



Safety Data Sheet

according to Regulation (EC) No 1907/2006

Sealing compound

Print date: 21.06.2018

Part-no. 90542114

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

Product group:

Others

Catalogue-no.: 15 03 170

Dichtungsmasse

Sealing compound

Matériau d'étanchéité

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

Use of the substance/mixture

Used in the automobile industry.
Anaerobic sealant and glue.

For processing instructions, please see annex safety data sheet.

1.3. Details of the supplier of the safety data sheet

Company name: Opel Automobile GmbH
Place: D 65423 Rüsselsheim am Main

Telefax: +49-6142/ 749-503

e-mail: OPEL-helpdesk@ifz-berlin.de
Responsible Department: IFZ Ingenieurbüro und Consulting GmbH
Telefon: +49 30 2904897-10
Telefax: +49 - 30 / 2904897-20

1.4. Emergency telephone number:

Internationale Hotline: +49 6131 19240
United Kingdom +44 870 600 626 / 0870 600 6266

Further Information

No more data.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if inhaled.

Causes serious eye damage.

May cause an allergic skin reaction.

May cause respiratory irritation.

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008



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Hazard components for labelling

Triethylene glycol dimethacrylate
Methacryloxyethyl succinate
Tributylamine
2-Hydroxyethyl methacrylate

Signal word: Danger

Pictograms:



Hazard statements

H332 Harmful if inhaled.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe vapour.
P273 Avoid release to the environment.
P280 Wear protective gloves, eye protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
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.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents/container to hazardous or special waste collection point.

Additional advice on labelling

The product is classified and labelled in accordance with the EC directives or respective national laws.

2.3. Other hazards

Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitisation of susceptible persons.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

base: polyethyleneglycol dimethacrylate
Anaerobic sealant and glue



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Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
109-16-0	Triethylene glycol dimethacrylate			20 - 40 %
	203-652-6		01-2119969287-21	
	Skin Sens. 1B; H317			
27138-31-4	Dipropylene glycol dibenzoate			15 - < 25 %
	248-258-5		01-2119529241-49	
	Aquatic Chronic 3; H412			
20882-04-6	Methacryloxyethyl succinate			1.0 - 3.0 %
	244-096-4		01-2120137902-58	
	Eye Dam. 1, Skin Sens. 1; H318 H317			
80-15-9	alpha, alpha-Dimethylbenzylhydroperoxide 80%			1.0 - < 2.0 %
	201-254-7	617-002-00-8		
	Org. Perox. E, Acute Tox. 3, Acute Tox. 4, Acute Tox. 4, STOT RE 2, Skin Corr. 1B, Aquatic Chronic 2; H242 H331 H312 H302 H373 ** H314 H411			
1576-35-8	4-Methylbenzenesulfonylhydrazide			0.1 - < 1 %
	216-407-3			
	Self-react. D, Acute Tox. 3, Aquatic Chronic 2; H242 H301 H411			
102-82-9	Tributylamine			0.10 - 0.90 %
	203-058-7		01-2119474898-14	
	Acute Tox. 2, Acute Tox. 2, Acute Tox. 4, Skin Irrit. 2; H330 H310 H302 H315			
868-77-9	2-Hydroxyethyl methacrylate			0.1 - 0.5 %
	212-782-2	607-124-00-X		
	Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1; H319 H315 H317			
123-31-9	Hydroquinone			0.01 - < 0.1 %
	204-617-8	604-005-00-4	01-2119524016-51	
	Carc. 2, Muta. 2, Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 10); H351 H341 H302 H318 H317 H400 H410			

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

Further Information

2-Hydroxyethyl methacrylate (CAS Nr.: 868-77-9), Dipropylene glycol dibenzoate (20882-04-6) and Hydroquinone (123-31-9) see Community Rolling Plan (CoRAP).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove the victim into fresh air. In case of feeling unwell: Obtain medical attention. Show this safety data sheet to the doctor in attendance.

If unconscious, place the person in the recovery position and seek medical advice immediately. Do not administer liquids to the unconscious person and avoid vomiting.

Protection is needed for the First Aider. (protective gloves, chemical-resistant; safety glasses)

In case of insufficient ventilation, wear suitable respiratory equipment.

Eye wash fountains and safety showers must be easily accessible.



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After inhalation

Move and lay victim down to fresh air, in order to improve breathing. Upon irritation of the respiratory tract or mucous membranes (e.g. coughing), indisposition or prolonged exposure, consult a doctor. In case of irregular breathing or respiratory arrest: Oxygen or artificial respiration, if needed. Lay the affected person down, and keep her or him warm and calm.

