SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830

MEGAPLAST PPE, B

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

1.1. Product identifier

Product name : MEGAPLAST PPE, B
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Adhesive: component
Hardener

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Novatio*
Industrielaan 5B
B-2250 Olen
☎ +32 14 25 76 40
🖷 +32 14 22 02 66
info@novatio.be
*NOVATIO is a registered trademark of Novatech International N.V.

Manufacturer of the product

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
🖷 +32 14 85 97 38
info@tec7.be

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Repr.	category 1B	H360D: May damage the unborn child.
Skin Sens.	category 1	H317: May cause an allergic skin reaction.
Aquatic Chronic	category 3	H412: Harmful to aquatic life with long lasting effects.

2.2. Label elements

Contains: tetrahydrofurfuryl methacrylate; 2-ethylhexyl methacrylate; [2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate; succinic anhydride; 2-hydroxyethyl methacrylate.

Signal word Danger

H-statements

H360D May damage the unborn child.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

P-statements

P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves, protective clothing and eye protection/face protection.
P273 Avoid release to the environment.
P302 + P352 IF ON SKIN: Wash with plenty of water and soap.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
tetrahydrofurfuryl methacrylate	2455-24-5 219-529-5	30%<C<70%	Repr. 1B; H360D Skin Sens. 1; H317 Aquatic Chronic 3; H412	(1)(10)	Constituent
2-ethylhexyl methacrylate	688-84-6 211-708-6	10%<C<30%	Skin Sens. 1B; H317 Aquatic Chronic 3; H412	(1)(10)	Constituent
[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate	20882-04-6 244-096-4	C<10%	Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319	(1)	Constituent
succinic anhydride 01-2119485841-30	108-30-5 203-570-0	C<1%	Resp. Sens. 1; H334 Skin Sens. 1; H317 Acute Tox. 4; H302 Skin Corr. 1; H314 Eye Dam. 1; H318	(1)	Constituent
2-hydroxyethyl methacrylate	868-77-9 212-782-2	C<1%	Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319	(1)(2)(10)	Constituent

(1) For H-statements in full: see heading 16
(2) Substance with a Community workplace exposure limit
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Wash immediately with lots of water. Do not apply (chemical) neutralizing agents without medical advice. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Do not apply (chemical) neutralizing agents without medical advice. Consult a doctor/medical service if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

4.2.1 Acute symptoms

After inhalation:
No effects known.
After skin contact:
No effects known.
After eye contact:
No effects known.
After ingestion:
No effects known.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.

Major fire: Class B foam (not alcohol-resistant).

5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.

Major fire: Water; risk of puddle expansion.

5.2. Special hazards arising from the substance or mixture

Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Do not move the load if exposed to heat. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Face shield. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Face shield. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain released product. Dam up the liquid spill. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into absorbent material, e.g.: sand, saw dust, kieselguhr. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately. Do not discharge the waste into the drain. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Storage temperature: < 25 °C. Store in a cool area. Keep container in a well-ventilated place. Keep out of direct sunlight. Keep only in the original container. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, oxidizing agents, (strong) acids, (strong) bases.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

If applicable and available it will be listed below.

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 Threshold values

DNEL/DMEL - Workers

tetrahydrofurfuryl methacrylate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	3.53 mg/m³	
	Long-term systemic effects dermal	1 mg/kg bw/day	

2-ethylhexyl methacrylate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	2.5 mg/m³	
	Long-term systemic effects dermal	5 mg/kg bw/day	

2-hydroxyethyl methacrylate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	4.9 mg/m³	
	Long-term systemic effects dermal	1.3 mg/kg bw/day	

DNEL/DMEL - General population

tetrahydrofurfuryl methacrylate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	0.87 mg/m³	
	Long-term systemic effects dermal	0.5 mg/kg bw/day	
	Long-term systemic effects oral	0.5 mg/kg bw/day	

