

according to Regulation (EC) No 1907/2006

## freeform® bond

Revision date: 01.02.2024

Product code: 10571.2

Page 1 of 11

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

### 1.1. Product identifier

freeform® bond

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

1.3. Details of the supplier of the	<u>safety data sheet</u>	
Company name:	DETAX GmbH	
Street:	Carl-Zeiss-Straße 4	
Place:	D-76275 Ettlingen	
Telephone:	+49 7243/510-0	Telefax: +49 7243/510-100
E-mail:	post@detax.com	
Internet:	www.detax.com	
Responsible Department:	This number is only obtainable du	uring office hours
	(Monday - Thursday 8.00 a.m 5	5.00 p.m., Friday 8.00 a.m 4.00 p.m.)
1.4. Emergency telephone	+1-800-424-9300 (CHEMTREC v	vorldwide)

number:

## **SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

### Regulation (EC) No 1272/2008

Flam. Liq. 2; H225 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 STOT SE 3; H335 Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

Danger

## 2.2. Label elements

## Regulation (EC) No 1272/2008

#### Hazard components for labelling

"methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate, MMA" acrylic acid derivates @000000030301 vinylester resin diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Signal word:

Pictograms:



#### **Hazard statements**

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.



according to Regulation (EC) No 1907/2006

## freeform® bond

Revision date: 01.02.2024

Product code: 10571.2

Page 2 of 11

#### **Precautionary statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	0
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352	IF ON SKIN: Wash with plenty of .
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	

### Special labelling of certain mixtures

EUH210

Safety data sheet available on request.

## 2.3. Other hazards

No information available.

## **SECTION 3: Composition/information on ingredients**

## 3.2. Mixtures

## Hazardous components

CAS No	Chemical name				
	EC No	Index No	REACH No		
	Classification (Regulation (EC) No				
80-62-6	"methyl 2-methylprop-2-enoate; me	thyl 2-methylpropenoate; methyl met	thacrylate, MMA"	20 - 70 %	
	201-297-1	607-035-00-6			
	Flam. Liq. 2, Skin Irrit. 2, Skin Sens	. 1, STOT SE 3; H225 H315 H317 H	335		
1384855-91-7	2-propenoic acid , reaction products		25 - 50 %		
	800-838-4		01-2119980666-22		
	Eye Irrit. 2, Skin Sens. 1A, Aquatic	Chronic 3; H319 H317 H412			
55818-57-0	vinylester resin		0.1 - < 5 %		
			01-2119490020-53		
	Skin Sens. 1, Aquatic Chronic 2; H	317 H411			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)pho		0,1 - 5 %		
	278-355-8	015-203-00-X	01-2119972295-29		
	Repr. 2, Skin Sens. 1B, Aquatic Chronic 2; H361 H317 H411				

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

## Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity			
	Specific Conc. Limits, M-factors and ATE					
80-62-6	201-297-1	"methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate, MMA"	20 - 70 %			
	inhalation: LC50 = 78 mg/l (vapours); dermal: LD50 = >5000 mg/kg; oral: LD50 = 7870 mg/kg					
1384855-91-7	800-838-4	2-propenoic acid , reaction products with dipentaerythritol	25 - 50 %			
	dermal: LD50 = 2000 mg/kg; oral: LD50 = 2000 mg/kg					
55818-57-0	vinylester resin					
	dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg					
75980-60-8	278-355-8	3-355-8 diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide				
	dermal: LD50 =	= >2000 mg/kg; oral: LD50 = >5000 mg/kg				

according to Regulation (EC) No 1907/2006

# DETAX GmbH

## freeform® bond

Revision date: 01.02.2024

Product code: 10571.2

Page 3 of 11

### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

#### After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

#### 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. Medical treatment necessary.

### 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.

#### After ingestion

Rinse mouth immediately and drink plenty of water.