After contact with skin

Wash off with soap and plenty of water immediately. Remove all contaminated clothes and shoes. In the case of skin irritation or allergic reactions see a physician.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids. Rinse the eyes with the lids open for several minutes under running water. (10 min) Protect unharmed eye. Remove contact lenses after the first 1 - 2 minutes and continue flushing. Consult an ophthalmologist immediately. A suitable eye shower is available in the working area.

After ingestion

Clean mouth with water and drink plenty of water afterwards. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Consult a physician.

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

Inhalation: irritation of the respiratory tract. May cause: cough, severe shortness of breath/shortness of breath. Discomfort in the chest. (Angina pectoris)

After eye contact: Material sprayed or splashed into the eyes can cause symptoms or injuries such as redness, tearing and corneal damage. Visual disturbances. Possible risk of irreversible effects.

Skin contact: May produce an allergic reaction. rash, nettle rash (Urticaria). Repeated or long term contact can lead to skin irritations.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

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

Symptomatic treatment (decontamination and vital functions). If necessary, contact poison centre.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), foam, dry powder.

Remove intact containers immediately from the dangerous area and/or cool them with water. Water mist may be used to cool closed containers.

Unsuitable extinguishing media

High volume water jet.

5.2. Special hazards arising from the substance or mixture

When heated or in the case of a fire, the formation of poisonous gases is possible. Depending on the conditions of the fire, the following combustion products could be formed/ given off: carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x).

5.3. Advice for firefighters

Do not breathe in the vapours and combustion gases. In the event of fire, wear self-contained breathing apparatus. Wear personal protective equipment. Complete protection suit and compressed air breathing apparatus.

Avoid bringing product in contact with the skin. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus.

Additional information

The combustion gases are partially condensed with the water used to extinguish the fire and end up as a contaminant in this water. Contaminated extinguishing water and soil must be disposed of in accordance with official regulations.



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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation and/or exhaust ventilation. Avoid contact with the skin and the eyes. Do not breathe in vapours. In case of mist, spray or aerosol exposure, wear suitable personal respiratory protection and protective suit.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

6.3. Methods and material for containment and cleaning up

Small amounts: Soak up the product with absorbent, non-flammable material. Larger amounts: Spilled or leaking material is to be soaked up with non-flammable absorbent materials (sand, soil, diatomaceous earth) and put in containers. Keep in suitable, closed containers for disposal. Dispose of the material collected according to regulations.

6.4. Reference to other sections

Please note reference in section 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. Do not inhale large amounts of the vapours released at the beginning of the curing process (contact with humid air). Avoid contact with skin and eyes. Use personal protective equipment. Avoid spillage and leakage due to the risk of slipping.

Further information on handling

When using, do not eat, drink, or smoke. Contaminated work clothing should not be allowed out of the workplace. When handling the product, follow hygiene and safety precautions. See section 8.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in original container. Protect from contamination. Do not pour the residual product back into the original container.

Advice on storage compatibility

Avoid contact with strong oxidising agents.

Further information on storage conditions

Store at room temperature in the original container. (8°C - 21°C)

Total storage period: 24 months.

7.3. Specific end use(s)

Anaerobic sealant and glue.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
98-82-8	Cumene	25	125		TWA (8 h)	WEL
		50	250		STEL (15 min)	WEL
123-31-9	Hydroquinone	-	0.5		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL



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DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
109-16-0	Triethylene glycol dimethacrylate			
Worker DNEL, long-term		inhalation	systemic	48.5 mg/m ³
Worker DNEL, long-term		dermal	systemic	13.9 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	14.5 mg/m ³
Consumer DNEL, long-term		dermal	systemic	8.33 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	8.33 mg/kg bw/day
27138-31-4	Dipropylene glycol dibenzoate			
Worker DNEL, long-term		inhalation	systemic	8.8 mg/m ³
Worker DNEL, acute		dermal	systemic	170 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	35.98 mg/m ³
Worker DNEL, long-term		dermal	systemic	10 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	80 mg/kg bw/day
Consumer DNEL, acute		inhalation	systemic	8.7 mg/m ³
Consumer DNEL, acute		oral	systemic	80 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	0.22 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	8.69 mg/m ³
Consumer DNEL, long-term		oral	systemic	5 mg/kg bw/day
80-15-9	alpha, alpha-Dimethylbenzylhydroperoxide 80%			
Worker DNEL, long-term		inhalation	systemic	6 mg/m ³
102-82-9	Tributylamine			
Worker DNEL, long-term		inhalation	systemic	15.2 mg/m ³
Worker DNEL, long-term		inhalation	local	15.2 mg/m ³
868-77-9	2-Hydroxyethyl methacrylate			
Worker DNEL, long-term		dermal	systemic	1.3 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	4.9 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0.83 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	2.9 mg/m ³
Consumer DNEL, long-term		oral	systemic	0.83 mg/kg bw/day
123-31-9	Hydroquinone			
Worker DNEL, long-term		dermal	systemic	128 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	7 mg/m ³
Worker DNEL, long-term		inhalation	local	1 mg/m ³
Consumer DNEL, long-term		dermal	systemic	64 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1.74 mg/m ³
Consumer DNEL, long-term		inhalation	local	0.5 mg/m ³



