Safety Data Sheet for:
16000 – 16999 Cramer Repair Kit – styrene free

This Kit contains:
17000 – 17999 Cramer Repair Spray 50ml
20701 Cramer Filler 30g
20580 Cramer Hardener 8g

Hazard labelling outer/sales packaging

Label elements according to Regulation (EC) 1272/2008
Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger
Pictograms: GHS07, GHS02, GHS09
Hazard statements:
H317 May cause an allergic skin reaction.
H222-H229 Extremely flammable aerosol. Pressurised container: may burst if heated.
H319 Causes severe eye irritation.
H336 May cause drowsiness and dizziness.
For details on the labelling of the individual components (< 125 ml) see safety data sheet.

Additional information regarding the transport:

Kit for repair use, transport in accordance with ADR/IMDG as:

UN-Number:	UN3316
Proper Shipping Name:	CHEMICAL KITS
Class:	9
Classification code:	M11
Packing Group:	---
Label:	9
ADR tunnel restriction code:	D/E
IMDG EmS:	F-A, S-P

Transport in accordance with chapter 3.4 ADR / IMDG – LQ
Limited Quantity: 1 LTR/KG

Total net weight dangerous goods 0,082 kg / each Kit

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Repair Spray 50 ml

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

1.1. Product identifier

Repair Spray 50 ml

Product code:

17000-17999

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

Use of the substance/mixture

Paints and varnishes

1.3. Details of the supplier of the safety data sheet

Company name:	Cramer GmbH
Street:	Salzstr. 8 A
Place:	D-85622 Feldkirchen
Telephone:	+49 (0) 89-99909770
e-mail:	info@cramer-gmbh.de
Contact person:	Product Safety Department
e-mail:	info@cramer-gmbh.de
Internet:	www.cramer.gmbh

UK Distributor: Cramer U.K. Ltd
Unit 24, Lodge Hill Business Park, Station Road
WESTBURY SUB MENDIP BA5 1EY
Tel: 01934 713377

1.4. Emergency telephone number:

+49 (0) 89 99909770 (Monday-Thursday 08:00 -16:00, UTC+01)
Only available during office hours.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aerosol 1; H222-H229
Eye Irrit. 2; H319
STOT SE 3; H336

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

acetone
n-butyl acetate
2-methoxy-1-methylethyl acetate

Signal word: Danger

Pictograms:

Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Special labelling of certain mixtures

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Pictograms:

Hazard statements

H222-H229-H336

Precautionary statements

P101-P102-P210-P211-P251-P410+P412

2.3. Other hazards

Vapours can form explosive mixtures with air.

Results of PBT and vPvB assessment: not applicable

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
67-64-1	acetone			25 - < 50 %
	200-662-2	606-001-00-8	01-2119471330-49	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
123-86-4	n-butyl acetate			12,5 - < 20 %
	204-658-1	607-025-00-1	01-2119485493-29	
	Flam. Liq. 3, STOT SE 3; H226 H336 EUH066			
108-65-6	2-methoxy-1-methylethyl acetate			5 - < 10 %
	203-603-9	607-195-00-7	01-2119475791-29	
	Flam. Liq. 3, STOT SE 3; H226 H336			
13463-67-7	titanium dioxide			5 - < 10 %
	236-675-5	022-006-00-2		
	Carc. 2; H351			
	xylene			2,5 - < 5 %
	905-588-0	601-022-00-9	01-2119488216-32	
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H226 H332 H312 H315 H319 H335 H373 H304			
64-17-5	ethanol; ethyl alcohol			< 2,5 %
	200-578-6	603-002-00-5	01-2119490979-12	
	Flam. Liq. 2, Eye Irrit. 2; H225 H319			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
67-64-1	200-662-2	acetone	25 - < 50 %
	dermal: LD50 = > 15800 mg/kg; oral: LD50 = 5800 mg/kg		
123-86-4	204-658-1	n-butyl acetate	12,5 - < 20 %
	inhalation: LC50 = >21 mg/l (vapours); dermal: LD50 = > 17600 mg/kg; oral: LD50 = 10800 mg/kg		
108-65-6	203-603-9	2-methoxy-1-methylethyl acetate	5 - < 10 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = 8530 mg/kg		
	905-588-0	xylene	2,5 - < 5 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 2000 mg/kg; oral: LD50 = 3523 mg/kg		
64-17-5	200-578-6	ethanol; ethyl alcohol	< 2,5 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 10470 mg/kg Eye Irrit. 2; H319: >= 50 - 100		

Further Information

titanium dioxide: Classification according to Regulation (EC) No 1272/2008 [CLP] 14. ATP: Note W, Note 10

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

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

After inhalation

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Provide fresh air. Rinse mouth immediately and drink 1 glass of of water. Immediately call a doctor.