#### 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**

### 5.1. Extinguishing media

#### Suitable extinguishing media

Water spray jet, Carbon dioxide (CO2), Foam, Extinguishing powder.

#### 5.2. Special hazards arising from the substance or mixture

Highly flammable. Vapours can form explosive mixtures with air.

## 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

## Additional information

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

#### General advice

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

### 6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

## 6.3. Methods and material for containment and cleaning up

#### Other information

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.

### 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**



according to Regulation (EC) No 1907/2006

## freeform® bond

Revision date: 01.02.2024

Product code: 10571.2

Page 4 of 11

## 7.1. Precautions for safe handling

#### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

#### 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. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### Hints on joint storage

Do not store together with: Oxidising agent . Pyrophoric or self-heating substances.

## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

#### Occupational exposure limit values

CAS No	Name of agent	ppm	mg/m³	fib/cm³	Category	Origin
80-62-6	Methyl methacrylate	50	-		TWA (8 h)	
		100	-		STEL (15 min)	

#### **DNEL/DMEL** values

CAS No	Name of agent						
DNEL type		Exposure route	Effect	Value			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			•			
Worker DNEL	, long-term	inhalation	systemic	0,822 mg/m³			
Worker DNEL, long-term		dermal	systemic	0,233 mg/kg bw/day			
Consumer DN	EL, long-term	inhalation	systemic	0,145 mg/m³			
Consumer DN	EL, long-term	dermal	systemic	0,0833 mg/kg bw/day			
Consumer DN	EL, long-term	oral	systemic	0,0833 mg/kg bw/day			

#### 8.2. Exposure controls

#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

#### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Suitable eye protection: goggles.

## Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four



according to Regulation (EC) No 1907/2006

## freeform® bond

Revision date: 01.02.2024

Product code: 10571.2

Page 5 of 11

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.

Butyl caoutchouc (butyl rubber)

## Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing .

## **Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

## **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

	Physical state: Colour:	Liquid light yellow		
		ight your		Test method
	Melting point/freezing point:		not determined	
	Boiling point or initial boiling point and		92 °C	DIN 51356
	boiling range:			
	Flammability:		not applicable	
	Lower explosion limits:		not applicable 2 vol. %	
	Upper explosion limits:		12 vol. %	
	Flash point:			DIN 51755
	Auto-ignition temperature:			DIN 51794
	Decomposition temperature:		>100 °C	
	pH-Value:		not determined	
	Water solubility:		16 g/L	
	(at 20 °C)			
	Solubility in other solvents			
	not determined			
	Partition coefficient n-octanol/water:		not determined 40 hPa	
	Vapour pressure: (at 20 °C)		40 NPa	
	Vapour pressure:		160 hPa	
	(at 50 °C)			
	Density (at 20 °C):			DIN 51757
	Relative vapour density:		not determined	
<u>9.</u> 2	2. Other information			
	Information with regard to physical haza	ard classes		
	Explosive properties			
	The product is not: Explosive.			
	Self-ignition temperature Solid:		not applicable	
	Gas:		not applicable	
	Oxidizing properties		not applicable	
	Not oxidizing.			
	Other safety characteristics			
	Evaporation rate:		not determined	
	Solid content:		not determined	

### **SECTION 10: Stability and reactivity**

according to Regulation (EC) No 1907/2006

## freeform® bond

Revision date: 01.02.2024

Product code: 10571.2

Page 6 of 11

## 10.1. Reactivity

Highly flammable.

## 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

## 10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

### 10.5. Incompatible materials

No information available.

