

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P280	Wear protective gloves/protective clothing/eye protection/face protection.
P280	Wear protective gloves.
P280	Wear eye protection / face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a poison center/doctor if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	Specific treatment (see on this label).
P337+P313	If eye irritation persists: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**- Other hazards****- Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

**- Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

**- Dangerous components:**

CAS: 2156-97-0	dodecyl acrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	20 – 29%
CAS: 84100-23-2	4-tert-Butylcyclohexyl acrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319	10 – 19%
	Urethane Acrylate Repr. 1B, H360; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1B, H317; STOT SE 3, H335	10 – 19%
CAS: 112926-00-8	Precipitated silica (Silica-Amorphous) Combustible Dust	9.65%
CAS: 1330-61-6	isodecyl acrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	5 – 9%
CAS: 75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide Repr. 2, H361; Skin Sens. 1, H317	≤ 1%

### 4 First-aid measures

**- Description of first aid measures****- After inhalation:**

Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.  
Supply fresh air; consult doctor in case of complaints.

**- After skin contact:** Immediately wash with water and soap and rinse thoroughly.**- After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.**- After swallowing:** If symptoms persist consult doctor.**- Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

**- Extinguishing media**

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

**- Special hazards arising from the substance or mixture** No further relevant information available.**- Advice for firefighters****- Protective equipment:**

Wear self-contained respiratory protective device.  
Wear fully protective suit.

### 6 Accidental release measures

**- Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

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Wear protective clothing.

**- Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

**- Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

Dispose of the collected material according to regulations.

**- Reference to other sections**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

**- Handling:****- Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.

**- Information about protection against explosions and fires:** Keep respiratory protective device available.

**- Conditions for safe storage, including any incompatibilities****- Storage:**

**- Requirements to be met by storerooms and receptacles:** No special requirements.

**- Information about storage in one common storage facility:** Not required.

**- Further information about storage conditions:** Keep receptacle tightly sealed.

**- Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**- Additional information about design of technical systems:** No further data; see item 7.

**- Control parameters****- Components with limit values that require monitoring at the workplace:**

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

**CAS: 112926-00-8 Precipitated silica (Silica-Amorphous)**

PEL	20mppcf or 80mg/m <sup>3</sup> /%SiO <sub>2</sub>
REL	Long-term value: 6 mg/m <sup>3</sup> See Pocket Guide App. C
TLV	TLV withdrawn

**- Additional information:** The lists that were valid during the creation were used as basis.

**- Exposure controls****- Personal protective equipment:****- General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes and skin.

**- Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**- Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**- Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.  
Nitrile rubber, NBR

**- Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- **Eye protection:** Required use of safety glasses
- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

<b>- Information on basic physical and chemical properties</b>	
<b>- General Information</b>	
<b>- Appearance:</b>	
- <b>Form:</b>	Liquid
- <b>Color:</b>	Yellowish
- <b>Odor:</b>	Mild
- <b>Odor threshold:</b>	Not determined.
- <b>pH-value:</b>	Not determined.
<b>- Change in condition</b>	
- <b>Melting point/Melting range:</b>	Undetermined.
- <b>Boiling point/Boiling range:</b>	> 200 °C (> 392 °F)
- <b>Flash point:</b>	Not applicable.
- <b>Flammability (solid, gaseous):</b>	Not applicable.
- <b>Decomposition temperature:</b>	Not determined.
- <b>Auto igniting:</b>	Product is not selfigniting.
- <b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>- Explosion limits:</b>	
- <b>Lower:</b>	Not determined.
- <b>Upper:</b>	Not determined.
- <b>Vapor pressure:</b>	Not determined.
<b>- Density:</b>	
- <b>Relative density</b>	Not determined.
- <b>Vapor density</b>	Not determined.
- <b>Evaporation rate</b>	Not determined.
<b>- Solubility in / Miscibility with</b>	
- <b>Water:</b>	Not miscible or difficult to mix.
- <b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>- Viscosity:</b>	
- <b>Dynamic:</b>	Not determined.
- <b>Kinematic:</b>	Not determined.
<b>- Solvent content:</b>	
- <b>VOC content:</b>	0.00 % 0.0 g/l / 0.00 lb/gal
- <b>Solids content:</b>	14.8 %
- <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