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

Carbon dioxide (CO_2), Extinguishing powder, Water spray jet. In case of major fire and large quantities: Water spray jet alcohol resistant foam.
Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Extremely flammable aerosol. Pressurized container: May burst if heated. Vapours can form explosive mixtures with air.
In case of fire may be liberated: Pyrolysis products, toxic.

5.3. Advice for firefighters

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

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Evacuate area.

For non-emergency personnel

Remove all sources of ignition. Provide adequate ventilation. Use personal protection equipment.

For emergency responders

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

For containment

Stop leak if safe to do so. Cover drains.

For cleaning up

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

Other information

Use non-sparking tools.
Clean contaminated articles and floor according to the environmental legislation.

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

Do not pierce or burn, even after use. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Advice on protection against fire and explosion

Do not spray on naked flames or any incandescent material. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Do not breathe gas/fumes/vapour/spray.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.
Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

Keep away from heat. Protect from direct sunlight.

7.3. Specific end use(s)

Paints and varnishes

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
108-65-6	2-Methoxy-1-methylethylacetate	50	275		TWA (8 h)	
		100	550		STEL (15 min)	
67-64-1	Acetone	500	1210		TWA (8 h)	
74-98-6	Aliphatic hydrocarbon gases, Alkanes (C1-C3), Propane	-	-		Asphyxiant	
75-28-5	Butane, all isomers - Isobutane	1000	-		STEL (15 min)	
106-97-8	Butane, all isomers - n-butane	1000	-		STEL (15 min)	
64-17-5	Ethanol	1000	-		STEL (15 min)	
64-17-5	Ethyl alcohol	1000	-		STEL (15 min)	
67-63-0	Isopropyl alcohol	200	-		TWA (8 h)	
		400	-		STEL (15 min)	
123-86-4	n-Butyl acetate	50	241		TWA (8 h)	
		150	723		STEL (15 min)	
67-63-0	Propan-2-ol	200	-		TWA (8 h)	
		400	-		STEL (15 min)	
13463-67-7	Titanium dioxide, respirable dust	-	4		TWA (8 h)	
13463-67-7	Titanium dioxide, total inhalable dust	-	10		TWA (8 h)	
1330-20-7	Xylene, mixed isomers	50	221		TWA (8 h)	
		100	442		STEL (15 min)	

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
67-64-1	Acetone	Acetone	50 mg/L	Urine	End of shift
67-63-0	2-Propanol	Acetone	40 mg/L	Urine	End of shift at end of workweek

8.2. Exposure controls




Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Use eye protection according to EN 166.
Tightly sealed safety glasses.

Hand protection

Wear suitable gloves tested to EN374.
Suitable material: Butyl caoutchouc (butyl rubber)
Thickness of glove material: 0,4 mm
penetration time (maximum wearing period): 42 min. (Xylene)

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

control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
short-term: Filtering device (full mask or mouthpiece) with filter: A2/P3
long-term / high concentrations: Self-contained respirator (breathing apparatus)

Thermal hazards

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

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid (Aerosol)	
Colour:	According to product specification	
Odour:	characteristic	
Odour threshold:	not determined	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		not applicable
Flammability		
Solid/liquid:		not applicable
Gas:		not applicable
Lower explosion limits:		1,2 vol. %
Upper explosion limits:		13 vol. %
Flash point:		not applicable
Auto-ignition temperature:		333 °C
Decomposition temperature:		not determined
pH-Value:		6 - 8
Viscosity / kinematic:		not determined
Water solubility:		Immiscible
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:		not determined
Vapour pressure: (at 20 °C)		247 hPa
Density (at 20 °C):		0,8 g/cm³
Relative vapour density:		not determined
Particle characteristics:		not determined

9.2. Other information

Explosive properties

Heating may cause an explosion.
Vapours can form explosive mixtures with air.

