

Safety Data Sheet

Hardener

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : Hardener

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

Relevant identified uses

Main use category : Professional use

Use of the substance/mixture : Preparation intended for dental technical applications

Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

KERRHAWE S.A.
Via Strecce n°4
6934 Bioggio (Switzerland)
T +41916100505

Manufacturer

PRISMAN GmbH
Otto Hahn Ring 6-18
D-64653 Lorsch - Germany

Contact person : safety@kerrhawe.com - tel. +41916100505 (08.00-17.00)

1.4. Emergency telephone number

Emergency number : CHEMTREC® Emergency Call Center. Emergency Telephone Number (for USA only) 001-800-424-9300 International and Maritime Telephone Number +1 (703) 527-3887

Country	Organisation/Company	Address	Emergency number
Gibraltar	GHA Call Centre Zone 2, Level3, St Bernard's Hospital	Harbour Views Road	+350 200 79700 +350 200 72266
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504
United Kingdom	National Poisons Information Service (Newcastle Unit)	Claremont Place Newcastle-upon-Tyne, Newcastle	+44 191 2606182/+44 191 2606180 24H

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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

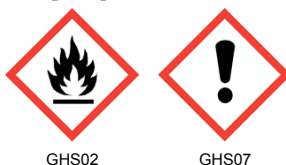
Flam. Liq. 2 H225
Eye Irrit. 2 H319
STOT SE 3 H336

Full text of H statements : see section 16

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP)	: Danger
Hazardous ingredients	: butanone, ethyl methyl ketone; n-butyl acetate
Hazard statements (CLP)	: H225 - Highly flammable liquid and vapour. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness.
Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, open flames, sparks. No smoking. P261 - Avoid breathing mist, vapours, spray. P280 - Wear protective gloves, eye protection. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 - Call a POISON CENTER/doctor if you feel unwell. P337+P313 - If eye irritation persists: Get medical advice/attention. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
butanone, ethyl methyl ketone	(CAS-No.) 78-93-3 (EC-No.) 201-159-0 (EC Index-No.) 606-002-00-3	50 - 100	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
n-butyl acetate	(CAS-No.) 123-86-4 (EC-No.) 204-658-1 (EC Index-No.) 607-025-00-1	10 - 25	Flam. Liq. 3, H226 STOT SE 3, H336

Full text of H-statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

First-aid measures general	: Move to fresh air.
First-aid measures after inhalation	: Supply fresh air, consult doctor in case of complaints.
First-aid measures after skin contact	: Generally the product does not irritate the skin.
First-aid measures after eye contact	: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
First-aid measures after ingestion	: If symptoms persist, call a physician.

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

No additional information available

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

No additional information available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	: Dry powder. Carbon dioxide. Sand. DO NOT USE WATER.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting	: No special measures required.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Use personal protective equipment as required. Keep unprotected persons away.
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For non-emergency personnel

No additional information available

For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation. Do not flush with water or aqueous cleansing agents.

6.4. Reference to other sections

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling : Keep container tightly closed. Keep away from sources of ignition - No smoking. Avoid static electricity discharges. Ensure good ventilation of the work station.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep cool. Store in a dry place. Store in a closed container.

Storage area : Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

butanone, ethyl methyl ketone (78-93-3)		
EU	Local name	Butanone
EU	IOELV TWA (mg/m³)	600 mg/m³
EU	IOELV TWA (ppm)	200 ppm
EU	IOELV STEL (mg/m³)	900 mg/m³
EU	IOELV STEL (ppm)	300 ppm
Gibraltar	Eight hours mg/m3	600 mg/m³
Gibraltar	Eight hours ppm	200 ppm
Gibraltar	Short-term mg/m3	900 mg/m³
Gibraltar	Short-term ppm	300 ppm
Ireland	Local name	Methyl ethyl ketone (MEK)
Ireland	OEL (8 hours ref) (mg/m³)	600 mg/m³
Ireland	OEL (8 hours ref) (ppm)	200 ppm
Ireland	OEL (15 min ref) (mg/m3)	900 mg/m³
Ireland	OEL (15 min ref) (ppm)	300 ppm
Ireland	Notes (IE)	Sk, IOELV
Malta	Local name	Butanone
Malta	OEL TWA (mg/m³)	600 mg/m³
Malta	OEL TWA (ppm)	200 ppm
Malta	OEL STEL (mg/m³)	900 mg/m³
Malta	OEL STEL (ppm)	300 ppm
United Kingdom	Local name	Butan-2-one (methyl ethyl ketone)
United Kingdom	WEL TWA (mg/m³)	600 mg/m³
United Kingdom	WEL TWA (ppm)	200 ppm
United Kingdom	WEL STEL (mg/m³)	899 mg/m³
United Kingdom	WEL STEL (ppm)	300 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity), BMGV (Biological monitoring guidance values are listed in Table 2)
n-butyl acetate (123-86-4)		
EU	Local name	n-butyl acetate

n-butyl acetate (123-86-4)		
EU	Notes	(Ongoing)
Ireland	Local name	Butyl acetate
Ireland	OEL (8 hours ref) (mg/m³)	710 mg/m³
Ireland	OEL (8 hours ref) (ppm)	150 ppm
Ireland	OEL (15 min ref) (mg/m³)	950 mg/m³
Ireland	OEL (15 min ref) (ppm)	200 ppm
United Kingdom	Local name	Butyl acetate
United Kingdom	WEL TWA (mg/m³)	724 mg/m³
United Kingdom	WEL TWA (ppm)	150 ppm
United Kingdom	WEL STEL (mg/m³)	966 mg/m³
United Kingdom	WEL STEL (ppm)	200 ppm

