



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No. 2015/830

Revision date: 17/1/2018
Version: 6
Language: en-GB,IE
Date of print: 8/3/2018

Fix-Kleber

Material number 10

Page: 1 of 11

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

1.1 Product identifier

Trade name: Fix-Kleber

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

General use: Pressure-sensitive adhesive for C & B work and model casting in the dental field

1.3 Details of the supplier of the safety data sheet

Company name: Marcadent GmbH
Street/POB-No.: Bernhard Hahn Str. 30
Postal Code, city: 41812 Erkelenz
Germany
WWW: www.marcadent.de
E-mail: info@marcadent.de
Telephone: +49 (0)2431-80 558-45
Telefax: +49 (0)2431-80 558-63
Dept. responsible for information:
Telephone: +49 (0)2431 8055845, E-mail: info@marcadent.de

1.4 Emergency telephone number

Telephone: +49 (0)2431 8055845
Only available during office hours.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Flam. Liq. 2; H225 Highly flammable liquid and vapour.
Eye Irrit. 2; H319 Causes serious eye irritation.
STOT SE 2; H371 May cause damage to organs.
(EUH066) Repeated exposure may cause skin dryness or cracking.
Aquatic Chronic 2; H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (CLP)



Signal word:

Danger

Hazard statements: H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H371 May cause damage to organs.
H411 Toxic to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.



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Precautionary statements:

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take action to prevent static discharges.
P260	Do not breathe vapours.
P273	Avoid release to the environment.
P280	Wear protective gloves and 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.
P309+P311	IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P337+P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.
P501	Dispose of contents/container to hazardous or special waste collection point.

Special labelling

Text for labelling: Contains Ethyl acetate, Tris(methylphenyl) phosphate.

2.3 Other hazards

Higher doses may have a narcotic effect.
On contact with air, potentially explosive mixtures may develop.

Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: Mixture of the substances listed below with non-hazardous additions

Hazardous ingredients:

Ingredient	Designation	Content	Classification
EC No. 205-500-4 CAS 141-78-6	Ethyl acetate	40 - 60 %	Flam. Liq. 2; H225. Eye Irrit. 2; H319. STOT SE 3; H336. (EUH066).
EC No. 203-714-2 CAS 109-87-5	Dimethoxymethane	25 - 50 %	Flam. Liq. 2; H225.
EC No. 247-693-8 CAS 26444-49-5	Diphenyl tolyl phosphate	1 - 2.5 %	Aquatic Acute 1; H400. Aquatic Chronic 1; H410.
EC No. 204-112-2 CAS 115-86-6	Triphenyl phosphate	0.5 - 1 %	Aquatic Acute 1; H400. Aquatic Chronic 1; H410.
EC No. 215-548-8 CAS 1330-78-5	Tris(methylphenyl) phosphate	< 0.5 %	STOT SE 1; H370. Aquatic Chronic 2; H411.

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



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SECTION 4: First aid measures

4.1 Description of first aid measures

- In case of inhalation: Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Seek medical attention.
Remove victim out of the danger area.
- Following skin contact: Immediately remove all contaminated clothing. Thoroughly wash skin with soap and water. In case of skin irritation, consult a physician.
- After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.
- After swallowing: Do not induce vomiting. Danger of aspiration!
Rinse mouth immediately and drink plenty of water.
Never give anything by mouth to an unconscious person.
Keep airway open. Immediately get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

After resorption: sore throat, loss of appetite, headache, fatigue, drowsiness, nausea, vomiting, breathing paralysis.
Higher doses may have a narcotic effect.
In case of inhalation: Vapours irritate mucous membranes and respiratory tracts.
After contact with skin: Repeated exposure may cause skin dryness or cracking.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Attention in case of vomiting and stomach pumping: danger of aspiration. Accelerate intestinal transit.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Alcohol resistant foam, extinguishing powder, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Highly flammable liquid and vapour.
Liquid evaporates very quickly. Vapours form explosive mixtures with air. Vapours are heavier than air and will spread at floor level.
May form dangerous gases and vapours in case of fire.
In case of fire may be liberated: carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus. To avoid contact with skin, keep safety distance and wear suitable protective clothing.