Other safety characteristics

Solid content: 12,5 %

Further Information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurized container: May burst if heated.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Vapours can form explosive mixtures with air.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Keep away from heat. Protect from direct sunlight.

10.5. Incompatible materials

Oxidizing agent. Pyrophoric or self-heating substances.

10.6. Hazardous decomposition products

In case of fire may be liberated: Pyrolysis products, toxic

SECTION 11: Toxicological information

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

Acute toxicity

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

ATEmix calculated

ATE (dermal) 57571,4 mg/kg; ATE (inhalation vapour) 316,64 mg/l; ATE (inhalation dust/mist) 43,179 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-64-1	acetone				
	oral	LD50 5800 mg/kg	Rat	Manufacturer	
	dermal	LD50 > 15800 mg/kg	Rabbit	Manufacturer	
123-86-4	n-butyl acetate				
	oral	LD50 10800 mg/kg	Rat	Manufacturer	OECD 401
	dermal	LD50 > 17600 mg/kg	Rabbit	Manufacturer	
	inhalation (4 h) vapour	LC50 >21 mg/l	Rat	Manufacturer	
108-65-6	2-methoxy-1-methylethyl acetate				
	oral	LD50 8530 mg/kg	Rat	Manufacturer	
	dermal	LD50 > 5000 mg/kg	Rabbit	Manufacturer	
	xylene				
	oral	LD50 3523 mg/kg	Rat	Manufacturer	
	dermal	LD50 2000 mg/kg	Rabbit	Manufacturer	
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
64-17-5	ethanol; ethyl alcohol				
	oral	LD50 10470 mg/kg	Rat	Manufacturer	
	dermal	LD50 > 2000 mg/kg	Rat	Manufacturer	

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause drowsiness or dizziness. (acetone; n-butyl acetate)

STOT-repeated exposure

Repeated exposure may cause skin dryness or cracking.

Aspiration hazard

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

Information on likely routes of exposure

oral, Skin contact, Eye contact, Inhalation.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

12.1. Toxicity

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

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
67-64-1	acetone					
	Acute fish toxicity	LC50 8300 mg/l	96 h	Piscis	Manufacturer	
	Acute algae toxicity	ErC50 7200 mg/l	96 h	Algae	Manufacturer	
	Acute crustacea toxicity	EC50 8450 mg/l	48 h	Daphnia spec.	Manufacturer	
108-65-6	2-methoxy-1-methylethyl acetate					
	Acute fish toxicity	LC50 100 - 180 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	Manufacturer	
	Acute crustacea toxicity	EC50 > 500 mg/l	48 h	Daphnia magna	Manufacturer	
	xylene					
	Acute fish toxicity	LC50 13,5 mg/l	96 h	Piscis	Manufacturer	
	Acute crustacea toxicity	EC50 7,4 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	
64-17-5	ethanol; ethyl alcohol					
	Acute fish toxicity	LC50 13000 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	Manufacturer	
	Acute crustacea toxicity	EC50 12340 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	

12.2. Persistence and degradability

The product has not been tested.

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 and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
Do not pierce or burn, even after use.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1

Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1

Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1

Marine pollutant:	-
Special Provisions:	63, 190, 277, 327, 344, 381, 959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es):	2.1
14.4. Packing group:	-
Hazard label:	2.1

Special Provisions:	A145 A167 A802	
Limited quantity Passenger:	30 kg G	
Passenger LQ:	Y203	
Excepted quantity:	E0	
IATA-packing instructions - Passenger:		203
IATA-max. quantity - Passenger:		75 kg
IATA-packing instructions - Cargo:		203
IATA-max. quantity - Cargo:		150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: gas.

14.7. Maritime transport in bulk according to IMO instruments

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 40, Entry 75

2010/75/EU (VOC):	76,8 %
2004/42/EC (VOC):	629,4 g/L
Information according to 2012/18/EU (SEVESO III):	P3a FLAMMABLE AEROSOLS

Additional information

Aerosol Directive (75/324/).

