



# Safety Data Sheet

according to 29 CFR 1910.1200(g)

## DruckWege Type D Gingiva Rev. 2

Revision date: 17.01.2020

Page 1 of 11

### 1. Identification

#### Product identifier

DruckWege Type D Gingiva Rev. 2

#### **Product code:**

TDS

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

##### **Use of the substance/mixture**

3D Printing  
resin

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

Company name:	DruckWege GmbH	
Street:	Schulstr. 38	
Place:	D-53773 Hennef	
Telephone:	+49 2242 9185 137	
e-mail:	mail@druckwege.de	
Contact person:	Florian Reil / Anton Gillert	Telephone: +49 2242 9185 137

**Emergency phone number:** Emergency telephone: +49 (0)89 41407483 (24 h, Munich, Germany)

### 2. Hazard(s) identification

#### Classification of the chemical

##### **29 CFR Part 1910.1200**

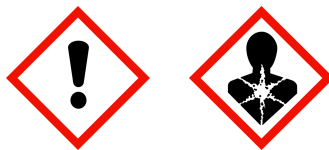
Acute toxicity: Acute Tox. 4 (inhalation)  
Skin corrosion/irritation: Skin Irrit. 2  
Serious eye damage/eye irritation: Eye Irrit. 2A  
Respiratory or skin sensitization: Skin Sens. 1A  
Reproductive toxicity: Repr. 2  
Specific target organ toxicity single exposure: STOT SE 3 (respiratory tract irritation)

#### Label elements

##### **29 CFR Part 1910.1200**

**Signal word:** Warning

**Pictograms:**



#### **Hazard statements**

Causes skin irritation  
May cause an allergic skin reaction  
Causes serious eye irritation  
Harmful if inhaled  
May cause respiratory irritation  
Suspected of damaging fertility or the unborn child

#### **Precautionary statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands thoroughly after handling.  
Use only outdoors or in a well-ventilated area.



# Safety Data Sheet

according to 29 CFR 1910.1200(g)

## DruckWege Type D Gingiva Rev. 2

Revision date: 17.01.2020

Page 2 of 11

Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If on skin: Wash with plenty of soap and water.  
Take off contaminated clothing and wash it before reuse.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Call a poison center/doctor if you feel unwell.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
If exposed or concerned: Get medical advice/attention.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of waste according to applicable legislation.

### Hazards not otherwise classified

No information available.

## 3. Composition/information on ingredients

### Mixtures

#### Hazardous components

CAS No	Components	Quantity
63225-53-6	2-[[butylamino]carbonyl]oxyethyl acrylate	45.35 %
84100-23-2	4-(1,1-dimethylethyl)cyclohexyl acrylate	10.5 %
28961-43-5	Propylidynetrimethanol, ethoxylated, esters with acrylic acid	7.5 %
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	4.99 %
7575-23-7	Pentaerythritol tetrakis(3-mercaptopropionate)	2.5 %
159034-91-0	Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine (1 - 6.5 moles ethoxylated)	0.9975 %
818-61-1	2-hydroxyethyl acrylate	0.147 %

## 4. First-aid measures

### Description of first aid measures

#### General information

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. Get medical advice/attention.

#### 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. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Medical treatment necessary.

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

No information available.

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



## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### DruckWege Type D Gingiva Rev. 2

Revision date: 17.01.2020

Page 3 of 11

Treat symptomatically.

#### 5. Fire-fighting measures

##### Extinguishing media

###### **Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

##### Specific hazards arising from the chemical

Non-flammable. In case of fire may be liberated: Gases/vapors, toxic.

##### Special protective equipment and precautions for fire-fighters

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.

#### 6. Accidental release measures

##### Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fume/vapour/spray. Avoid contact with skin, eyes and clothes. Remove persons to safety. Use personal protection equipment.

##### Environmental precautions

Do not allow to enter into surface water or drains.

##### 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.

##### Reference to other sections

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

#### 7. Handling and storage

##### Precautions for safe handling

###### **Advice on safe handling**

Provide adequate ventilation. Do not breathe gas/fume/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.