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PNEC values

CAS No	Substance	Value
Environmental compartment		
109-16-0	Triethylene glycol dimethacrylate	
Freshwater		
		0.164 mg/l
Freshwater (intermittent releases)		
		0.164 mg/l
Marine water		
		0.0164 mg/l
Freshwater sediment		
		1.85 mg/kg
Marine sediment		
		0.185 mg/kg
Micro-organisms in sewage treatment plants (STP)		
		10 mg/l
Soil		
		0.274 mg/kg
27138-31-4	Dipropylene glycol dibenzoate	
Freshwater		
		0.0037 mg/l
Freshwater (intermittent releases)		
		0.037 mg/l
Marine water		
		0.00037 mg/l
Freshwater sediment		
		1.49 mg/kg
Marine sediment		
		0.149 mg/kg
Micro-organisms in sewage treatment plants (STP)		
		10 mg/l
Soil		
		1 mg/kg
80-15-9	alpha, alpha-Dimethylbenzylhydroperoxide 80%	
Freshwater		
		0.0031 mg/l
Freshwater (intermittent releases)		
		0.031 mg/l
Marine water		
		0.00031 mg/l
Freshwater sediment		
		0.023 mg/kg
Marine sediment		
		0.0023 mg/kg
Micro-organisms in sewage treatment plants (STP)		
		0.35 mg/l
Soil		
		0.0029 mg/kg
102-82-9	Tributylamine	
Freshwater		
		0.0036 mg/l
Freshwater (intermittent releases)		
		0.036 mg/l
Marine water		
		0.00036 mg/l
Freshwater sediment		
		16.9 mg/kg
Marine sediment		
		1.69 mg/kg
Micro-organisms in sewage treatment plants (STP)		
		100 mg/l
Soil		
		3.37 mg/kg
868-77-9	2-Hydroxyethyl methacrylate	
Freshwater		
		0.482 mg/l
Freshwater (intermittent releases)		
		1 mg/l
Marine water		
		0.482 mg/l
Freshwater sediment		
		3.79 mg/kg
Marine sediment		
		3.79 mg/kg



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Micro-organisms in sewage treatment plants (STP)	10 mg/l
Soil	0.476 mg/kg
123-31-9	Hydroquinone
Freshwater	0.000114 mg/l
Freshwater (intermittent releases)	0.00134 mg/l
Marine water	0.0000114 mg/l
Freshwater sediment	0.00098 mg/kg
Marine sediment	0.000097 mg/kg
Micro-organisms in sewage treatment plants (STP)	0.71 mg/l
Soil	0.000129 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Provide sufficient air exchange and/or exhaust in work rooms. When the concentration in the air is over the maximum occupational exposure limit, an approved respiratory protection apparatus must be worn.

Protective and hygiene measures

A high standard of personal hygiene is required. Avoid prolonged and intensive skin contact. Do not eat, drink, smoke or take snuff at work. Wash hands before breaks and at the end of the workday. Remove and wash contaminated clothing before re-use.

Eye wash fountains and safety showers must be easily accessible.

Eye/face protection

In case of risk of splashing, wear protective glasses. - EN 166

Safety glasses with side-shields. Tightly fitting safety goggles.

Hand protection

Protective gloves, chemical-resistant - EN 374. The manufacturer recommends the following glove materials: Suitable material for brief contact or splashes (recommended: at least compliant with protection index 2 > 30 minutes permeation time in compliance with EN 374): nitrile rubber (NBR; layer thickness: ≥ 0.4 mm). Suitable materials even for lengthy direct contact (recommended: pursuant to safety index 6 > 480 minutes permeation time pursuant to EN 374): nitrile rubber (NBR; layer thickness: ≥ 0.4 mm).

This information is based on our own tests, literature references and information from glove manufacturers or has been derived by analogy from similar substances.

Safety gloves should be selected for the actual conditions of use and in accordance with the instructions for use provided by the manufacturer.

Please note that the daily use of a chemical glove in practice may be considerably shorter than the permeation time calculated in EN 374 as a result of many different factors (for example temperature).

Protective gloves should be replaced immediately if damaged or in case of signs of wear.

Skin protection

Wear suitable protective clothing. - EN 14605 (liquid); EN 13982 (dust).

Personal protection equipment should comply with the relevant standards, be suitable for purpose, in good condition and maintained as specified.

No rings, watches or similar things should be worn. Product residues can remain and, therefore, can trigger skin reactions. If necessary: Clean thoroughly. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

Respiratory protection

Provide adequate ventilation and/or exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear a mask for organic vapours. Respirator with A filter - EN 14387.