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	2 - obviously hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,5,6,7,8,9,10,11,12,13,14,16.

Abbreviations and acronyms

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

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

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Eye Irrit. 2; H319	Bridging principle "Aerosols"
STOT SE 3; H336	Bridging principle "Aerosols"

Relevant H and EUH statements (number and full text)

H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
EUH066	Repeated exposure may cause skin dryness or cracking.

EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Filler 207xx

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

1.1. Product identifier

Filler 207xx

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

Use of the substance/mixture

Bodyfiller/stopper

1.3. Details of the supplier of the safety data sheet

Company name:	Cramer GmbH	**UK Distributor:** Cramer U.K. Ltd
Street:	Salzstr. 8 A	Unit 24, Lodge Hill Business Park, Station Road
Place:	D-85622 Feldkirchen	WESTBURY SUB MENDIP BA5 1EY
Telephone:	+49 (0) 89-99909770	Tel: 01934 713377
e-mail:	info@cramer-gmbh.de	
Contact person:	Product Safety Department	
e-mail:	info@cramer-gmbh.de	
Internet:	www.cramer.gmbh	

1.4. Emergency telephone number:

+49 (0) 89 99909770 (Monday-Thursday 08:00 -16:00, UTC+01)
Only available during office hours.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin Sens. 1; H317

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

2-hydroxyethyl methacrylate
2,2'-ethylenedioxydiethyl dimethacrylate
methacrylic acid, monoester with propane-1,2-diol
cobalt bis(2-ethylhexanoate)

Signal word: Warning

Pictograms:

Hazard statements

H317	May cause an allergic skin reaction.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves and eye/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P501	Dispose of contents/container in accordance with regional regulations.

2.3. Other hazards

The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
868-77-9	2-hydroxyethyl methacrylate			1 - < 5 %
	212-782-2	607-124-00-X	01-2119490169-29	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1; H315 H319 H317			
109-16-0	2,2'-ethylenedioxydiethyl dimethacrylate			1 - < 5 %
	203-652-6		01-2119969287-21	
	Skin Sens. 1B; H317			
27813-02-1	methacrylic acid, monoester with propane-1,2-diol			1 - < 5 %
	248-666-3		01-2119490226-37	
	Eye Irrit. 2, Skin Sens. 1; H319 H317			
136-52-7	cobalt bis(2-ethylhexanoate)			0,2 - 0,24 %
	205-250-6		01-2119524678-29	
	Repr. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 3; H361f H319 H317 H400 H412			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
868-77-9	212-782-2	2-hydroxyethyl methacrylate	1 - < 5 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = 5564 mg/kg		
27813-02-1	248-666-3	methacrylic acid, monoester with propane-1,2-diol	1 - < 5 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 2000 mg/kg		
136-52-7	205-250-6	cobalt bis(2-ethylhexanoate)	0,2 - 0,24 %
	dermal: LD50 = > 2000 mg/kg Aquatic Acute 1; H400: M=1		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection!

After inhalation

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

After contact with skin

After contact with skin, wash immediately with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person or a person with cramps. Get medical advice/attention.

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

Allergic reactions.
Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Carbon dioxide (CO2), Foam, Dry extinguishing powder

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Heating causes rise in pressure with risk of bursting.
In case of fire may be liberated: Pyrolysis products, toxic.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. (BS EN 137) Protective clothing (BS EN 469, BS EN 659, HO A29 A30)

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Evacuate area.

For non-emergency personnel

Use personal protection equipment. Provide adequate ventilation.

For emergency responders

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

For containment

Stop leak if safe to do so.

For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Collect in closed and suitable containers for disposal.

Other information

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 adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed and in a well-ventilated place. Keep/Store only in original container.

Hints on joint storage

Do not store together with: Food and feedingstuffs.

Further information on storage conditions

Protect from direct sunlight.