2-hydroxyethyl methacrylate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	2.9 mg/m³	
	Long-term systemic effects dermal	0.83 mg/kg bw/day	
	Long-term systemic effects oral	0.83 mg/kg bw/day	

PNEC

tetrahydrofurfuryl methacrylate

Compartments	Value	Remark
Fresh water	0.347 mg/l	
Fresh water (intermittent releases)	0.347 mg/l	
Marine water	0.035 mg/l	
Marine water (intermittent releases)	0.035 mg/l	
STP	15.8 mg/l	
Fresh water sediment	2.12 mg/kg sediment dw	
Marine water sediment	0.212 mg/kg sediment dw	
Soil	0.221 mg/kg soil dw	

2-ethylhexyl methacrylate

Compartments	Value	Remark
Fresh water	0.003 mg/l	
Marine water	< 0.001 mg/l	
Fresh water (intermittent releases)	0.022 mg/l	
STP	10 mg/l	
Fresh water sediment	2.24 mg/kg sediment dw	
Marine water sediment	0.224 mg/kg sediment dw	
Soil	0.446 mg/kg soil dw	

succinic anhydride

Compartments	Value	Remark
Fresh water	0.1 mg/l	
Marine water	0.01 mg/l	
Fresh water (intermittent releases)	1 mg/l	
STP	3 mg/l	

2-hydroxyethyl methacrylate

Compartments	Value	Remark
Fresh water	0.482 mg/l	
Fresh water (intermittent releases)	1 mg/l	
Marine water	0.482 mg/l	
Marine water (intermittent releases)	1 mg/l	
STP	10 mg/l	
Fresh water sediment	3.79 mg/kg sediment dw	
Marine water sediment	3.79 mg/kg sediment dw	
Soil	0.476 mg/kg soil dw	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection:

Insufficient ventilation: wear respiratory protection.

b) Hand protection:

Protective gloves against chemicals (EN 374).

Materials	Measured breakthrough time	Remark	Protection index
nitrile rubber	> 480 minutes	0.4 mm	Class 6

c) Eye protection:

Face shield.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquid
Odour	Characteristic odour
Odour threshold	No data available
Colour	Beige
Particle size	Not applicable (liquid)
Explosion limits	No data available in the literature
Flammability	Not classified as flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	17000 mPa.s - 36000 mPa.s
Kinematic viscosity	No data available in the literature
Melting point	No data available in the literature
Boiling point	No data available in the literature
Evaporation rate	No data available in the literature
Relative vapour density	No data available in the literature
Vapour pressure	No data available in the literature
Solubility	Water ; insoluble
Relative density	1.1
Decomposition temperature	No data available in the literature
Auto-ignition temperature	No data available in the literature
Flash point	No data available in the literature
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available in the literature

9.2. Other information

Absolute density	0.96 kg/m³ - 1.00 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating increases the fire hazard.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

Oxidizing agents, (strong) acids, (strong) bases.

10.6. Hazardous decomposition products

Upon combustion: CO and CO2 are formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

MEGAPLAST PPE, B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrahydrofurfuryl methacrylate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	4000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal						Data waiving	
Inhalation						Data waiving	

2-ethylhexyl methacrylate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD0	OECD 401	> 2000 mg/kg bw		Rat (male / female)	Experimental value	
Skin						Data waiving	
Inhalation						Data waiving	

succinic anhydride

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	1795 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg bw		Rat (male / female)	Experimental value	
Inhalation						Data waiving	

2-hydroxyethyl methacrylate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		5564 mg/kg bw		Rat	Experimental value	
Dermal	LD50		> 5000 mg/kg bw	24 h	Rabbit (male)	Experimental value	
Inhalation						Data waiving	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

MEGAPLAST PPE, B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrahydrofurfuryl methacrylate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment without rinsing
Skin	Not irritating	Draize Test	24 h	24; 48; 72 hours	Rabbit	Experimental value	