Environmental exposure controls

The product contains pollutants.

Should not be released into the environment.



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid
Colour: green
Odour: characteristic

Test method

pH-Value: No data available.

Changes in the physical state

Melting point: No data available.
Initial boiling point and boiling range: No data available.
Flash point: > 100 °C
Sustaining combustion: No data available

Flammability

Solid: No data available.
Gas: No data available.

Explosive properties

Not applicable.

Lower explosion limits: No data available.
Upper explosion limits: No data available.
Ignition temperature: No data available.

Auto-ignition temperature

Solid: No data available.
Gas: No data available.

Decomposition temperature: No data available.

Oxidizing properties

No data available.

Vapour pressure: No data available.

Density (at 20 °C): 1.05 - 1.09 g/cm³

Bulk density: No data available.

Water solubility: insoluble

Solubility in other solvents

acetone: soluble

Partition coefficient: No data available.

Viscosity / dynamic: No data available.

Viscosity / kinematic: No data available.

Vapour density: No data available.

Evaporation rate: No data available.

9.2. Other information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.



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10.2. Chemical stability

Stable under proper storage and handling.

10.3. Possibility of hazardous reactions

No dangerous reactions occur under normal storage conditions and in normal use.

10.4. Conditions to avoid

Keep away from heat and sources of ignition. Protect from contamination.

10.5. Incompatible materials

Reacts with: strong oxidising agents.

10.6. Hazardous decomposition products

Decomposes on heating. Incomplete incineration and thermolysis produces toxic gases. (carbon monoxide (CO)) See also section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No data available.

Acute toxicity



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Harmful by inhalation. No data is available on the product itself. The following toxicological assessments are based on the toxicological knowledge of the separate components of the product.

Toxicity after swallowing:
May irritate digestive organs.

CAS 109-16-0 Triethylene glycol dimethacrylate:
LD50/oral/rat: 10837 mg/kg

CAS 27138-31-4 Dipropylene glycol dibenzoate:
LD50/oral/rat: 3914 mg/kg - Method: OECD 401

CAS 20882-04-6 Methacryloxyethyl succinate:
LD50/oral: > 2000 mg/kg - Method: OECD 423

CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%:
LD50/oral/rat: 550 mg/kg

CAS 1576-35-8 4-Methylbenzenesulfonhydrazide:
LD50/oral/rat: 280 mg/kg

CAS 102-82-9 Tributylamine:
LD50/oral/mouse: 320 mg/kg
LD50/oral/rat: 420 mg/kg

CAS 123-31-9 Hydroquinone:
LD50/oral/rat: 367 mg/kg - Method: OECD 401

Toxicity upon inhalation:
CAS 27138-31-4 Dipropylene glycol dibenzoate:
LC50/inhalative/4h/rat: > 200 mg/l

CAS 102-82-9 Tributylamine:
LC50/inhalative/4h/rat: 0.5 mg/l (vapour) - Method: OECD 403

Toxicity after skin contact:
CAS 109-16-0 Triethylene glycol dimethacrylate:
LD50/dermal/mouse: > 2000 mg/kg

CAS 27138-31-4 Dipropylene glycol dibenzoate:
LD50/dermal/rat: > 2000 mg/kg (Method: OECD 402)

CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%:
LD50/dermal: 1200 - 1520 mg/kg

CAS 102-82-9 Tributylamine:
LD50/dermal/rabbit: 195 mg/kg

CAS 868-77-9 2-Hydroxyethyl methacrylate:
LD50/dermal/rabbit: > 5000 mg/kg

ATEmix calculated

ATE (inhalative aerosol) 4.587 mg/l

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CAS No	Chemical name			
	Exposure route	Dose	Species	Source
80-15-9	alpha, alpha-Dimethylbenzylhydroperoxide 80%			
	oral	LD50 382 mg/kg	Rat	IUCLID
	dermal	ATE 1100 mg/kg		
	inhalative vapour	ATE 3 mg/l		
	inhalative aerosol	ATE 0.5 mg/l		
1576-35-8	4-Methylbenzenesulfonylhydrazide			
	oral	ATE 100 mg/kg		
102-82-9	Tributylamine			
	oral	ATE 500 mg/kg		
	dermal	ATE 50 mg/kg		
	inhalative vapour	ATE 0.5 mg/l		
	inhalative aerosol	ATE 0.05 mg/l		
868-77-9	2-Hydroxyethyl methacrylate			
	oral	LD50 5050 mg/kg	Rat	
123-31-9	Hydroquinone			
	oral	LD50 302 mg/kg	Rat	IUCLID

Irritation and corrosivity

Risk of serious damage to eyes. Material sprayed or splashed into the eyes can cause symptoms or injuries such as redness, tearing and corneal damage.

