

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier: NYTE3D Model

Product code:
NM1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: 3D Printing, resin

1.3. Details of the supplier of the safety data sheet

Company name: NYTE3D GmbH
Street: Hans-Heinrich-Warnke-Str. 12
Place: D-29227 Celle
Telephone: +49 (0)5141 966969-0
E-Mail: info@nyte3d.de
Contact person: Manuel Schlenkrich
Telephone: +49 (0)5141 966969-0
Internet: www.nyte3d.de

1.4. Emergency telephone number:
GlZ-Nord, Göttingen, Germany +49 551 19240 (24h/7d)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Hazard categories:

- Acute toxicity: Acute Tox. 4
- Skin corrosion/irritation: Skin Irrit. 2
- Serious eye damage/eye irritation: Eye Dam. 1
- Respiratory or skin sensitisation: Skin Sens. 1
- Specific target organ toxicity - repeated exposure: STOT RE 2
- Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

- Harmful if swallowed.
- Causes skin irritation.
- Causes serious eye damage.
- May cause an allergic skin reaction.
- May cause damage to organs through prolonged or repeated exposure.
- Harmful to aquatic life with long lasting effects.

2.2. Label elements
GB CLP Regulation

Hazard components for labelling

- monomer 1 (mono acrylate)
- mixture of oligomers 2 (urethane acrylate)
- mixture of oligomers 1 (urethane acrylate/urethane methacrylate)
- aromatic tertiary phosphine oxide

Signal word: Danger

Pictograms:

Hazard statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P280 Wear suitable protective clothing, gloves and eye/face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P501 Dispose of waste according to applicable legislation.

2.3. Other hazards: No information available.

SECTION 3: Composition/ information on ingredients

3.2. Mixtures

Hazardous components

CAS No: 5117-12-4
Chemical name: monomer 1 (mono acrylate)
Quantity: 30 - < 60 %
EC No: 418-140-1
Index No: 613-222-00-3
REACH No: 01-2120102080-83
GHS Classification: Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, STOT RE 2; H302 H318 H317 H373

Chemical name: mixture of oligomers 1 (urethane acrylate/urethane methacrylate)
Quantity: 20 - < 40 %
GHS Classification: Skin Sens. 1, Aquatic Chronic 3; H317 H412

Chemical name: mixture of oligomers 2 (urethane acrylate)
Quantity: 10 - < 25 %
GHS Classification: Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H319 H317 H411

Chemical name: monomer 2 (diacrylate)
Quantity: 10 - < 25 %
GHS Classification: Skin Irrit. 2, Eye Irrit. 2; H315 H319

CAS No: 75980-60-8
Chemical name: aromatic tertiary phosphine oxide
Quantity: 1 - < 5 %
EC No: 278-355-8
Index No: 015-203-00-X
GHS Classification: Repr. 2, Skin Sens. 1, Aquatic Chronic 2; H361f H317 H411

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No: 5117-12-4
EC No: 418-140-1
Chemical name: monomer 1 (mono acrylate)
Quantity: 30 - < 60 %
dermal: LD50 = > 2000 mg/kg
oral: LD50 = 588 mg/kg

Chemical name: mixture of oligomers 1 (urethane acrylate/urethane methacrylate)
Quantity: 20 - < 40 %
oral: LD50 = > 5000 mg/kg

Chemical name: mixture of oligomers 2 (urethane acrylate)
Quantity: 10 - < 25 %
dermal: LD50 = > 2000 mg/kg
oral: LD50 = > 2000 mg/kg

CAS No: 75980-60-8
EC No: 278-355-8
Chemical name: aromatic tertiary phosphine oxide
Quantity: 1 - < 5 %
dermal: LD50 = > 2000 mg/kg
oral: LD50 = > 5000 mg/kg

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
When in doubt or if symptoms are observed, get medical advice.

After inhalation:
Provide fresh air.
If experiencing respiratory symptoms: Call a doctor.

After contact with skin:
After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes:
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion:
Observe risk of aspiration if vomiting occurs. Do NOT induce vomiting. Rinse mouth immediately and drink 1 glass of of water. Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person or a person with cramps.

4.2. Most important symptoms and effects, both acute and delayed
No information available.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture
Non-flammable.
In case of fire may be liberated: Pyrolysis products, toxic

5.3. Advice for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information
Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Provide adequate ventilation. Do not breathe gas/fumes/ vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Evacuate area.

6.2. Environmental precautions
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Provide adequate ventilation. Do not breathe gas/fumes/ vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Advice on protection against fire and explosion
Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed.

Hints on joint storage: No information available.

Further information on storage conditions
Protect against: UV-radiation/sunlight, Heat.