[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating; category 2					Literature study	
Skin	Irritating; category 2					Literature study	

succinic anhydride

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage		18 h - 24 h		Rabbit	Experimental value	
Skin	Corrosive	OECD 431	3 minutes - 60 minutes	42 hours	Reconstructed human corneal epidermis	Experimental value	

2-hydroxyethyl methacrylate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Irritating	Draize Test		24; 48; 72 hrs; 4; 5; 7 days	Rabbit	Experimental value	Single treatment without rinsing
Skin	Not irritating	Equivalent to OECD 404	24 h	24; 72 hours	Rabbit	Experimental value	
Skin	Irritating; category 2					Annex VI	

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

Conclusion

Not classified as irritating to the respiratory system
Not classified as irritating to the skin
Not classified as irritating to the eyes

Respiratory or skin sensitisation

MEGAPLAST PPE, B

No (test)data on the mixture available

Classification is based on the relevant ingredients

tetrahydrofurfuryl methacrylate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Not applicable (in vitro test)	Sensitizing					Experimental value	

2-ethylhexyl methacrylate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	Guinea pig maximisation test			Guinea pig (female)	Experimental value	

[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing					Literature study	

succinic anhydride

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal (on the ears)	Sensitizing	OECD 429			Mouse (female)	Experimental value	
Inhalation (aerosol)	Sensitizing		6 h		Rat (male / female)	Experimental value of similar product	

2-hydroxyethyl methacrylate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Buehler test			Guinea pig (male)	Experimental value	
Skin	Sensitizing	Guinea pig maximisation test			Guinea pig (female)	Experimental value	

Conclusion

May cause an allergic skin reaction.
Not classified as sensitizing for inhalation

Specific target organ toxicity

MEGAPLAST PPE, B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrahydrofurfuryl methacrylate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 422	300 mg/kg bw/day		No effect	≥ 29 day(s)	Rat (male / female)	Experimental value

succinic anhydride

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	Equivalent to OECD 408	100 mg/kg bw/day		No effect	13 weeks (5 days / week)	Rat (male / female)	Experimental value
Dermal								Data waiving
Inhalation								Data waiving

2-hydroxyethyl methacrylate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 422	100 mg/kg bw/day		No effect		Rat (male)	Experimental value
Oral (stomach tube)	NOAEL	OECD 422	300 mg/kg bw/day		No effect		Rat (female)	Experimental value
Inhalation	NOAEC systemic effects	OECD 413	1232 mg/m³ air		No adverse systemic effects	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation	NOAEC local effects	OECD 413	352 mg/m³ air		No effect	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

MEGAPLAST PPE, B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

tetrahydrofurfuryl methacrylate

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 473	Human lymphocytes		Experimental value	

succinic anhydride

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)		Experimental value	
Negative with metabolic activation, negative without metabolic activation	Ames test	Chinese hamster ovary (CHO)		Experimental value	

2-hydroxyethyl methacrylate

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 476	Chinese hamster ovary (CHO)	No effect	Experimental value	

Conclusion

Not classified for mutagenic or genotoxic toxicity

Mutagenicity (in vivo)

MEGAPLAST PPE, B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

2-hydroxyethyl methacrylate

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	OECD 474	2 day(s)	Rat (male)		Experimental value

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

MEGAPLAST PPE, B

No (test)data on the mixture available

Judgement is based on the relevant ingredients

succinic anhydride

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral (stomach tube)	NOAEL	Equivalent to OECD 453	> 100 mg/kg bw/day	2 year(s)	Rat (male / female)	No carcinogenic effect		Experimental value