Repeated or long term contact can lead to skin irritations.

CAS 109-16-0 Triethylene glycol dimethacrylate:

Acute dermal irritation/corrosion: non-irritant (24 h, rabbit)

Method: Draize-test

Acute eye irritation/corrosion: non-irritant (rabbit)

Method: OECD 405

CAS 27138-31-4 Dipropylene glycol dibenzoate:

Acute dermal irritation/corrosion: non-irritant (4 h, rabbit)

Method: OECD 404

Acute eye irritation/corrosion: Mild eye irritation. (rabbit)

Method: OECD 405

CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%:

Acute dermal irritation/corrosion: corrosive (rabbit)

Method: Draize-test

CAS 868-77-9 2-Hydroxyethyl methacrylate:

Acute eye irritation/corrosion: irritant (rabbit)

Method: Draize-test

CAS 20882-04-6 Methacryloxyethyl succinate:

Acute dermal irritation/corrosion: non-irritant (0.25 h, human) Method:

OECD 439

Eye contact: category: I

Species: Bovine (cornea, in vitro) 10 min - Method: OECD 437 (BOCP)



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Sensitising effects

May produce an allergic reaction.

CAS 109-16-0 Triethylene glycol dimethacrylate:

sensitising - Species: mouse

Method: OECD 429

CAS 27138-31-4 Dipropylene glycol dibenzoate:

Skin sensitisation: None. - Species: guinea pig

Method: OECD 406

CAS 123-31-9 Hydroquinone:

sensitising - Species: guinea pig

(Guinea Pig maximum closage test)

Carcinogenic/mutagenic/toxic effects for reproduction



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Germ cell mutagenicity:

CAS 109-16-0 Triethylene glycol dimethacrylate: negative
Method: OECD 471 - Bacterial reverse mutation assay
Method: OECD 476 - In vitro Mammalian Cell Gene Mutation Test
Method: OECD 487 - In vitro Mammalian Cell Micronucleus Test)

CAS 27138-31-4 Dipropylene glycol dibenzoate: negative
Method: OECD 471 - Bacterial reverse mutation assay
Method: OECD 473 - In vitro Mammalian Chromosome Aberration Test
Method: OECD 476 - In vitro Mammalian Cell Gene Mutation Test

CAS 20882-04-6 Methacryloxyethyl succinate: negative
Method: OECD 471 - Bacterial reverse mutation assay

CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%: positive
Method: OECD 471 - Bacterial reverse mutation assay

CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%: negative
dermal, Species: mouse

CAS 1576-35-8 4-Methylbenzenesulfonhydrazide: positive
Bacterial reverse mutation assay (e.g. AMES test)

CAS 868-77-9 2-Hydroxyethyl methacrylate: positive
Method: OECD 473 - In vitro Mammalian Chromosome Aberration Test

CAS 868-77-9 2-Hydroxyethyl methacrylate: negative
Method: OECD 471 - Bacterial reverse mutation assay
Method: OECD 472 - Genetic Toxicology: Escherichia coli, Reverse Mutation Assay
Method: OECD 474 - oral, Species: rat (Mammalian Erythrocyte Micronucleus Test)
Method: OECD 476 - In vitro Mammalian Cell Gene Mutation Test

CAS 123-31-9 Hydroquinone: negative
EU-Method: B.13/14 (Mutagenicity)

Carcinogenicity:

CAS 868-77-9 2-Hydroxyethyl methacrylate:
Method: OECD 451 (102 weeks, 6h/d, 5d/weeks)

2-Hydroxyethyl methacrylate (CAS Nr.: 868-77-9), Dipropylene glycol dibenzoate (20882-04-6) and Hydroquinone (123-31-9) see Community Rolling Plan (CoRAP).

STOT-single exposure

Inhalation may result in respiratory irritation. (CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%)

STOT-repeated exposure



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Toxicity with repeated administration:

CAS 109-16-0 Triethylene glycol dimethacrylate:

NOAEL/oral/rat: 1000 mg/kg (daily)

Method: OECD 422

CAS 868-77-9 2-Hydroxyethyl methacrylate:

NOAEL/oral/rat: 100 mg/kg (once daily)

Method: OECD 422

CAS 27138-31-4 Dipropylene glycol dibenzoate:

NOAEL/oral/rat: > 1000 mg/kg (13 w daily)

Method: OECD 408

CAS 123-31-9 Hydroquinone:

NOAEL/oral/rat: \geq 250 mg/kg (14 days 5 days/week, 12 doses)

Method: OECD 407

LOAEL/oral/rat: \leq 500 mg/kg (14 days 5 days/week, 12 doses)

Method: OECD 407

Aspiration hazard

No data available.