7.3. Specific end use(s)

Bodyfiller/stopper

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
7727-43-7	Barium sulphate, respirable dust	-	5		TWA (8 h)	
1317-65-3	Calcium carbonate, respirable dust	-	4		TWA (8 h)	
1317-65-3	Calcium carbonate, total inhalable dust	-	10		TWA (8 h)	
-	Cobalt compounds (as Co)	-	0.02		TWA (8 h)	
1317-65-3	Limestone, respirable dust	-	4		TWA (8 h)	
1317-65-3	Limestone, total inhalable dust	-	10		TWA (8 h)	
1317-65-3	Marble, respirable dust	-	4		TWA (8 h)	
1317-65-3	Marble, total inhalable dust	-	10		TWA (8 h)	
14807-96-6	Talc, respirable dust	-	0.8		TWA (8 h)	
14807-96-6	Talc, total inhalable dust	-	10		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
868-77-9	2-hydroxyethyl methacrylate			
Consumer DNEL, long-term		oral	systemic	0,83 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	2,9 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,83 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	4,9 mg/m³
Worker DNEL, long-term		dermal	systemic	1,3 mg/kg bw/day
109-16-0	2,2'-ethylenedioxydiethyl dimethacrylate			
Consumer DNEL, long-term		oral	systemic	8,33 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	14,5 mg/m³
Consumer DNEL, long-term		dermal	systemic	8,33 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	48,5 mg/m³
Worker DNEL, long-term		dermal	systemic	13,9 mg/kg bw/day
27813-02-1	methacrylic acid, monoester with propane-1,2-diol			
Consumer DNEL, long-term		oral	systemic	2,5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	8,8 mg/m³
Consumer DNEL, long-term		dermal	systemic	2,5 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	17,7 mg/m³
Worker DNEL, long-term		dermal	systemic	4,2 mg/kg bw/day
136-52-7	cobalt bis(2-ethylhexanoate)			
Consumer DNEL, long-term		oral	systemic	0,0558 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	0,037 mg/m³
Worker DNEL, long-term		inhalation	local	0,235 mg/m³

PNEC values

CAS No	Substance	
Environmental compartment		Value
868-77-9	2-hydroxyethyl methacrylate	
Freshwater		0,482 mg/l
Freshwater (intermittent releases)		1 mg/l
Marine water		0,482 mg/l
Marine water (intermittent releases)		1 mg/l
Freshwater sediment		3,79 mg/kg
Marine sediment		3,79 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		0,476 mg/kg
109-16-0	2,2'-ethylenedioxydiethyl dimethacrylate	
Freshwater		0,164 mg/l
Freshwater (intermittent releases)		0,164 mg/l
Marine water		0,0164 mg/l
Marine water (intermittent releases)		0,164 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
27813-02-1	methacrylic acid, monoester with propane-1,2-diol	
Freshwater		0,904 mg/l
Freshwater (intermittent releases)		0,972 mg/l
Marine water		0,904 mg/l
Marine water (intermittent releases)		0,972 mg/l
Freshwater sediment		6,28 mg/kg
Marine sediment		6,28 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		0,727 mg/kg
136-52-7	cobalt bis(2-ethylhexanoate)	
Freshwater		0,0006 mg/l
Marine water		0,00236 mg/l
Freshwater sediment		9,5 mg/kg
Marine sediment		9,5 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,37 mg/l
Soil		10,9 mg/kg

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection. (EN 166)

Hand protection

Wear suitable gloves tested to EN374.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Breakthrough times and swelling properties of the material must be taken into consideration.

Skin protection

Wear suitable protective clothing. Chemical resistant safety shoes. (EN ISO 20344)

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
Filtering device (full mask or mouthpiece) with filter: B
Combination filtering device
Container device with compressed air (EN 137)
Fresh-air tube device
To follow: EN 529

Thermal hazards

No information available.

Environmental exposure controls

Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid (Paste)
Colour:	various
Odour:	characteristic
Odour threshold:	not determined
Melting point/freezing point:	(2-hydroxyethyl methacrylate) < -60 °C
Boiling point or initial boiling point and boiling range:	(2-hydroxyethyl methacrylate) 213 °C
Flammability	
Solid/liquid:	not determined
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	(2-hydroxyethyl methacrylate) 106 °C
Auto-ignition temperature:	(2-hydroxyethyl methacrylate) 375 °C
Decomposition temperature:	not determined
pH-Value:	6 - 8
Viscosity / kinematic:	not determined
Water solubility:	(2-hydroxyethyl methacrylate) >= 100 g/L
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	(2-hydroxyethyl methacrylate) 0,42

Vapour pressure: (at 20 °C)	(2-hydroxyethyl methacrylate) 0,08 hPa
Density:	1,870 g/cm³
Relative vapour density:	not determined
Particle characteristics:	not determined

9.2. Other information

Other safety characteristics

Evaporation rate:	(Air = 1) 4,5
Viscosity / dynamic: (at 25 °C)	700000 ± 50000 mPa·s

Further Information

No information available.