Additional information:

Hazchem-Code: •3YE

Move container away or cool with water from a protected position. Use water spray jet to knock down vapours.

Do not allow fire water to penetrate into surface or ground water.



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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.
Avoid contact with the substance.
Wear appropriate protective equipment. Keep unprotected people away.
Do not breathe vapours. Provide adequate ventilation.

6.2 Environmental precautions

Do not empty into drains. Danger of explosion!
Separation possible by separator. If necessary notify appropriate authorities.

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) and place in closed containers for disposal.
Provide adequate ventilation.

In case of spills of large quantities:

Seal off. Plug leak if safely possible. Dam spills and pump to remove. Explosion protection required. Close all lower level rooms. Absorb leftover product with non-flammable liquid-binding material (e.g. earth, sand, vermiculite or ground sand stone) and place in closed containers for disposal.

Additional information: Use only spark proof tools. Beware of reignition.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Do not allow containers to stand open.
Provide adequate ventilation, and local exhaust as needed.
Avoid contact with skin and eyes. Do not breathe vapours.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharges.
Beware of reignition. Do not weld. Use explosion-proof equipment and non-sparking tools/utensils.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed in a cool, well-ventilated place.
Keep away from sources of ignition and heat.

Hints on joint storage: Do not store together with combustible materials or highly flammable solids.

7.3 Specific end use(s)

No information available.



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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
141-78-6	Ethyl acetate	Europe: IOELV: STEL	1468 mg/m ³ ; 400 ppm
		Europe: IOELV: TWA	734 mg/m ³ ; 200 ppm
		Great Britain: WEL-STEEL	1460 mg/m ³ ; 400 ppm
		Great Britain: WEL-TWA	730 mg/m ³ ; 200 ppm
		Ireland: 15 minutes	400 ppm
		Ireland: 8 hours	200 ppm
109-87-5	Dimethoxymethane	Great Britain: MEL/OES-STEEL	3950 mg/m ³ ; 1250 ppm
		Great Britain: MEL/OES-TWA	3160 mg/m ³ ; 1000 ppm
		Ireland: 8 hours	3100 mg/m ³ ; 1000 ppm
115-86-6	Triphenyl phosphate	Great Britain: WEL-STEEL	6 mg/m ³
		Great Britain: WEL-TWA	3 mg/m ³
		Ireland: 15 minutes	6 mg/m ³
		Ireland: 8 hours	3 mg/m ³

DNEL/DMEL:

Information about Ethyl acetate:

Systemic effects:

DNEL Long-term, workers, dermal: 63 mg/kg bw/d

DNEL Short-term, workers, inhalative: 1468 mg/m³

DNEL Long-term, workers, inhalative: 734 mg/m³

DNEL Long-term, consumers, oral: 4.5 mg/kg bw/d

DNEL Long-term, consumers, dermal: 37 mg/kg bw/d

DNEL Short-term, consumers, inhalative: 734 mg/m³

DNEL Long-term, consumers, inhalative: 367 mg/m³

Local effects:

DNEL Short-term, workers, inhalative: 1468 mg/m³

DNEL Long-term, workers, inhalative: 734 mg/m³

DNEL Short-term, consumers, inhalative: 734 mg/m³

DNEL Long-term, consumers, inhalative: 367 mg/m³

Information about Tris(methylphenyl) phosphate:

Systemic effects:

DNEL Short-term, workers, dermal: 74 mg/kg bw/d

DNEL Long-term, workers, dermal: 3.33 mg/kg bw/d

DNEL Short-term, workers, inhalative: 1.1 mg/m³

DNEL Long-term, workers, inhalative: 0.47 mg/m³

DNEL Short-term, consumers, oral: 157.5 mg/kg bw/d

DNEL Long-term, consumers, oral: 0.03 mg/kg bw/d

DNEL Short-term, consumers, dermal: 37 mg/kg bw/d

DNEL Long-term, consumers, dermal: 1.67 mg/kg bw/d

DNEL Short-term, consumers, inhalative: 0.28 mg/m³

DNEL Long-term, consumers, inhalative: 0.06 mg/m³

Local effects:

DNEL Short-term, workers, dermal: 16 mg/kg bw/d

DNEL Short-term, consumers, dermal: 8 mg/kg bw/d



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PNEC: Information about Ethyl acetate:
PNEC water (freshwater): 0.26 mg/L
PNEC water (marine water): 0.026 mg/L
PNEC water (intermittent release): 1.65 mg/L
PNEC sediment (freshwater): 1.25 mg/kg dw
PNEC sediment (marine water): 0.125 mg/kg dw
PNEC soil: 0.24 mg/kg dw
PNEC sewage treatment plant: 650 mg/L

Information about Tris(methylphenyl) phosphate:
PNEC water (freshwater): 0.000102 mg/L
PNEC water (marine water): 0.0000102 mg/L
PNEC water (intermittent release): 0.000102 mg/L
PNEC sediment (freshwater): 0.0404 mg/kg dw
PNEC sediment (marine water): 0.00404 mg/kg dw
PNEC soil: 0.1 mg/kg dw
PNEC sewage treatment plant: 100 mg/L
PNEC Secondary Poisoning, oral: 0.67 mg/kg food and feedingstuffs

8.2 Exposure controls

Use only closed, grounded equipment with this product.
Provide adequate ventilation, and local exhaust as needed.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded.
Use filter type A (= against vapours of organic substances) according to EN 14387.

Hand protection: Protective gloves according to EN 374.
Glove material: butyl caoutchouc (butyl rubber) - Layer thickness: ≥ 0.5 mm
Breakthrough time: > 480 min
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Flame-resistant antistatic protective clothing.

General protection and hygiene measures:
Avoid contact with skin and eyes.
Do not inhale substance. Immediately remove all contaminated clothing.
Wash hands before breaks and after work. When using do not eat or drink.
Work place should be equipped with a shower and an eye rinsing apparatus.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Form: liquid
Colour: varying, depends on colouring

Odour: type specific

Odour threshold: No data available

pH value: No data available



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Melting point/freezing point:	No data available
Initial boiling point and boiling range:	> 42 °C
Flash point/flash point range:	-18 °C
Evaporation rate:	No data available
Flammability:	Highly flammable.
Explosion limits:	LEL (Lower Explosion Limit): 1.60 Vol-% UEL (Upper Explosive Limit): 17.60 Vol-%
Vapour pressure:	202 hPa
Vapour density:	No data available
Density:	1.000 g/mL
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	237 °C
Decomposition temperature:	No data available
Viscosity, dynamic:	4000 mPa*s
Explosive properties:	No data available
Oxidizing characteristics:	No data available

9.2 Other information

Additional information: No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Highly flammable liquid and vapour.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

On contact with air, potentially explosive mixtures may develop.
Especially in closed containers potentially explosive mixtures may form above water surface.

10.4 Conditions to avoid

Keep away from sources of ignition - No smoking.

10.5 Incompatible materials

Oxidizing agents

10.6 Hazardous decomposition products

In case of fire may be liberated: carbon monoxide and carbon dioxide.

Thermal decomposition: No data available



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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity: LD50 Rat, oral: 5620 mg/kg (Ethyl acetate)
LD50 Rabbit, dermal: > 20000 mg/kg (Ethyl acetate)
LC50 Rat, inhalative: > 18 mg/L/4h (Ethyl acetate)

Toxicological effects: Acute toxicity (oral): Lack of data.
Acute toxicity (dermal): Lack of data.
Acute toxicity (inhalative): Lack of data.
Skin corrosion/irritation: Lack of data.
Serious eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.
Sensitisation to the respiratory tract: Lack of data.
Skin sensitisation: Lack of data.
Germ cell mutagenicity/Genotoxicity: Lack of data.
Carcinogenicity: Lack of data.
Reproductive toxicity: Lack of data.
Effects on or via lactation: Lack of data.
Specific target organ toxicity (single exposure): STOT SE 2; H371 = May cause damage to organs.
Specific target organ toxicity (repeated exposure): Lack of data.
Aspiration hazard: Lack of data.