Specific effects in experiment on an animal

Reproduction toxicity:

CAS 109-16-0 Triethylene glycol dimethacrylate:

NOAEL P = 1000 mg/kg

NOAEL F1 = 1000 mg/kg

oral, Species: rat

Method: OECD 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

CAS 27138-31-4 Dipropylene glycol dibenzoate:

NOAEL P = 10000 ppm

NOAEL F1 = 10000 ppm

NOAEL F2 = 10000 ppm

oral, 10 w, Species: rat

Method: OECD 416 (Two Generation Reproduction Toxicity Study)

CAS 868-77-9 2-Hydroxyethyl methacrylate:

NOAEL P = 1000 mg/kg

NOAEL F1 = 1000 mg/kg

oral, Species: rat

Method: OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)

SECTION 12: Ecological information

12.1. Toxicity

The following toxicological assessments are based on the toxicological knowledge of the separate components of the product.

CAS 27138-31-4 Dipropylene glycol dibenzoate:

Acute toxicity to fish:

LC50/Pimephales promelas/96 h: 3.7 mg/l (OECD 203)

Daphnia toxicity:



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EC50/Daphnia magna/48 h: 19.3 mg/l (OECD 202 - immobilization)

Toxicity to algae:

EC50/Pseudokirchneriella subcapitata/72 h: 4.9 mg/l (OECD 201 - inhibition of growth)

NOEC/Pseudokirchneriella subcapitata/72 h: 1 mg/l (OECD 201 - inhibition of growth)

Toxicity to bacteria:

EC10/Bacteria/3 h: > 100 mg/l (OECD 209, activated sludge)

CAS 109-16-0 Triethylene glycol dimethacrylate:

Acute toxicity to fish:

LC50/Fish - Danio rerio/96 h: 16.4 mg/l (OECD 203)

Toxicity to algae:

EC50/Pseudokirchneriella subcapitata/72 h: > 100 mg/l (OECD 201 - inhibition of growth)

NOEC/Pseudokirchneriella subcapitata/72 h: 18.6 mg/l (OECD 201 - inhibition of growth)

Daphnia toxicity: (Chronic)

NOEC/Daphnia magna/21 d: 32 mg/l (OECD 211)

CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%:

Acute toxicity to fish:

LC50/Rainbow trout (Oncorhynchus mykiss)/96 h: 3.9 mg/l (OECD 203)

Daphnia toxicity:

EC50/Daphnia magna/48 h: 18 mg/l (OECD 202 - immobilization)

Toxicity to algae:

ErC50/Pseudokirchneriella subcapitata/72 h: 3.1 mg/l (OECD 201 - inhibition of growth)

Toxicity to bacteria:

EC10/Bacteria/30 min: 70 mg/l

CAS 1576-35-8 4-Methylbenzenesulfonhydrazide:

Acute toxicity to fish:

LC50/Danio rerio/96 h: > 1 - 10 mg/l (OECD 203)

Toxicity to bacteria:

EC50/Bacteria: > 1000 mg/l (OECD 209, activated sludge)

CAS 102-82-9 Tributylamine:

Acute toxicity to fish:

LC50/Golden orfe (Leuciscus idus)/48 h: 60.2 mg/l

Daphnia toxicity:

EC50/Daphnia magna/48 h: 8 mg/l (OECD 202 - immobilization)

Toxicity to algae:

EC50/Desmodesmus subspicatus/72 h: 8.2 mg/l (OECD 201 - inhibition of growth)

EC10/Desmodesmus subspicatus/72 h: 1.378 mg/l (OECD 201 - inhibition of growth)

Toxicity to bacteria:

EC 0 /Bacteria/3 h: > 800 mg/l (OECD 209, activated sludge)

CAS 868-77-9 2-Hydroxyethyl methacrylate:

Acute toxicity to fish:

LC50/Fish - Japanese medaka (Oryzias latipes)/96 h: > 100 mg/l (OECD 203)

Daphnia toxicity:

EC50/Daphnia magna/48 h: 380 mg/l (OECD 202 - immobilization)

Chronic: NOEC/Daphnia magna/21 d: 24.1 mg/l (OECD 211)

Toxicity to algae:

EC50/Pseudokirchneriella subcapitata/72 h: 836 mg/l (OECD 201 - inhibition of growth)

NOEC/Pseudokirchneriella subcapitata/72 h: 400 mg/l (OECD 201 - inhibition of growth)

Toxicity to bacteria:

EC 0 /Bacteria - Pseudomonas fluorescens/16 h: > 3000 mg/l

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CAS 123-31-9 Hydroquinone:

Acute toxicity to fish:

LC50/Rainbow trout (*Oncorhynchus mykiss*)/96 h: 0.638 mg/l (OECD 203)

Daphnia toxicity:

EC50/Daphnia magna/48 h: 0.134 mg/l (OECD 202 - immobilization)