##### 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 exhaust at critical locations.

###### **Hints on joint storage**

No information available.

#### 8. Exposure controls/personal protection

##### Control parameters

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**DruckWege Type D Gingiva Rev. 2**

Revision date: 17.01.2020

Page 4 of 11

**Exposure limits**

CAS No.	Substance	ppm	mg/m <sup>3</sup>	f/cc	Category	Origin
128-37-0	2,6-Di-tert-butyl-p-cresol	-	10		TWA (8 h)	REL
128-37-0	Butylated hydroxytoluene (inhalable fraction and vapor)		2		TWA (8 h)	ACGIH-2019
110-82-7	Cyclohexane	300	1050		TWA (8 h)	REL
		300	1050		TWA (8 h)	REL
		100			TWA (8 h)	ACGIH-2019
-	Particles (insoluble or poorly soluble) not otherwise specified (inhalable fraction)		10		TWA (8 h)	ACGIH-2019
-	Particles (insoluble or poorly soluble) not otherwise specified (respirable fraction)		3		TWA (8 h)	ACGIH-2019
-	Particulates not Otherwise regulated (PNOR) Respirable fraction	529.5 mp/m <sup>3</sup>	5		TWA (8 h)	REL
-	Particulates not Otherwise regulated (PNOR) Total dust	1765 mp/m <sup>3</sup>	15		TWA (8 h)	REL

**Exposure controls****Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**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. Do not breathe gas/fume/vapour/spray.

**Eye/face protection**

Wear eye protection/face protection.

**Hand protection**

Wear protective gloves.

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.

**9. Physical and chemical properties****Information on basic physical and chemical properties**

Physical state:	Liquid
Color:	various
Odor:	like: Acrylate

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**DruckWege Type D Gingiva Rev. 2**

Revision date: 17.01.2020

Page 5 of 11

pH-Value: not determined

**Changes in the physical state**

Melting point/freezing point: not determined

Initial boiling point and boiling range: &gt; 100 °C

Flash point: &gt; 103 °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

Ignition temperature: &gt; 341 °C

**Auto-ignition temperature**

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

**Oxidizing properties**

Not oxidising.

Vapor pressure:  
(at 20 °C) < 1 hPa

Density: not determined

Water solubility: poorly soluble

**Solubility in other solvents**

not determined

Partition coefficient: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Vapor density: not determined

Evaporation rate: not determined

**Other information**

Odor threshold: not determined

**10. Stability and reactivity****Reactivity**

No hazardous reaction when handled and stored according to provisions.

**Chemical stability**

Stability: Stable

The product is stable under storage at normal ambient temperatures.

**Possibility of hazardous reactions**

Hazardous reactions: Will not occur

No known hazardous reactions.

**Conditions to avoid**

No information available.

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**DruckWege Type D Gingiva Rev. 2**

Revision date: 17.01.2020

Page 6 of 11

**Incompatible materials**

No information available.

**Hazardous decomposition products**

In case of fire may be liberated: Gases/vapors, toxic.

**11. Toxicological information****Information on toxicological effects****Route(s) of Entry**

Eye contact, Skin contact, oral, inhalative.

**Acute toxicity**

Harmful if inhaled

**ATEmix calculated**

ATE (inhalation aerosol) 3,307 mg/l

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
63225-53-6	2-[[[(butylamino)carbonyl]oxy]ethyl acrylate				
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			
28961-43-5	Propylidynetrimethanol, ethoxylated, esters with acrylic acid				
	oral	LD50 > 2000 mg/kg	Rat	Manufacturer	
	dermal	LD50 > 2000 mg/kg	Rabbit	Manufacturer	
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide				
	oral	LD50 > 5000 mg/kg	Rat	Manufacturer	
	dermal	LD50 > 2000 mg/kg	Rat	Manufacturer	
7575-23-7	Pentaerythritol tetrakis(3-mercaptopropionate)				
	oral	LD50 1000 mg/kg	Rat	Manufacturer	OECD 423
818-61-1	2-hydroxyethyl acrylate				
	oral	ATE 500 mg/kg			
	dermal	ATE 300 mg/kg			