## **SECTION 11: Toxicological information**

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

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

#### **ATEmix calculated**

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
80-62-6	"methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate, MMA"					
	oral	LD50 mg/kg	7870	Rat		
	dermal	LD50 mg/kg	>5000	Rabbit		
	inhalation (4 h) vapour	LC50	78 mg/l	Rat		
1384855-91- 7	2-propenoic acid , reaction products with dipentaerythritol					
	oral	LD50 mg/kg	2000	Rat		OECD 423
	dermal	LD50 mg/kg	2000	Rabbit		OECD 402
55818-57-0	vinylester resin					
	oral	LD50 mg/kg	>2000	Rat		OECD 401
	dermal	LD50 mg/kg	>2000	Rat		OECD 402
75980-60-8	diphenyl(2,4,6-trimethylb	enzoyl)phos	phine oxide			
	oral	LD50 mg/kg	>5000	Rat		
	dermal	LD50 mg/kg	>2000	Rat		

## Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

## Sensitising effects

May cause an allergic skin reaction. ("methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate, MMA"; 2-propenoic acid , reaction products with dipentaerythritol; vinylester resin; diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide)



according to Regulation (EC) No 1907/2006

## freeform® bond

Revision date: 01.02.2024

Product code: 10571.2

Page 7 of 11

## Carcinogenic/mutagenic/toxic effects for reproduction

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

## STOT-single exposure

May cause respiratory irritation. ("methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate, MMA")

#### STOT-repeated exposure

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

#### Aspiration hazard

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

#### Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

### **SECTION 12: Ecological information**

## 12.1. Toxicity

Harmful to aquatic life with long lasting effects.

CAS No	Chemical name	Chemical name						
	Aquatic toxicity	Dose		[h]   [d]	Species	Source	Method	
80-62-6	"methyl 2-methylprop-2-er	noate; methy	l 2-methylpr	openoate	e; methyl methacrylate, M	MA"		
	Acute fish toxicity	LC50 mg/l	>100	96 h				
1384855-91- 7	2-propenoic acid , reaction	2-propenoic acid , reaction products with dipentaerythritol						
	Algae toxicity	NOEC	10 mg/l		Pseudokirchneriella subcapitata		OECD 201	
55818-57-0	vinylester resin			-				
	Acute fish toxicity	LC50 mg/l	>100	96 h			OECD 201	
	Acute crustacea toxicity	EC50 mg/l	>100	48 h			OECD 202	
75980-60-8	diphenyl(2,4,6-trimethylbe	nzoyl)phosp	hine oxide					
	Acute algae toxicity	ErC50 mg/l	>2,01		Pseudokirchneriella subcapitata			
	Acute crustacea toxicity	EC50 mg/l	3,53		Daphnia magna (Big water flea)			
	Acute bacteria toxicity	(EC50 mg/l)	>1000	3 h	Activated sludge			

## 12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name						
	Method	Value	d	Source			
	Evaluation						
55818-57-0	vinylester resin						
		42%	28				
	Not readily biodegradable (according to OECD criteria)						
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide						
		0-10%	28				
	Not readily biodegradable (according to OECD criteria)						

## 12.3. Bioaccumulative potential

The product has not been tested.



according to Regulation (EC) No 1907/2006

## freeform® bond

Revision date: 01.02.2024

Product code: 10571.2

Page 8 of 11

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
55818-57-0	vinylester resin	3,8
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	3,1

#### BCF

CAS No	Chemical name	BCF	Species	Source
	diphenyl(2,4,6-trimethylbenzoyl)phosphi ne oxide		Cyprinus carpio (Common Carp)	

#### 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:	UN 1866			
14.2. UN proper shipping name:	RESIN SOLUTION			
14.3. Transport hazard class(es):	3			
14.4. Packing group:	I			
Hazard label:	3			
Classification code:	F1			
Limited quantity:	500 mL			
Excepted quantity:	E3			
Transport category:	1			
Hazard No:	33			
Tunnel restriction code:	D/E			
Inland waterways transport (ADN)				
14.1. UN number or ID number:	UN 1866			
14.2. UN proper shipping name:	Resin solution			
<u>14.3. Transport hazard class(es):</u>	3			
14.4. Packing group:	I			
Hazard label:	3			
Classification code:	F1			