Chronic: NOEC/Daphnia magna/21 d: 0,0057 mg/l (OECD 211)

Toxicity to algae:

EC50/Pseudokirchneriella subcapitata/72 h: 0.335 mg/l (OECD 201 - inhibition of growth)

Toxicity to bacteria:

EC50/Bacteria/30 min: 0.038 mg/l

CAS 20882-04-6 Methacryloxyethyl succinate:

Daphnia toxicity:

EC50/Daphnia magna/48 h: > 515.4 mg/l (OECD 202 - immobilization)

Toxicity to algae:

EC50/Pseudokirchneriella subcapitata/72 h: > 312 mg/l (OECD 201 - inhibition of growth)

NOEC/Pseudokirchneriella subcapitata/72 h: 21.1 mg/l (OECD 201 - inhibition of growth)

CAS No	Chemical name				
	Aquatic toxicity	Dose	[h] [d]	Species	Source
868-77-9	2-Hydroxyethyl methacrylate				
	Acute fish toxicity	LC50	227 mg/l	96 h	Pimephales promelas
123-31-9	Hydroquinone				
	Algae toxicity	NOEC	0.0057 mg/l	21 d	

12.2. Persistence and degradability

The product is not biologically degradable.

CAS 27138-31-4 Dipropylene glycol dibenzoate:

Biological degradability: 87 % (OECD 301 B) - Highly biodegradable.

CAS 109-16-0 Triethylene glycol dimethacrylate:

Biological degradability: 85 % (OECD 301 B) - Highly biodegradable.

CAS 1576-35-8 4-Methylbenzenesulfonhydrazide:

Biological degradability: 50 - 100 % (OECD 301 C)

CAS 102-82-9 Tributylamine:

Biological degradability: < 10 % (OECD 301 C)

Biological degradability: 94 % (OECD 302 B) - Material is inherently biodegradable.

Biological degradability: 80.3 % (OECD 301 B) - Highly biodegradable.

CAS 868-77-9 2-Hydroxyethyl methacrylate

Biological degradability: 92 - 100 % (OECD 301 C) - Highly biodegradable.

CAS 123-31-9 Hydroquinone:

Biological degradability: 75 - 81 % (EU-Method: C.4-E) - Highly biodegradable.

CAS 20882-04-6 Methacryloxyethyl succinate:

Biological degradability: 80 % (OECD 301 F) - Highly biodegradable.

CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%:

Biological degradability: 0 % (OECD 301 B)

12.3. Bioaccumulative potential



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CAS 27138-31-4 Dipropylene glycol dibenzoate:
Partition coefficient (n-octanol/water) logPow: 3.9
OECD 117, Method: HPLC

CAS 109-16-0 Triethylene glycol dimethacrylate:
Partition coefficient (n-octanol/water) logPow: 2.3
OECD 117, Method: HPLC

CAS 20882-04-6 Methacryloxyethyl succinate:
Partition coefficient (n-octanol/water) logPow: 0.783
(23°C) EU-Method: A.8

CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%:
Partition coefficient (n-octanol/water) logPow: 2.16
Bioconcentration factor (BCF): 9.1 (calculated)
OECD 305, Bioconcentration: Flow-through Fish Test

CAS 1576-35-8 4-Methylbenzenesulfonhydrazide:
Partition coefficient (n-octanol/water) logPow: 0.55

CAS 102-82-9 Tributylamine:
Partition coefficient (n-octanol/water) logPow: 3.338
(25°C) OECD 123

CAS 868-77-9 2-Hydroxyethyl methacrylate:
Partition coefficient (n-octanol/water) logPow: 0.42

CAS 123-31-9 Hydroquinone:
Partition coefficient (n-octanol/water) logPow: 0.59
EU-Method: A.8

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
868-77-9	2-Hydroxyethyl methacrylate	0.47
123-31-9	Hydroquinone	0.59

12.4. Mobility in soil

Mobility: None. (Hardened material)

12.5. Results of PBT and vPvB assessment

CAS 27138-31-4 Dipropylene glycol dibenzoate:
The substance does not meet the criteria for PBT (persistent/bio-accumulative/toxic). The substance does not meet the criteria for vPvB (very persistent/very bio-accumulative).

CAS 109-16-0 Triethylene glycol dimethacrylate:
The substance does not meet the criteria for PBT (persistent/bio-accumulative/toxic). The substance does not meet the criteria for vPvB (very persistent/very bio-accumulative).

CAS 868-77-9 2-Hydroxyethyl methacrylate:
The substance does not meet the criteria for PBT (persistent/bio-accumulative/toxic). The substance does not meet the criteria for vPvB (very persistent/very bio-accumulative).

CAS 123-31-9 Hydroquinone:
The substance does not meet the criteria for PBT (persistent/bio-accumulative/toxic). The substance does not meet the criteria for vPvB (very persistent/very bio-accumulative).