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

No known hazardous reactions.

10.4. Conditions to avoid

Protect from direct sunlight.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

In case of fire may be liberated: Pyrolysis products, toxic.

SECTION 11: Toxicological information

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

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
868-77-9	2-hydroxyethyl methacrylate				
	oral	LD50 5564 mg/kg	Rat	Manufacturer	
	dermal	LD50 > 5000 mg/kg	Rabbit	Manufacturer	
27813-02-1	methacrylic acid, monoester with propane-1,2-diol				
	oral	LD50 > 2000 mg/kg	Rat	Manufacturer	OECD 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Manufacturer	
136-52-7	cobalt bis(2-ethylhexanoate)				
	dermal	LD50 > 2000 mg/kg	Rat	Manufacturer	OECD 402

Irritation and corrosivity

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

Sensitising effects

May cause an allergic skin reaction. (2-hydroxyethyl methacrylate; 2,2'-ethylenedioxydiethyl dimethacrylate; methacrylic acid, monoester with propane-1,2-diol; cobalt bis(2-ethylhexanoate))

Carcinogenic/mutagenic/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.

Information on likely routes of exposure

Inhalation, Skin contact, Eye contact, oral.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc.

SECTION 12: Ecological information

12.1. Toxicity

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

The product is not: Ecotoxic.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
868-77-9	2-hydroxyethyl methacrylate						
	Acute fish toxicity	LC50	> 100 mg/l	96 h	Oryzias latipes (Ricefish)	Manufacturer	OECD 203
	Acute algae toxicity	ErC50	345 mg/l	72 h	Selenastrum capricornutum	Manufacturer	OECD 201
	Acute crustacea toxicity	EC50	380 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	OECD 202
	Crustacea toxicity	NOEC	24,1 mg/l	21 d	Daphnia magna (Big water flea)	Manufacturer	OECD 211
109-16-0	2,2'-ethylenedioxydiethyl dimethacrylate						
	Acute fish toxicity	LC50	16,4 mg/l	96 h	Danio rerio (zebrafish)	Manufacturer	OECD 203
	Acute algae toxicity	ErC50	72,8 mg/l	72 h	Pseudokirchneriella subcapitata	Manufacturer	OECD 201
	Crustacea toxicity	NOEC	32 mg/l	21 d	Daphnia magna (Big water flea)	Manufacturer	OECD 211
27813-02-1	methacrylic acid, monoester with propane-1,2-diol						
	Acute crustacea toxicity	EC50	> 143 mg/l	48 h	Daphnia magna (Big water flea)	Manufacturer	OECD 202

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
868-77-9	2-hydroxyethyl methacrylate			
	OECD 301C	92 - 100 %	14	Manufacturer
	Readily biodegradable (according to OECD criteria).			
109-16-0	2,2'-ethylenedioxydiethyl dimethacrylate			
	OECD 301B	85 %		Manufacturer
	Readily biodegradable (according to OECD criteria).			
136-52-7	cobalt bis(2-ethylhexanoate)			
	OECD 301B	60 %	10	Manufacturer
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
868-77-9	2-hydroxyethyl methacrylate	0,42
109-16-0	2,2'-ethylenedioxydiethyl dimethacrylate	2,3
27813-02-1	methacrylic acid, monoester with propane-1,2-diol	2,3

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

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

2010/75/EU (VOC):	< 4,6 %
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	1 - slightly hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 5,6,7,8,9,10,11,12,13,15,16.