**Irritation and corrosivity**

Causes skin irritation

Causes serious eye irritation

**Sensitizing effects**

May cause an allergic skin reaction (2-[[[(butylamino)carbonyl]oxy]ethyl acrylate; 4-(1,1-dimethylethyl)cyclohexyl acrylate; Propylidynetrimethanol, ethoxylated, esters with acrylic acid; diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; Pentaerythritol tetrakis(3-mercaptopropionate); Propylidynetrimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine (1 - 6.5 moles ethoxylated); 2-hydroxyethyl acrylate)

**Carcinogenic/mutagenic/toxic effects for reproduction**

**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**DruckWege Type D Gingiva Rev. 2**

Revision date: 17.01.2020

Page 7 of 11

Suspected of damaging fertility or the unborn child (diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

**Specific target organ toxicity (STOT) - single exposure**

May cause respiratory irritation (4-(1,1-dimethylethyl)cyclohexyl acrylate)

**Specific target organ toxicity (STOT) - repeated exposure**

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

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): Butylated hydroxytoluene (BHT) (CAS 128-37-0) is listed in group 3.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

**Aspiration hazard**

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

**12. Ecological information****Ecotoxicity**

Toxic to aquatic life with long lasting effects.

CAS No	Components					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
63225-53-6	2-[[[butylamino]carbonyl]oxy]ethyl acrylate					
	Acute fish toxicity	LC50 2,52 mg/l	96 h	Piscis	Manufacturer	OECD 203
	Acute algae toxicity	ErC50 5,98 mg/l	72 h	Algae	Manufacturer	OECD 201
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide					
	Acute algae toxicity	ErC50 > 2,01 mg/l	72 h	Scenedesmus subspicatus	Manufacturer	
	Acute crustacea toxicity	EC50 3,53 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	
	Acute bacteria toxicity	(> 1000 mg/l)	3 h	Activated sludge	Manufacturer	
7575-23-7	Pentaerythritol tetrakis(3-mercaptopropionate)					
	Acute fish toxicity	LC50 0,42 mg/l	96 h	Piscis	Manufacturer	OECD 203
	Acute crustacea toxicity	EC50 0,71 mg/l	48 h	Daphnia spec	Manufacturer	OECD 202

**Persistence and degradability**

The product has not been tested.

**Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Components	Log Pow
63225-53-6	2-[[[butylamino]carbonyl]oxy]ethyl acrylate	1,82
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	3,1

**BCF**

CAS No	Components	BCF	Species	Source
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	47 - 55	Cyprinus carpio (Common Carp) fish	Manufacturer

**Mobility in soil**

The product has not been tested.



# Safety Data Sheet

according to 29 CFR 1910.1200(g)

## DruckWege Type D Gingiva Rev. 2

Revision date: 17.01.2020

Page 8 of 11

### 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.

## 13. Disposal considerations

### 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**

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

## 14. Transport information

### **US DOT 49 CFR 172.101**

**UN/ID number:**

UN 3082

**Proper shipping name:**ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-  
[[[(butylamino)carbonyl[oxy]ethyl acrylate)**Transport hazard class(es):**

9

**Packing group:**

III

Hazard label:

9



### **Marine transport (IMDG)**

**UN number:**

UN 3082

**UN proper shipping name:**ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-  
[[[(butylamino)carbonyl[oxy]ethyl acrylate)**Transport hazard class(es):**

9

**Packing group:**

III

Hazard label:

9



Special Provisions:

274, 335, 969

Limited quantity:

5 L

Excepted quantity:

E1

EmS:

F-A, S-F

### **Air transport (ICAO-TI/IATA-DGR)**

**UN number:**

UN 3082

**UN proper shipping name:**ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-  
[[[(butylamino)carbonyl[oxy]ethyl acrylate)**Transport hazard class(es):**

9

**Packing group:**

III

Hazard label:

9



**Safety Data Sheet**

according to 29 CFR 1910.1200(g)