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CAS 80-15-9 alpha, alpha-Dimethylbenzylhydroperoxide 80%:

The substance does not meet the criteria for PBT (persistent/bio-accumulative/toxic). The substance does not meet the criteria for vPvB (very persistent/very bio-accumulative).

CAS 102-82-9 Tributylamine:

The substance does not meet the criteria for PBT (persistent/bio-accumulative/toxic). The substance does not meet the criteria for vPvB (very persistent/very bio-accumulative).

CAS 1576-35-8 4-Methylbenzenesulfonylhydrazide:

The substance does not meet the criteria for PBT (persistent/bio-accumulative/toxic). The substance does not meet the criteria for vPvB (very persistent/very bio-accumulative).

12.6. Other adverse effects

No data available.

Further information

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Disposal in accordance with the official regulations. Where possible recycling is preferred to disposal or incineration. Offer surplus and non-recyclable solutions to a licensed disposal company.

Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances; hazardous waste

Waste disposal number of used product

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Unclean packing materials, just as the empty containers: Must be sent for special treatment in accordance with local authority regulations. Hazardous waste landfill. / Hazardous waste incineration.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number:</u>	not regulated
<u>14.2. UN proper shipping name:</u>	not regulated
<u>14.3. Transport hazard class(es):</u>	not regulated
<u>14.4. Packing group:</u>	not regulated



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Other applicable information (land transport)

Not classified as dangerous regarding transport regulations.

Inland waterways transport (ADN)

- 14.1. UN number:** not regulated
14.2. UN proper shipping name: not regulated
14.3. Transport hazard class(es): not regulated
14.4. Packing group: not regulated

Other applicable information (inland waterways transport)

Not classified as dangerous regarding transport regulations.

Marine transport (IMDG)

- 14.1. UN number:** not regulated
14.2. UN proper shipping name: not regulated
14.3. Transport hazard class(es): not regulated
14.4. Packing group: n.d.a.

Other applicable information (marine transport)

Not classified as dangerous regarding transport regulations.

Air transport (ICAO-TI/IATA-DGR)

- 14.1. UN number:** not restricted
14.2. UN proper shipping name: not restricted
14.3. Transport hazard class(es): not restricted
14.4. Packing group: n.d.a.

Other applicable information (air transport)

Not classified as dangerous regarding transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

not applicable

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

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3: alpha, alpha-Dimethylbenzylhydroperoxide 80%

2004/42/EC (VOC): VOC value (%): < 3

Additional information

No Substances of Very High Concern (SVHC) according REACH Article 57.

National regulatory information

Additional information

The national regulations have to be complied with as necessary.

15.2. Chemical safety assessment

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

SECTION 16: Other information



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Changes

Section: 1, 2, 3, 4, 5, 8, 11, 12, 15, 16

Abbreviations and acronyms

n.a. = not applicable

n.d. = not determined

n.d.a. = no data available

ATE = Acute Toxicity Estimate

DNEL = Derived No Effect Level

PNEC = Predicted No-Effect Concentration

NOEL = No Observed Effect Level

NOEC = No-Observed-Effect-Concentration

NOAEL = No Observed Adverse Effect Level

LOAEL = Lowest Observed Adverse Effect Level

SADT = Self-Accelerating decomposition temperature

SVHC = substance of very high concern

VOC = Volatile organic compounds

IUCLID = International Uniform Chemical Information Database

OECD = Organization for Economic Co-operation and Development

EPA = Environmental Protection Agency

RTECS = Registry of Toxic Effects of Chemical Substances

REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

CLP = Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

EINECS = European Inventory of Existing Commercial Chemical Substances

ECHA = European Chemicals Agency

Relevant H and EUH statements (number and full text)

H242	Heating may cause a fire.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
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.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
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.

Further Information

The information is based on present levels of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

The product is to be used exclusively for the applications named in the technical data sheet or in the processing instructions.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.



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



Sealing compound 90542114 – 15 03 170

- Anaerobic, solvent-free one-component reaction adhesive for the application of flat gaskets in automotive engineering. The adhesive hardens at room temperature, in the absence of air, and in contact with metal.

Application

The surfaces to be treated must be clean and grease-free.

Oxide layers that impair the strength of the bonding or delay hardening have to be removed mechanically by means of sandblasting, brushing, polishing or machining. The period of time between the cleaning process and the application of adhesive should be as short as possible in order to prevent corrosion or soiling of the adhesive surfaces.

The adhesive is applied manually from the bottle.

Special instructions

Temperature resistance

-60°C - +150°C

Storage

24 months at room temperature

Safety

For handling our products please refer to the instructions on our safety data sheet at www.ifz-berlin.de and the safety instructions on the product label.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.