

Material Safety Data Sheet according to (EC) 1907/2006



Tradename:

CLEAR-BLOKKER

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

1.1. Product identifier

Name of product: CLEAR-BLOKKER

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

Use of the substance/mixture

Light curing dental resin

1.3. Details of the supplier of the safety data sheet

Manufacturer / distributor

SCHEU DENTAL GmbH
Am Burgberg 20
D-58642 Iserlohn
Tel. +49 (2374) 9288-0
Fax +49 (2374) 9288-90

eMail: service@SCHEU-DENTAL.com
Internet: www.SCHEU-DENTAL.com

1.4. Emergency telephone number: +49 (2374) 9288-0

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008 [CLP]

Skin Sens. 1; H317
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Urethane dimethacrylate (UDMA)
tricyclodecan dimethanol diacrylate (TCDDMDA)
1,4 Butanediol dimethacrylate (1,4-BDDMA)

Signal word: Warning

Hazard Pictograms: GHS07 – GHS09



Hazard statements

H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection.
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P 501	Dispose of contents/container in accordance with local regulation.

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Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

SECTION 3: Composition / information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Mixture of acrylic resins and initiators.

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
Index No		
REACH-No		
	Urethane dimethacrylate (UDMA)	40 – 70 %
72869-86-4	Skin Sens.1, Aquatic Chronic 2; H317 H411	
	Tricyclodecan Dimethanol Diacrylate (TCDDMDA)	20 – 50 %
42594-17-2	Skin Sens. 1B, Aquatic Chronic 2; H317 H411	
	1,4 Butanediol dimethacrylate (1,4-BDDMA)	< 10 %
2082-81-7	Skin Sens. 1B; H317	

Additional information

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

CAS-No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
72869-86-4		urethane dimethacrylate (UDMA)	40 – 70 %
		inhalation: LC50 = >5 mg/l (dusts or mists); oral: LD50 = >2000 mg/kg	
42594-17-2		tricyclodecan dimethanol diacrylate (TCDDMDA)	20 – 50 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg	
2082-81-7		Butandiol dimethacrylate (1,4-BDDMA)	< 10 %
		dermal: LD50 = >3000 mg/kg; oral: LD50 = >5000 mg/kg	

SECTION 4: First aid measures

4.1. Description of first aid measures

- General Information:** Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours. Take off all contaminated clothing immediately.
- After inhalation:** Provide fresh air. Medical treatment necessary.
- After contact with skin:** After contact with skin, wash immediately with plenty of water and soap. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary.
- After contact with eyes:** After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist.
- After ingestion:** Do NOT induce vomiting. Medical treatment necessary.

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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

Foam, Fire-extinguishing powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide. Carbon dioxide Hazardous decomposition products

5.3. Advice for firefighters

Special protective equipment for fire fighters:

In case of fire: Wear self-contained breathing apparatus.

Additional information

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

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 to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Advice on safe handling

Provide good room ventilation.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

Avoid contact with skin, eyes and clothes. 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 or drink.

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7.2. Conditions for safe storage, including any incompatibilities

Storage:

Requirements for storage rooms and vessels

Protect from the action of light. Keep only in the original container at a temperature between 4 – 25 °C. Can polymerize with intense heat release.

Advice on storage compatibility

No special measures are necessary.

7.3. Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

8.2. Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly fitting goggles.

Hand protection

Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.

Skin protection

Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Information

Physical state	Gel
Colour	colourless
Odour	characteristic
pH-Value:	not determined
Changes in the physical state	
Melting point	not determined
Initial boiling point and boiling range	not determined
Flash point	> 100 °C
Flammability	
Solid	not applicable
Gas	not applicable
Lower explosion limits	not determined
Upper explosion limits	not determined
Auto-ignition temperature	
Solid	not applicable
Gas	not applicable
Decomposition temperature	not determined
Vapour pressure	not determined
Density	1,1 g/cm ³
Water solubility	insoluble
Solubility in other solvents	
The substance is not soluble in water	
Partition coefficient	not determined

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Viscosity / dynamic (at 20°C)	200 * 1000 mPa·s
Vapour density	not determined
Evaporation rate	not determined

9.2. Other information

Solid content not determined

Product has not been tested. The statement is derived from the properties of the components.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and / or heavy metal ions.

10.4. Conditions to avoid

Protect from the action of light. Keep only in the original container at a temperature between 4 – 25 °C. Can polymerize with intense heat release.