8.2. Exposure controls

- Appropriate engineering controls : No additional information available. See Heading 7.
- Personal protective equipment : Protective goggles.
- Hand protection : The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Butyl rubber. (0,5 mm). Cat. III. (> 240 minutes). Viton. (0,5 mm). Cat. III. (< 10 minutes)
- Eye protection : Protective goggles
- Respiratory protection : Not required



- Other information : Keep away from food, drink and animal feeding stuffs. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and after work. Avoid contact with eyes. Avoid contact with skin and eyes.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Colour : Colourless.
- Odour : Ester.
- Odour threshold : Not determined
- pH : Not determined
- Relative evaporation rate (butylacetate=1) : Not determined
- Melting point : Not determined
- Freezing point : Not determined
- Boiling point : 79 °C
- Flash point : -4 °C
- Auto-ignition temperature : 370 °C
- Decomposition temperature : Not determined
- Flammability (solid, gas) : Highly flammable liquid and vapour.
- Vapour pressure : 105 hPa
- Relative vapour density at 20 °C : Not determined
- Relative density : 0.9 g/cm3
- Solubility : Not miscible.
- Log Pow : Not determined
- Viscosity, kinematic : Not determined
- Viscosity, dynamic : Not determined

Explosive properties : Not explosive.
 Oxidising properties : Highly flammable liquid and vapour.
 Explosive limits : 1.2 vol %
 11.5 vol %

9.2. Other information

VOC content : 97 %

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No additional information available

10.2. Chemical stability

No decomposition if stored and used normally.

10.3. Possibility of hazardous reactions

None to our knowledge.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

None to our knowledge.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity : Not classified

butanone, ethyl methyl ketone (78-93-3)	
LD50 oral rat	3300 mg/kg
LD50 dermal rabbit	5000 mg/kg
n-butyl acetate (123-86-4)	
LD50 oral rat	13100 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 21 mg/l/4h

Skin corrosion/irritation : Not classified
 Based on available data, the classification criteria are not met
 pH: Not determined

Serious eye damage/irritation : Causes serious eye irritation.
 pH: Not determined

Respiratory or skin sensitisation : Not classified
 Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified
 Based on available data, the classification criteria are not met

Carcinogenicity : Not classified
 Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified
 Based on available data, the classification criteria are not met

STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified
 Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
 Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Hardener	
Log Pow	Not determined

12.4. Mobility in soil

Hardener	
Ecology - soil	Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available






SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste treatment methods : Do not remove as household garbage. Do not discharge into drains.
 Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: TRANSPORT INFORMATION

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1263	1263	1263	1263	1263
14.2. UN proper shipping name				
PAINT	PAINT	Paint	PAINT	PAINT
Transport document description				
UN 1263 PAINT, 3, II, (D/E)	UN 1263 PAINT, 3, II			
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Special provisions (ADR) : 163, 640C, 650, 367
 Limited quantities (ADR) : 5I
 Excepted quantities (ADR) : E2
 Hazard identification number (Kemler No.) : 33
 Orange plates :



- Transport by sea

Special provisions (IMDG) : 163
 Limited quantities (IMDG) : 5 L
 Excepted quantities (IMDG) : E2

EmS-No. (Fire) : F-E
 EmS-No. (Spillage) : S-E
 Flash point (IMDG) : -4°C

- Air transport

PCA Excepted quantities (IATA) : E2
 PCA Limited quantities (IATA) : Y341
 Special provisions (IATA) : A3, A72, A192

Rail transport

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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-Regulations

Contains no REACH substances with Annex XVII restrictions
 Contains no substance on the REACH candidate list
 Contains no REACH Annex XIV substances

VOC content : 97 %

National regulations

EC-regulation 2015/830 /EC, 1907/2006/EC (REACH), 1272/2008/EC (CLP), 790/2009/EC. Transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Workplace exposure limits.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: OTHER INFORMATION

Data sources : EC-regulation 2015/830 /EC, 1907/2006/EC (REACH), 1272/2008/EC (CLP), 790/2009/EC. Transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO). Workplace exposure limits.
 Other information : None.
 Date of issue : 15/10/2017
 Revision date : 04/04/2018
 Supersedes : 15/10/2017
 Version : 2.0
 Signature : A. Åsebø Murel

Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

The information in this safety data sheet is based on information from the manufacturer/supplier, present european and national legislation, and presupposes that the product is used within the specified area of application.