CAS: 75980-60-8 diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide

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

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- **Primary irritant effect:**
  - **on the skin:** Irritant to skin and mucous membranes.
  - **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories**- **IARC (International Agency for Research on Cancer)**

CAS: 112926-00-8   Precipitated silica (Silica-Amorphous)	3
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
  - **Remark:** Toxic for fish
- **Additional ecological information:**
  - **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
  - **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- **UN-Number**
  - **DOT, IMDG, IATA** UN3082
- **UN proper shipping name**
  - **DOT** Environmentally hazardous substance, liquid, n.o.s. (dodecyl acrylate, Urethane Acrylate)
  - **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dodecyl acrylate, Urethane Acrylate), MARINE POLLUTANT
  - **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dodecyl acrylate, Urethane Acrylate)
- **Transport hazard class(es)**
  - **DOT, IMDG, IATA**

- **Class**

9 Miscellaneous dangerous substances and articles

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- <b>Label</b>	9
- <b>Packing group</b> - DOT, IMDG, IATA	III
- <b>Environmental hazards:</b>	Product contains environmentally hazardous substances: Urethane Acrylate
- <b>Marine pollutant:</b>	Yes (DOT) Symbol (fish and tree)
- <b>Special marking (IATA):</b>	Symbol (fish and tree)
- <b>Special precautions for user</b>	Warning: Miscellaneous dangerous substances and articles
- <b>Hazard identification number (Kemler code):</b>	90
- <b>EMS Number:</b>	F-A,S-F
- <b>Stowage Category</b>	A
- <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
- <b>Transport/Additional information:</b>	
- <b>DOT</b>	
- <b>Quantity limitations</b>	On passenger aircraft/rail: No limit On cargo aircraft only: No limit
- <b>Remarks:</b>	Special marking with the symbol (fish and tree).
- <b>IMDG</b>	
- <b>Limited quantities (LQ)</b>	5L
- <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
- <b>UN "Model Regulation":</b>	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DODECYL ACRYLATE, URETHANE ACRYLATE), 9, III

## \*15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
- Sara

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

dodecyl acrylate	ACTIVE
Hydrophobic Urethane Acrylate	ACTIVE
4-tert-Butylcyclohexyl acrylate	ACTIVE
Urethane Acrylate	ACTIVE
isodecyl acrylate	ACTIVE
Rubber	ACTIVE
diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide	ACTIVE
Defoamer	ACTIVE

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

Rubber

- **Chemicals known to cause reproductive toxicity for females:**

Rubber

- **Chemicals known to cause reproductive toxicity for males:**

Rubber

- **Chemicals known to cause developmental toxicity:**

Rubber

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### - Carcinogenic categories

#### - EPA (Environmental Protection Agency)

None of the ingredients is listed.

#### - TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

#### - NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** ND Industries, Inc. - Safety, Health and Environmental Affairs
- **Contact:** Safety, Health and Environmental Affairs
- **Classification System:**

#### - HMIS-ratings (scale 0 - 4)

HEALTH	2	Health = *2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

#### - NFPA ratings (scale 0 - 4)

2	0	0	Health = 2
			Fire = 0
			Reactivity = 0

#### - Date of preparation / last revision 10/29/2020 / 5

#### - Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 VOC: Volatile Organic Compounds (USA, EU)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 NIOSH: National Institute for Occupational Safety  
 OSHA: Occupational Safety & Health  
 TLV: Threshold Limit Value  
 PEL: Permissible Exposure Limit  
 REL: Recommended Exposure Limit  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2  
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
 Skin Sens. 1: Skin sensitisation – Category 1  
 Skin Sens. 1B: Skin sensitisation – Category 1B  
 Repr. 1B: Reproductive toxicity – Category 1B  
 Repr. 2: Reproductive toxicity – Category 2  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

#### - \* Data compared to the previous version altered.

#### - Disclaimer

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