according to Regulation (EC) No 1907/2006

freeform® bond					
Revision date: 01.02.2024	Product coo	le: 10571.2	Page 9 of 11		
Limited quantity:	500 mL				
Excepted quantity:	E3				
Marine transport (IMDG)					
14.1. UN number or ID number:	UN 1866				
14.2. UN proper shipping name:	<b>RESIN SOLUTION</b>				
14.3. Transport hazard class(es):	3				
14.4. Packing group:	I				
Hazard label:	3				
Special Provisions:	-				
Limited quantity:	500 mL				
Excepted quantity:	E3				
EmS:	F-E, S-E				
Other applicable information (marine trans					
Flash point: 12°C c.c.	• /				
Air transport (ICAO-TI/IATA-DGR)					
14.1. UN number or ID number:	UN 1866				
14.2. UN proper shipping name:	RESIN SOLUTION				
14.3. Transport hazard class(es):	3				
14.4. Packing group:					
Hazard label:	3				
Special Provisions:	A3				
Limited quantity Passenger:	Forbidden				
Passenger LQ:	Forbidden				
Excepted quantity:	E3				
IATA-packing instructions - Passenger:		351			
IATA-max. quantity - Passenger:		1 L			
IATA-packing instructions - Cargo:		361			
IATA-max. quantity - Cargo:		30 L			
14.6. Special precautions for user					
Warning: Combustible liquid.					
14.7. Maritime transport in bulk according to	IMO instruments				
not applicable					
SECTION 15: Regulatory information					
15.1. Safety, health and environmental regul	ations/legislation spe	ecific for the substance or mixture			
EU regulatory information					
Restrictions on use (REACH, annex XVII):					
Entry 3, Entry 40, Entry 75					
Information according to 2012/18/EU	P5c FLAMMABLE L	אחווט			
(SEVESO III):					
X ,					
National regulatory information					
Employment restrictions:	Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile		nile		
	work protection guid	eline' (94/33/EC).			
Water hazard class (D):	Water hazard class (D): 2 - obviously hazardous to water				
Skin resorption/Sensitization:	Causes allergic hype	ersensitivity reactions.			
15.2 Chomical safety assessment					
15.2. Chemical safety assessment					

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

## **SECTION 16: Other information**



according to Regulation (EC) No 1907/2006

## freeform® bond

Revision date: 01.02.2024

Product code: 10571.2

Page 10 of 11

Abbreviations and acronyms ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service LC50: Lethal concentration, 50% LD50: Lethal dose, 50% 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 DNEL: Derived No Effect Level DMEL: Derived Minimal Effect Level PNEC: Predicted No Effect Concentration ATE: Acute toxicity estimate 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 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) EmS: Emergency Schedules MFAG: Medical First Aid Guide ICAO: International Civil Aviation Organization MARPOL: International Convention for the Prevention of Marine Pollution from Ships IBC: Intermediate Bulk Container SVHC: Substance of Very High Concern Flam. Liq: Flammable liquid Skin Irrit: Skin irritation Eye Irrit: Eye irritation Skin Sens: Skin sensitisation Repr: Reproductive toxicity STOT SE: Specific target organ toxicity - single exposure Aquatic Chronic: Chronic aquatic hazard

## Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
STOT SE 3; H335	Calculation method
Aquatic Chronic 3; H412	Calculation method

### Relevant H and EUH statements (number and full text)



according to Regulation (EC) No 1907/2006

freeform® bond					
Revision date: 01.02.2024	Product code: 10571.2	Page 11 of 11			
H225	Highly flammable liquid and vapour.				
H315	Causes skin irritation.				
H317	May cause an allergic skin reaction.				
H319	Causes serious eye irritation.				
H335	May cause respiratory irritation.				
H361	Suspected of damaging fertility or the unborn child.				
H411	Toxic to aquatic life with long lasting effects.				
H412	Harmful to aquatic life with long lasting effects.				
EUH210	Safety data sheet available on request.				
Further Information					

## rther 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.)