2-hydroxyethyl methacrylate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation	NOAEC	Equivalent to OECD 451	≥ 2.05 mg/l air	102 weeks (6h / day, 5 days / week)	Rat (female)	No carcinogenic effect		Experimental value
Inhalation	NOAEC	Equivalent to OECD 451	≥ 4.1 mg/l air	102 weeks (6h / day, 5 days / week)	Rat (male)	No carcinogenic effect		Experimental value
Oral (drinking water)	NOAEL	Carcinogenic toxicity study	≥ 193.8 mg/kg bw/day	104 weeks (daily)	Rat (female)	No carcinogenic effect		Experimental value
Oral (drinking water)	NOAEL	Carcinogenic toxicity study	≥ 90.3 mg/kg bw/day	104 weeks (daily)	Rat (male)	No carcinogenic effect		Experimental value

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

MEGAPLAST PPE, B

No (test)data on the mixture available

Classification is based on the relevant ingredients

tetrahydrofurfuryl methacrylate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 422	120 mg/kg bw/day	≥ 29 days (gestation, daily)	Rat (female)			Experimental value
	Dose level (P)	OECD 422	300 mg/kg bw/day	≥ 29 days (gestation, daily)	Rat (female)	Increase in fetal death		Experimental value
	NOAEL	OECD 422	300 mg/kg bw/day		Rat (male)			Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL	OECD 422	120 mg/kg bw/day	≥ 29 day(s)	Rat (female)	No effect		Experimental value
	Dose level	OECD 422	300 mg/kg bw/day	≥ 29 day(s)	Rat (female)	Increased post-implantation loss		Experimental value
	NOAEL	OECD 422	300 mg/kg bw/day	29 day(s)	Rat (male)	No effect		Experimental value

succinic anhydride

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral)	NOAEL	Equivalent to OECD 414	140 mg/kg bw/day	10 days (gestation, daily)	Rat (female)	No effect	Foetus	Read-across
Maternal toxicity (Oral)	NOAEL	Equivalent to OECD 414	140 mg/kg bw/day	10 days (gestation, daily)	Rat	No effect		Read-across
Effects on fertility (Oral)	NOAEL	Equivalent to OECD 416	55 mg/kg bw/day	> 80 day(s)	Rat (male / female)	No effect		Read-across

2-hydroxyethyl methacrylate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 422	≥ 1000 mg/kg bw/day		Rat (male / female)	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	50 mg/kg bw/day	23 day(s)	Rabbit (female)	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL (P/F1)	Equivalent to OECD 422	≥ 1000 mg/kg bw/day		Rat (male / female)	No effect		Experimental value

Conclusion

May damage the unborn child.

Toxicity other effects

MEGAPLAST PPE, B

No (test)data on the mixture available

Chronic effects from short and long-term exposure

MEGAPLAST PPE, B

Skin rash/inflammation.

SECTION 12: Ecological information

12.1. Toxicity

MEGAPLAST PPE, B

No (test)data on the mixture available

Classification is based on the relevant ingredients

tetrahydrofurfuryl methacrylate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	ASTM E-35.21	34.7 mg/l	96 h	Pimephales promelas	Flow-through system	Fresh water	Experimental value; Lethal
Acute toxicity crustacea	EC50		97.3 mg/l		Invertebrata		Fresh water	
Toxicity algae and other aquatic plants	ErC50	OECD 201	> 100 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Experimental value; Nominal concentration
Long-term toxicity aquatic crustacea	NOEC	OECD 211	37.2 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; Reproduction

2-ethylhexyl methacrylate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Toxicity algae and other aquatic plants	NOEC	OECD 201	0.28 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity aquatic crustacea	NOEC	OECD 211	0.105 mg/l	21 day(s)	Daphnia galeata	Semi-static system	Fresh water	Experimental value; Reproduction

2-hydroxyethyl methacrylate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 100 mg/l	96 h	Oryzias latipes	Semi-static system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50	OECD 202	380 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	836 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
	NOEC	OECD 201	400 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish								Data waiving
Long-term toxicity aquatic crustacea	NOEC	OECD 211	24.1 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Experimental value; GLP
Toxicity aquatic micro-organisms	EC0		> 3000 mg/l	16 h	Pseudomonas fluorescens	Semi-static system	Fresh water	Experimental value

