

CAST+PRESS

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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

1.1. Product identifier: NYTE3D Cast + Press

Product code: NCP1
UFI: KSS0-K8E5-FQ45-MD64

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-Warneke-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 +49 (0)551 19240 (24h/7d)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

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

Full text of hazard statements: see SECTION 16.

2.2. Label elements Regulation (EC) No 1272/2008

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 protective gloves/protective clothing/ eye protection/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

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

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
Classification (Regulation (EC) No 1272/2008): 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 %
Classification (Regulation (EC) No 1272/2008): Skin Sens. 1, Aquatic Chronic 3; H317 H412

Chemical name: mixture of oligomers 2 (urethane acrylate)
Quantity: 10 - < 25 %
Classification (Regulation (EC) No 1272/2008): Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H319 H317 H411

Chemical name: monomer 2 (diacrylate)
Quantity: 10 - < 25 %
Classification (Regulation (EC) No 1272/2008): 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
Classification (Regulation (EC) No 1272/2008): 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:
First aider: Pay attention to self-protection! Never give anything by mouth to an unconscious person or a person with cramps. When in doubt or if symptoms are observed, get medical advice.

After inhalation:
Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. 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
Allergic reactions.
Causes skin irritation. Causes serious eye irritation.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

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. Use water spray jet to protect personnel and to cool endangered containers. 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

General advice

Do not breathe gas/fumes/vapour/spray.
Avoid contact with skin, eyes and clothes. Evacuate area.

For non-emergency personnel
Provide adequate ventilation.
Use personal protection equipment.

For emergency responders
Use personal protection equipment.

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

6.3. Methods and material for containment and cleaning up

For containment
Stop leak if safe to do so. Cover drains.

For cleaning up
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Other information
Clean contaminated articles and floor according to the environmental legislation.

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.

Advice on general occupational hygiene
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.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep container tightly closed. Keep locked up.
Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

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
Occupational exposure limits

PNEC values

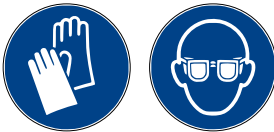
CAS No: 5117-12-4
Substance: monomer 1 (mono acrylate)
Environmental compartment:
Freshwater: 0,012 mg/l
Freshwater sediment: 0,009 mg/kg
Soil: 0,001 mg/kg

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

Day of creation 4. April 2022	NYTE3D GmbH Hans-Heinrich-Warneke-Str. 12 29227 Celle, Germany
Revised on 28. February 2024	+49 (0)5141 966969-0
Revision no. 1,3 Revised version: Revision no. 1,2	info@nyte3d.de www.nyte3d.de

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.

Individual protection measures, such as personal protective equipment

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.

Thermal hazards:
No information available.

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: grey
Odour: characteristic
Odour threshold: not determined

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/liquid: not applicable
Gas: not applicable

Lower explosion limits: not determined
Upper explosion limits: not determined
Auto-ignition temperature: not determined
Decomposition temperature: not determined
pH-Value: 4,5 – 9
Viscosity / kinematic: not determined
Water solubility: miscible

Solubility in other solvents:
not determined
Partition coefficient n-octanol/water: not determined
Vapour pressure: < 0,1hPa (at 20 °C)
Density: not determined
Relative vapour density: not determined
Particle characteristics: not applicable

9.2. Other information

Explosive properties:
The product is not: Explosive.

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

Other safety characteristics:
Viscosity / dynamic: not determined

Further 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.

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- 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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity
Harmful if swallowed.
ATEmix calculated
ATE (oral) 1504,2 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
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.
- Information on likely routes of exposure:
- oral, dermal, inhalative, Eye contact

11.2. Information on other hazards

- Endocrine disrupting properties:
- No information available.

SECTION 12: Ecological information

- 12.1. Toxicity
- Toxic 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]l[d]: 96 h
Species: Piscis
Source: Manufacturer
Method: OECD 203
Aquatic toxicity: Acute algae toxicity

Dose: ErC50 120 mg/l
[h]l[d]: 72 h
Species: Algae
Source: Manufacturer
Method: OECD 201
Aquatic toxicity: Acute crustacea toxicity
Dose: EC50 120 mg/l
[h]l[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]l[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]l[d]: 72 h
Species: Pseudokirchneriella subcapitata
Source: Manufacturer
Method: OECD 201
Aquatic toxicity: Acute crustacea toxicity
Dose: EC50 15,9 mg/l
[h]l[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]l[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]l[d]: 72 h
Species: Algae
Source: Manufacturer
Method: OECD 201
Aquatic toxicity: Acute crustacea toxicity
Dose: EC50 3,53 mg/l
[h]l[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 substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

- 12.6. Endocrine disrupting properties
- This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

- 12.7. 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 or ID 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 or ID 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 or ID 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 or ID 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.

- 14.6. Special precautions for user
- No information available.

- 14.7. Maritime transport in bulk according to IMO instruments
- 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, Entry 75

- 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

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,12,14.

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
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 Regulation (EC) No 1272/2008 [CLP]

Classification: Acute Tox. 4; H302
Classification procedure: Calculation method

Classification: Skin Irrit. 2; H315
Classification procedure: Calculation method

Classification: Eye Dam. 1; H318
Classification procedure: Calculation method

Classification: Skin Sens. 1; H317
Classification procedure: Calculation method

Classification: STOT RE 2; H373
Classification procedure: Calculation method

Classification: Aquatic Chronic 3; H412
Classification procedure: 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 20. April 2023, the following adjustments were made: Adjustments of company headquarter, phone numbers, and contact person of NYTE3D GmbH in section 1.3 and at the top right position of each page.

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.