7.3. Specific end use(s)
3D Printing, resin

SECTION 8: Exposure controls/ personal protection

8.1. Control parameters
-

PNEC values

CAS No: 5117-12-4
Substance: monomer 1 (mono acrylate)
Environmental compartment:
Freshwater: 0,012 mg/l
Freshwater: sediment 0,009 mg/kg
Soil: 0,001 mg/kg

Substance: mixture of oligomers 1 (urethane acrylate/urethane methacrylate)
Environmental compartment:
Freshwater: 0,016 mg/l
Marine water: 0,002 mg/l
Freshwater sediment: 2,992 mg/kg
Marine sediment: 0,299 mg/kg
Micro-organisms in sewage treatment plants (STP): 10,18 mg/l
Soil: 0,589 mg/kg

Substance: mixture of oligomers 2 (urethane acrylate)
Environmental compartment:
Freshwater: 0,0049 mg/l
Marine water: 0,0049 mg/l
Freshwater sediment: 0,851 mg/kg
Marine sediment: 0,0851 mg/kg
Micro-organisms in sewage treatment plants (STP): 1 mg/l
Soil: 0,167 mg/kg

8.2. Exposure controls

Appropriate engineering controls:
Provide adequate ventilation as well as local exhaustion at critical locations.

Protective and hygiene measures:
Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash

hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Eye/face protection:
Use eye protection according to EN 166.

Hand protection:
Wear suitable gloves tested to EN374. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection:
Use of protective clothing.

Respiratory protection:
In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls:
Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: beige, grey, black or pink according to the product description
Odour: characteristic
Odour threshold: not determined
pH-Value: 4,5 - 9

Changes in the physical state:
Melting point/freezing point: not determined
Boiling point or initial boiling point and boiling range: > 100 °C
Flash point: > 100 °C

Flammability:
Solid: not applicable
Gas: not applicable

Explosive properties:
The product is not: Explosive.
Lower explosion limits: not determined
Upper explosion limits: not determined
Auto-ignition temperature: not determined

Self-ignition temperature:
Solid: not applicable
Gas: not applicable
Decomposition temperature: not determined

Oxidizing properties:
Not oxidising.
Vapour pressure: < 0,1 hPa (at 20 °C)
Density: not determined
Water solubility: miscible

Solubility in other solvents:
not determined
Partition coefficient n-octanol/water: not determined
Viscosity / dynamic: not determined
Viscosity / kinematic: not determined
Relative vapour density: not determined
Evaporation rate: not determined

9.2. Other information
No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability
The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions
No known hazardous reactions.

10.4. Conditions to avoid
UV-radiation/sunlight, Heat.

10.5. Incompatible materials
No information available.

10.6. Hazardous decomposition products
In case of fire may be liberated: Pyrolysis products, toxic

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity
Harmful if swallowed.

ATEmix calculated
ATE (oral) 1511,1 mg/kg

CAS No: 5117-12-4
Chemical name: monomer 1 (mono acrylate)
Exposure route: oral
Dose: LD50 588 mg/kg
Species: Rat
Source: Manufacturer

MODEL

Safety Data Sheet
according to UK REACH Regulation

Method: OECD 401
Exposure route: dermal
Dose: LD50 > 2000 mg/kg
Species: Rat
Source: Manufacturer
Method: OECD 402

Chemical name: mixture of oligomers 1 (urethane acrylate/urethane methacrylate)
Exposure route: oral
Dose: LD50 > 5000 mg/kg
Species: Rat
Source: Manufacturer
Method: OECD 401

Chemical name: mixture of oligomers 2 (urethane acrylate)
Exposure route: oral
Dose: LD50 > 2000 mg/kg
Species: Rat
Source: Manufacturer
Method: OECD 420 Regulation(EC)No. 440/2008, Annex, B.3
Exposure route: dermal
Dose: LD50 > 2000 mg/kg
Species: Rat
Source: Manufacturer

CAS No: 75980-60-8
Chemical name: aromatic tertiary phosphine oxide
Exposure route: oral
Dose: LD50 > 5000 mg/kg
Species: Rat
Source: Manufacturer
Exposure route: dermal
Dose: LD50 > 2000 mg/kg
Species: Rat
Source: Manufacturer
Method: OECD 402

Irritation and corrosivity:
Causes skin irritation.
Causes serious eye damage.

Sensitising effects:
May cause an allergic skin reaction.
(monomer 1 (mono acrylate); mixture of oligomers 1 (urethane acrylate/urethane methacrylate); mixture of oligomers 2 (urethane acrylate); aromatic tertiary phosphine oxide)

Carcinogenic/mutagenic/toxic effects for reproduction:
Based on available data, the classification criteria are not met.

STOT-single exposure:
Based on available data, the classification criteria are not met.

STOT-repeated exposure:
May cause damage to organs through prolonged or repeated exposure. (monomer 1 (mono acrylate))

Aspiration hazard:
Based on available data, the classification criteria are not met.

Practical experience

Other observations:
No information available.