Symptoms

After resorption: sore throat, loss of appetite, headache, fatigue, drowsiness, nausea, vomiting, breathing paralysis.
Higher doses may have a narcotic effect.
In case of inhalation: Vapours irritate mucous membranes and respiratory tracts.
After contact with skin: Repeated exposure may cause skin dryness or cracking.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.
Information about Ethyl acetate:
Toxic effect on fishes and plankton. Reacts with water.
Algae toxicity:
IC50 *Desmodesmus subspicatus* (green algae): 3300 mg/L/48 h.
Daphnia toxicity:
EC50 *Daphnia magna* (Big water flea): 717 mg/L/48 h.
Fish toxicity:
LC50 *Pimephales promelas* (fathead minnow): 230 mg/L/96 h.

12.2 Persistence and degradability

Further details: No data available



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12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 08 04 09* = Waste adhesives and sealants containing organic solvents or other dangerous substances

MFSU = manufacture, formulation, supply and use

* = Evidence for disposal must be provided.

Recommendation: Incinerate as hazardous waste according to applicable local, state, and federal regulations. Do not dispose of with household waste.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number

ADR/RID, IMDG, IATA-DGR:

UN 1133

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 1133, Adhesives

14.3 Transport hazard class(es)

ADR/RID: Class 3, Code: F1

IMDG: Class 3, Subrisk -

IATA-DGR: Class 3



14.4 Packing group

ADR/RID, IMDG, IATA-DGR:

II



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14.5 Environmental hazards

Marine pollutant: yes

14.6 Special precautions for user

Land transport (ADR/RID)

Warning board: ADR/RID: Kemmler-number 33, UN number UN 1133
Hazard label: 3
Special provisions: 640D
Limited quantities: 5 L
EQ: E2
Contaminated packaging - Instructions: P001 IBC02 R001
Contaminated packaging - Special provisions: PP1
Special provisions for packing together: MP19
Portable tanks - Instructions: T4
Portable tanks - Special provisions: TP1 TP8
Tank coding: LGBF
Tunnel restriction code: D/E

Sea transport (IMDG)

EmS: F-E, S-D
Special provisions: -
Limited quantities: 5 L
Excepted quantities: E2
Contaminated packaging - Instructions: P001
Contaminated packaging - Provisions: PP1
IBC - Instructions: IBC02
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T4
Tank instructions - Provisions: TP1, TP8
Stowage and handling: Category B.
Properties and observations: Adhesives are solutions of gums, resins, etc., usually volatile due to the solvents. Miscibility with water depends upon their composition.
Segregation group: none

Air transport (IATA)

Hazard label: Flamm. liquid
Excepted Quantity Code: E2
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L
Passenger and Cargo Aircraft: Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L
Cargo Aircraft only: Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L
Special provisions: A3
Emergency Response Guide-Code (ERG): 3L

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

No data available

SECTION 15: Regulatory information

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

National regulations - Great Britain

Hazchem-Code: •3YE
No data available

National regulations - EC member states

Volatile organic compounds (VOC):
approx. 95 % by weight

Labelling of packaging with <= 125mL content



Signal word: **Danger**

Hazard statements: H371 May cause damage to organs.
EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements:
P102 Keep out of reach of children.
P260 Do not breathe vapours.
P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Further information

Wording of the H-phrases under paragraph 2 and 3:

H225 = Highly flammable liquid and vapour.
H319 = Causes serious eye irritation.
H336 = May cause drowsiness or dizziness.
H370 = Causes damage to organs.
H371 = May cause damage to organs.
H400 = Very toxic to aquatic life.
H410 = Very toxic to aquatic life with long lasting effects.
H411 = Toxic to aquatic life with long lasting effects.
EUH066 = Repeated exposure may cause skin dryness or cracking.

Reason of change: Changes in section 2: Labelling (P-phrases: EU, ATP 8)

Date of first version: 22/8/2013

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.