10.5. Incompatible materials

Oxidising agent, Reducing agent, Heavy metals, acids, Alkali (lye)

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological Information**11.1. Information on toxicological effects****Acute toxicity**

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

CAS No.	Chemical name			
	Exposure routes	Dose	Species	Source
72869-86-4	urethane dimethacrylate (UDMA)			
	oral	LD50 >2000 mg/kg	Rat	OECD 401
	inhalation (4h) dust/mist	LC50 >5 mg/l		
42594-17-2	Tricyclodecan Dimethanol Diacrylate (TCDDMDA)			
	oral	LD50 >2000 mg/kg	Rat	
	dermal	LD50 >2000 mg/kg	Rat	
2082-81-7	1,4 Butanediol dimethacrylate (1,4-BDDMA)			
	oral	LD50 >5000 mg/kg	Rat	OECD 401
	dermal	LD50 >3000 mg/kg	Rabbit	

Irritation and corrosivity

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

Sensitising effects

May cause an allergic skin reaction. (Urethane dimethacrylate (UDMA)); (tricyclodecan dimethanol diacrylate (TCDDMDA)); (1,4 Butanediol dimethacrylate (1,4-BDDMA))

Possible sensitization in case of persons suffering from hypersensitivity.

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CMR effects (carcinogenic, mutagenic and toxic effects for reproduction)

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Further information

Product has not been tested. The statement is derived from the properties of the components.

SECTION 12: Ecological Information

12.1. Toxicity

CAS No	Chemical name	Dose	[h]	[d]	Species	Source
72869-86-4	Urethane dimethacrylate (UDMA)					
	Acute fish toxicity	LC50 10,1 mg/l	96 h		Brachydanio rerio (zebrafish)	OECD 203
42594-17-2	tricyclodecan dimethanol diacrylate (TCDDMDA)					
	Acute fish toxicity	LC50 4,95 mg/l	96 h			
	Acute algae toxicity	ErC50 1,6 mg/l	72 h		Pseudokirchneriella subcapitata	OECD 201
	Acute crustacea toxicity	EC50 2,36 mg/l	48 h		Daphnia magna (Big water flea)	OECD 202

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
72869-86-4	Urethane dimethacrylate (UDMA)				
	Biodegradation	22 %		28	OECD 301 F

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT an vPvB assessment

The product has not been tested.

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 uncontrolled discharge of product into the environment. Do not allow to enter into surface water or drains.

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Page: 7 von 8**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Small quantities can be polymerized by light and the cured solid material can be disposed of with the regular garbage. Larger quantities must be disposed of following the regulations of the local authorities. Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products 070208

WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues.
Classified as hazardous waste.

List of Wastes Code - contaminated packaging 070208

WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues.
Classified as hazardous waste.

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport Information**Land transport (ADR/RID)**

14.1. UN number	UN 3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRICYCLODECANE DIMETHANOL DIACRYLATE)
14.3. Transport hazard class(es)	9
14.4. Packing group	III
Hazard label	9
Classification code	M6
Special Provisions	274 335 375 601
Limited quantity	5 L
Excepted quantity	E1
Transport category	3
Hazard No	90
Tunnel restriction code	E

Other applicable information (land transport)

SV 375: These substances, when carried in single or combination packagings of a net quantity not exceeding 5 litres of liquids or a net mass not exceeding 5 kg of solids per single or combination packaging are not subject to the other provisions of ADR, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Inland waterways transport (ADN)

14.1. UN number	UN 3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRICYCLODECANE DIMETHANOL DIACRYLATE)
14.3. Transport hazard class(es)	9
14.4. Packing group	III
Hazard label	9
Classification code	M6
Special Provisions	274 335 375 601
Limited quantity	5 L
Excepted quantity	E1

Marine transport (IMDG)

14.1. UN number	UN 3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

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	(TRICYCLODECANE DIMETHANOL DIACRYLATE)
14.3. Transport hazard class(es)	9
14.4. Packing group	III
Hazard label	9
Classification code	M6
Special Provisions	274 335 969
Limited quantity	5 L
Excepted quantity	E1
EmS	F-A, S-F

Air transport (ICAO)

14.1. UN number	UN 3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRICYCLODECANE DIMETHANOL DIACRYLATE)
14.3. Transport hazard class(es)	9
14.4. Packing group	III
Hazard label	9
Special Provisions	A97 A158 A197
Limited quantity Passenger	30 kg G
Passenger LQ	Y964
Excepted quantity	E1
IATA-packing instruction - Passenger	964
IATA-max. quantity - Passenger	450 L
IATA-packing instructions - Cargo	964
IATA-max. quantity - Cargo	450 L

Other applicable information (air transport)

A 197: These substances are not subject to other provisions of these Regulations when carried in single or combination packagings with a net quantity per single or inner packaging not exceeding 5L for liquids and a net weight not exceeding 5kg for substances, provided the packagings meet the general requirements of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance	TRICYCLODECANE DIMETHANOL DIACRYLATE

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 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, Entry 75

National regulations:

Water contaminating class (D): 2- obviously hazardous to water

15.2. Chemical Safety Assessment

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

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Page: 9 von 8**SECTION 16: Other Information****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 (division of the American Chemical Society)
LC50	Lethal concentration, 50 %
LD50	Lethal dose, 50 %

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

Classification	Classification procedure
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H- and EUH-phrases (Number and full text)

H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Further information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.