**DruckWege Type D Gingiva Rev. 2**

Revision date: 17.01.2020

Page 9 of 11



Special Provisions:	A97 A158 A197
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y964
Excepted quantity:	E1
IATA-packing instructions - Passenger:	964
IATA-max. quantity - Passenger:	450 L
IATA-packing instructions - Cargo:	964
IATA-max. quantity - Cargo:	450 L

**Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: 2-[[[(butylamino)carbonyl]oxy]ethyl acrylate

**Special precautions for user**

No information available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

not applicable

**15. Regulatory information****U.S. Regulations****National Inventory TSCA**

- CAS No. 110-82-7: Yes.
- CAS No. 128-37-0: Yes.
- CAS No. 63225-53-6: Yes.
- CAS No. 84100-23-2: No.
- CAS No. 28961-43-5: Yes.
- CAS No. 75980-60-8: Yes.
- CAS No. 7575-23-7: Yes.
- CAS No. 159034-91-0: No.
- CAS No. 818-61-1 Yes.

**National regulatory information**

SARA Section 304 CERCLA:

Cyclohexane (110-82-7): Reportable quantity = 1,000 (454) lbs. (kg)

SARA Section 311/312 Hazards:

- 2-[[[(butylamino)carbonyl]oxy]ethyl acrylate (63225-53-6): Immediate (acute) health hazard
- 4-(1,1-dimethylethyl)cyclohexyl acrylate (84100-23-2): Immediate (acute) health hazard
- Propylidynetrimehanol, ethoxylated, esters with acrylic acid (28961-43-5): Immediate (acute) health hazard
- diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8): Immediate (acute) health hazard
- Pentaerythritol tetrakis(3-mercaptopropionate) (7575-23-7): Immediate (acute) health hazard
- Propylidynetrimehanol, ethoxylated, esters with acrylic acid, reaction products withdiethylamine (1 - 6.5 moles ethoxylated) (159034-91-0): Immediate (acute) health hazard
- 2-hydroxyethyl acrylate (818-61-1): Immediate (acute) health hazard
- Cyclohexane (110-82-7): Fire hazard, Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:

Cyclohexane (110-82-7): De minimis limit = 1.0 %, Reportable threshold = Standard

**State Regulations**



# Safety Data Sheet

according to 29 CFR 1910.1200(g)

## DruckWege Type D Gingiva Rev. 2

Revision date: 17.01.2020

Page 10 of 11

### Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

## 16. Other information

### Hazardous Materials Information Label (HMIS)

Health: \*3  
Flammability: 0  
Physical Hazard: 1

### NFPA Hazard Ratings

Health: 3  
Flammability: 0  
Reactivity: 1  
Unique Hazard:

Revision date: 17.01.2020

Revision No: 1,0



### Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists  
ATE: Acute toxicity estimate  
BCF: Bio-concentration factor  
CAS: Chemical Abstracts Service  
EC50: Effective Concentration 50%  
EL50: Effect loading, 50%  
ErC50: Effective Concentration 50%, growth rate  
GHS: Globally Harmonized System of Classification, Labelling and Packaging of Chemicals  
HMIS: Hazardous Materials Identification System  
IARC: International Agency for Research on Cancer  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
IBC: Intermediate Bulk Container  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
IMDG: International Maritime Code for Dangerous Goods  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
LL50: Lethal loading, 50%  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
NFPA: National Fire Protection Association  
NOEC: No Observed Effect Concentration  
NTP: National Toxicology Program  
OSHA: Occupational Safety and Health Administration  
PBT: persistent, bioaccumulative, toxic  
PEL: Permissible Exposure Limits  
SARA: Superfund Amendments Reauthorization Act  
TSCA: Toxic Substances Control Act  
TWA: Total Weight Average  
UN: United Nations  
US DOT: United States Department of Transportation

### Other data

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.



## Safety Data Sheet

according to 29 CFR 1910.1200(g)

### DruckWege Type D Gingiva Rev. 2

Revision date: 17.01.2020

Page 11 of 11

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