Conclusion

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

tetrahydrofurfuryl methacrylate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	75 %; Oxygen consumption	28 day(s)	Experimental value

2-ethylhexyl methacrylate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	88 %; GLP	28 day(s)	No relevant data available

[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	≥ 80 %; Oxygen consumption	28 day(s)	Experimental value

succinic anhydride

Biodegradation water

Method	Value	Duration	Value determination
OECD 301E: Modified OECD Screening Test	96.55 %; GLP	28 day(s)	Experimental value

2-hydroxyethyl methacrylate

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	92 % - 100 %; GLP	14 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
SRC AOP v1.92	15.961 h	0.5E6 /cm³	Calculated value

Conclusion

Contains readily biodegradable component(s)

12.3. Bioaccumulative potential

MEGAPLAST PPE, B

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

tetrahydrofurfuryl methacrylate

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		1.76	22.6 °C	Experimental value

2-ethylhexyl methacrylate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	37; GLP	56 h	Danio rerio	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		4.95	20 °C	Experimental value

[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		0.782	23 °C	Experimental value

succinic anhydride

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		2.44	40 °C	Experimental value

2-hydroxyethyl methacrylate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		1.34 - 1.54; Calculated value		Pisces	

Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 107		0.42	25 °C	Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

tetrahydrofurfuryl methacrylate

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	1.4 - 1.74	Calculated value

2-ethylhexyl methacrylate

(log) Koc

Parameter	Method	Value	Value determination
log Koc	SRC PCKOCWIN v2.0	2.750	Calculated value

succinic anhydride

(log) Koc

Parameter	Method	Value	Value determination
			Data waiving

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Fugacity Model Level III	9.85 %		0.0821 %	46.2 %	43.9 %	Calculated value

2-hydroxyethyl methacrylate

(log) Koc

Parameter	Method	Value	Value determination
log Koc		1.63	Calculated value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
0.000462 Pa.m³/mol	SRC HENRYWIN v3.20	25 °C		Calculated value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level III	11 %		0.04 %	66 %	22.9 %	Calculated value

Conclusion

Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

MEGAPLAST PPE, B

Fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

Groundwater

Groundwater pollutant

tetrahydrofurfuryl methacrylate

Groundwater

Groundwater pollutant

2-ethylhexyl methacrylate

Groundwater

Groundwater pollutant

2-hydroxyethyl methacrylate

Groundwater

Groundwater pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
08 04 09* (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants containing organic solvents or other hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Remove to an authorized incinerator with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

European Union

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Annex II of MARPOL 73/78	Not applicable, based on available data

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
0 %	

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
· 2-hydroxyethyl methacrylate	Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN). 5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage”; b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: “Just a sip of grill lighter may lead to life threatening lung damage”; c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. 6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled H304, intended for supply to the general public. 7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'

National legislation Belgium

MEGAPLAST PPE, B

No data available

National legislation The Netherlands

MEGAPLAST PPE, B

Waterbezwaarlijkheid	Z (2); Algemene Beoordelingsmethodiek (ABM)

National legislation France

MEGAPLAST PPE, B

No data available

National legislation Germany

MEGAPLAST PPE, B

WGK	1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017

tetrahydrofurfuryl methacrylate

TA-Luft	5.2.7.1.3

2-ethylhexyl methacrylate

TA-Luft	5.2.5/I

[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate

TA-Luft	5.2.5

succinic anhydride

TA-Luft	5.2.5/I

2-hydroxyethyl methacrylate

TA-Luft	5.2.5

National legislation United Kingdom

MEGAPLAST PPE, B

No data available

Other relevant data

MEGAPLAST PPE, B

No data available

succinic anhydride

IARC - classification	3; Succinic anhydride

15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

tetrahydrofurfuryl methacrylate

A chemical safety assessment has been performed.

SECTION 16: Other information

Full text of any H-statements referred to under heading 3:

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H360D May damage the unborn child.
H412 Harmful to aquatic life with long lasting effects.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers

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