Abbreviations and acronyms

CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

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

Classification	Classification procedure
Skin Sens. 1; H317	Calculation method

Relevant H and EUH statements (number and full text)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hardener

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

1.1. Product identifier

Hardener

Product code:

20580
20581

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

Use of the substance/mixture

Hardener

1.3. Details of the supplier of the safety data sheet

Company name:	Cramer GmbH	**UK Distributor:** Cramer U.K. Ltd
Street:	Salzstr. 8 A	Unit 24, Lodge Hill Business Park, Station Road
Place:	D-85622 Feldkirchen	WESTBURY SUB MENDIP BA5 1EY
Telephone:	+49 (0) 89-99909770	Tel: 01934 713377
e-mail:	info@cramer-gmbh.de	
Contact person:	Product Safety Department	
e-mail:	info@cramer-gmbh.de	
Internet:	www.cramer.gmbh	

1.4. Emergency telephone number:

+49 (0) 89 99909770 (Monday-Thursday 08:00 -16:00, UTC+01)
Only available during office hours.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Org. Perox. E; H242
Eye Irrit. 2; H319
Skin Sens. 1; H317
Aquatic Acute 1; H400
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

dibenzoyl peroxide; benzoyl peroxide

Signal word: Warning

Pictograms:

Hazard statements

H242	Heating may cause a fire.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P501	Dispose of waste according to applicable legislation.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Warning

Pictograms:

Hazard statements

H317

Precautionary statements

P101-P102-P280-P302+P352-P333+P313-P501

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
94-36-0	dibenzoyl peroxide; benzoyl peroxide			50 - < 55 %
	202-327-6	617-008-00-0	01-2119511472-50	
	Org. Perox. B, Eye Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H241 H319 H317 H400 H410			
107-21-1	ethanediol; ethylene glycol			5 - < 10 %
	203-473-3	603-027-00-1	01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302 H373			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
107-21-1	203-473-3	ethanediol; ethylene glycol	5 - < 10 %
	oral: ATE = 500 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

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

After inhalation

Provide fresh air. If unconscious but breathing normally, place in recovery position and seek medical advice. If experiencing respiratory symptoms: Call a doctor.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink 1 glass of of water. When in doubt or if symptoms are observed, get medical advice.

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Carbon dioxide (CO2), Extinguishing powder.
In case of major fire and large quantities: alcohol resistant foam
Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Beware of reignition. Thermal decomposition. Oxidizing.
In case of fire may be liberated: Hazardous decomposition products: Benzene, Carbon monoxide.

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Evacuate area.

For non-emergency personnel

Remove all sources of ignition. Provide adequate ventilation. Use personal protection equipment.

For emergency responders

Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment

Stop leak if safe to do so. Cover drains.

For cleaning up

Take up mechanically, placing in appropriate containers for disposal. Treat the recovered material as prescribed in the section on waste disposal.

Other information

Clean contaminated articles and floor according to the environmental legislation.

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

Use only in well-ventilated areas. Handle with care - avoid bumps, friction and impact.
Use personal protection equipment.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Use only antistatically equipped (spark-free) tools.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Keep away from food, drink and animal feedingstuffs. Avoid contact with skin, eyes and clothes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep/Store only in original container. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Food and feedingstuffs, Reducing agent, Heavy metals ,Acid, Alkali (lye), Oxidising agent.

Further information on storage conditions

Keep away from heat.

7.3. Specific end use(s)

Hardener

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
107-21-1	(OLD) 1,2-Dihydroxyethane, particulate	-	10		TWA (8 h)	
107-21-1	1,2-Dihydroxyethane, vapour	20	52		TWA (8 h)	
		40	104		STEL (15 min)	
94-36-0	Benzoyl peroxid (Dibenzoyl peroxide)	-	5		TWA (8 h)	
94-36-0	Dibenzoyl peroxide	-	5		TWA (8 h)	
131-11-3	Dimethyl phthalate	-	5		TWA (8 h)	
		-	10		STEL (15 min)	
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	
		40	104		STEL (15 min)	
107-21-1	Ethylene glycol, vapour	20	52		TWA (8 h)	
		40	104		STEL (15 min)	

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Use eye protection according to EN 166.
Tightly sealed safety glasses.

Hand protection

Wear protective gloves. (EN ISO 374)

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Breakthrough times and swelling properties of the material must be taken into consideration.

Skin protection

Wear suitable protective clothing.

Respiratory protection

Respiratory protection necessary at: insufficient ventilation, exceeding exposure limit values.