SECTION 12: Ecological information

12.1. Toxicity
Harmful to aquatic life with long lasting effects.

CAS No: 5117-12-4
Chemical name: monomer 1 (mono acrylate)
Aquatic toxicity: Acute fish toxicity
Dose: LC50 220 mg/l
[h][d]: 96 h
Species: Piscis
Source: Manufacturer
Method: OECD 203
Aquatic toxicity: Acute algae toxicity
Dose: ErC50 120 mg/l
[h][d]: 72 h
Species: Algae
Source: Manufacturer
Method: OECD 201
Aquatic toxicity: Acute crustacea toxicity
Dose: EC50 120 mg/l
[h][d]: 48 h
Species: Daphnia spec.
Source: Manufacturer
Method: OECD 202

Chemical name: mixture of oligomers 1 (urethane acrylate/urethane methacrylate)
Aquatic toxicity: Acute fish toxicity
Dose: LC50 18 mg/l
[h][d]: 96 h
Species: Oncorhynchus mykiss (Rainbow trout)
Source: Manufacturer
Method: OECD 203
Aquatic toxicity: Acute algae toxicity
Dose: ErC50 > 24,5 mg/l
[h][d]: 72 h
Species: Pseudokirchneriella subcapitata
Source: Manufacturer
Method: OECD 201
Aquatic toxicity: Acute crustacea toxicity
Dose: EC50 15,9 mg/l

[h][d]: 48 h
Species: Daphnia magna (Big water flea)
Source: Manufacturer
Method: OECD 202

Chemical name: mixture of oligomers 2 (urethane acrylate)
Aquatic toxicity: Acute fish toxicity
Dose: LC50 3,39 mg/l
[h][d]: 96 h
Species: Piscis
Source: Manufacturer

CAS No: 75980-60-8
Chemical name: aromatic tertiary phosphine oxide
Aquatic toxicity: Acute algae toxicity
Dose: ErC50 > 2,01 mg/l
[h][d]: 72 h
Species: Algae
Source: Manufacturer
Method: OECD 201
Aquatic toxicity: Acute crustacea toxicity
Dose: EC50 3,53 mg/l
[h][d]: 48 h
Species: Daphnia spec.
Source: Manufacturer
Method: OECD 202

12.2. Persistence and degradability
The product has not been tested.

CAS No: 75980-60-8
Chemical name: aromatic tertiary phosphine oxide
Method: OECD 301F
Value: < 20 %
d: 28
Source: Manufacturer
Evaluation: Not readily biodegradable (according to OECD criteria)

12.3. Bioaccumulative potential
The product has not been tested.

Partition coefficient n-octanol/water

Chemical name: mixture of oligomers 1 (urethane acrylate/urethane methacrylate)
Log Pow: 3,35- 3,76

Chemical name: mixture of oligomers 2 (urethane acrylate)
Log Pow: 2,2

12.4. Mobility in soil
The product has not been tested.

12.5. Results of PBT and vPvB assessment
The product has not been tested.

12.6. Other adverse effects
No information available.

Further information
Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging
Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:
No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:
No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):
No dangerous good in sense of this transport regulation.

14.4. Packing group:
No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number:
No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:
No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):
No dangerous good in sense of this transport regulation.

14.4. Packing group:
No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:
No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:
No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):
No dangerous good in sense of this transport regulation.

14.4. Packing group:
No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:
No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:
No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):
No dangerous good in sense of this transport regulation.

14.4. Packing group:
No dangerous good in sense of this transport regulation.

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user
No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):
Entry 3

Information according to 2012/18/EU (SEVESO III):
Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the, juvenile work protection guideline’ (94/33/EC).

Water hazard class (D): 2 – obviously hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

SECTION 16: Other information

Abbreviations and acronyms

CLP	Classification, labelling and Packaging
REACH	Registration, Evaluation and Authorization of Chemicals
GHS	Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN	United Nations
CAS	Chemical Abstracts Service
DNEL	Derived No Effect Level
DMEL	Derived Minimal Effect Level
PNEC	Predicted No Effect Concentration
ATE	Acute toxicity estimate
LC50	Lethal concentration, 50%
LD50	Lethal dose, 50%
LL50	Lethal loading, 50%
EL50	Effect loading, 50%
EC50	Effective Concentration 50%
ErC50	Effective Concentration 50%, growth rate
NOEC	No Observed Effect Concentration
BCF	Bio-concentration factor
PBT	persistent, bioaccumulative, toxic
vPvB	very persistent, very bioaccumulative
ADR	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID	Regulations concerning the international carriage of dangerous goods by rail
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG	International Maritime Code for Dangerous Goods
EmS	Emergency Schedules
MFAG	Medical First Aid Guide
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
IBC	Intermediate Bulk Container

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Revised on 28. February 2024	Hans-Heinrich-Warnke-Str. 12 29227 Celle, Germany
Revision no. 1,4 Revised version: Revision no. 1,3	+49 (0)5141 966969-0 info@nyte3d.de www.nyte3d.de

VOC	Volatile Organic Compounds
SVHC	Substance of Very High Concern

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Classification for mixtures and used evaluation method according to GB CLP Regulation

- Acute Tox. 4; H302: Calculation method
- Skin Irrit. 2; H315: Calculation method
- Eye Dam. 1; H318: Calculation method
- Skin Sens. 1; H317: Calculation method
- STOT RE 2; H373: Calculation method
- Aquatic Chronic 3; H412: Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Further Information
The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

On 17. July 2023, the following adjustments were made: Additional color "pink" in section 9.1.

On 28. February 2024, the following adjustment was made: Adjustment of the NYTE3D GmbH company headquarter in section 1.3 and at the top right position of each page.