Thermal hazards

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

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid (Paste)
Colour:	white
Odour:	characteristic
Odour threshold:	not determined

		Test method
Melting point/freezing point:	-10 °C	
Boiling point or initial boiling point and boiling range:	100 °C	
Flammability		
Solid/liquid:	not determined	
Gas:	not applicable	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Flash point:	> 60 °C	
Auto-ignition temperature:	410 °C	DIN 51794
Decomposition temperature:	50 °C	
pH-Value:	3,9	
Viscosity / kinematic:	not applicable	
Water solubility:	practically insoluble	

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined	
Vapour pressure: (at 20 °C)	23 hPa	
Density (at 20 °C):	1,262 g/cm³	DIN 53217
Relative vapour density:	not applicable	
Particle characteristics:	not determined	

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

Heating may cause an explosion.

Oxidizing properties

Oxidizing. May cause fire.

Other safety characteristics

Solid content: 84 %

Further Information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Oxidising.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Reaction with: Reducing agent, Heavy metals ,Acid, Alkali (lye), Oxidising agent.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

10.5. Incompatible materials

Reducing agent, Heavy metals ,Acid, Alkali (lye), Oxidising agent.

10.6. Hazardous decomposition products

Benzene, Carbon monoxide.

SECTION 11: Toxicological information

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

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol; ethylene glycol				
	oral	ATE 500 mg/kg			

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (dibenzoyl peroxide; benzoyl peroxide)

Carcinogenic/mutagenic/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.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

The product has not been tested.

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 and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160903 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; oxidising substances; peroxides, for example hydrogen peroxide; hazardous waste

List of Wastes Code - used product

160903 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; oxidising substances; peroxides, for example hydrogen peroxide; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 3108
14.2. UN proper shipping name:	ORGANIC PEROXIDE TYPE E, SOLID (dibenzoyl peroxide; benzoyl peroxide)
14.3. Transport hazard class(es):	5.2
14.4. Packing group:	-
Hazard label:	5.2

Classification code:	P1
Special Provisions:	122 274
Limited quantity:	500 g
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 3108
14.2. UN proper shipping name:	ORGANIC PEROXIDE TYPE E, SOLID (dibenzoyl peroxide; benzoyl peroxide)
14.3. Transport hazard class(es):	5.2
14.4. Packing group:	-
Hazard label:	5.2

Classification code:	P1
Special Provisions:	122 274
Limited quantity:	500 g
Excepted quantity:	E0

Marine transport (IMDG)

14.1. UN number or ID number:	UN 3108
14.2. UN proper shipping name:	ORGANIC PEROXIDE TYPE E, SOLID (dibenzoyl peroxide; benzoyl peroxide)
14.3. Transport hazard class(es):	5.2
14.4. Packing group:	-
Hazard label:	5.2

Special Provisions:	122, 274
Limited quantity:	500 g
Excepted quantity:	E0
EmS:	F-J, S-R

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 3108
14.2. UN proper shipping name:	ORGANIC PEROXIDE TYPE E, SOLID (dibenzoyl peroxide; benzoyl peroxide)
14.3. Transport hazard class(es):	5.2
14.4. Packing group:	-
Hazard label:	5.2

Special Provisions:	A20 A802
Limited quantity Passenger:	Forbidden
Passenger LQ:	Forbidden
Excepted quantity:	E0
IATA-packing instructions - Passenger:	570
IATA-max. quantity - Passenger:	10 kg
IATA-packing instructions - Cargo:	570
IATA-max. quantity - Cargo:	25 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: dibenzoyl peroxide; benzoyl peroxide

14.6. Special precautions for user

Warning: Organic peroxides.

14.7. Maritime transport in bulk according to IMO instruments

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

2010/75/EU (VOC):	6 %
Information according to 2012/18/EU (SEVESO III):	P6b SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES
Additional information:	E1

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	1 - slightly hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information

Abbreviations and acronyms

CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

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

Classification	Classification procedure
Org. Perox. E; H242	On basis of test data
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 1; H410	Calculation method

Relevant H and EUH statements (number and full text)

H241	Heating may cause a fire or explosion.
H242	Heating may cause a fire.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
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.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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