

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

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

- 1.1 Product identifier**- Trade name:** Megabond**- Article number:** R054254-02**- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.**- Application of the substance / the mixture** Adhesives**- 1.3 Details of the supplier of the safety data sheet****- Manufacturer/Supplier:**

Kömmerling Chemische Fabrik GmbH
Zweibrücker Straße 200
D-66954 Pirmasens
Tel.: +49 (0)6331/56-2000
www.koe-chemie.de

- Informing department:

Abteilung: C-U Qualitäts- und Umweltmanagementcenter
(department: C-U Quality- and Environmentalmanagementcenter)
Tel.: +49 (0)6331/56-2553; Fax.: +49 (0)6331/56-1091
e-Mail: Productsafety@Koe-Chemie.de

- 1.4 Emergency telephone number:

In case of poisoning:
GBK-EMTEL International
Tel.(24h): +49(0)6132/84463 (all languages)

In case of transport accidents:
Tel.(24h): (001) 352 323 3500 (Infotrac - Contract ID: 90373 / GBK)

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture**- Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 2 H225 Highly flammable liquid and vapour.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- Additional information: The classification resulted from the calculation method of CLP-regulation.**- 2.2 Label elements****- Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- Hazard pictograms

GHS02 GHS07 GHS09

- Signal word Danger

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: Megabond

(Contd. of page 1)

- Hazard-determining components of labelling:

 hydrocarbons, C6-C7
 ethyl acetate
 butanone

- Hazard statements

 H225 Highly flammable liquid and vapour.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.

- Precautionary statements

 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P243 Take action to prevent static discharges.
 P261 Avoid breathing mist/vapours/spray.
 P262 Do not get in eyes, on skin, or on clothing.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P403 Store in a well-ventilated place.

- Additional information:

EUH208 Contains rosin, Orange terpenes. May produce an allergic reaction.

- 2.3 Other hazards

In the event of a large-scale use of the product, ignition sources in the immediate proximity and in low-lying areas, such as welding equipment, bells, heating elements, refrigerators, storage heaters etc. should be switched off! Erect warning signs warning of the hazardous risk of explosive atmosphere!

- Results of PBT and vPvB assessment

 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures

 - **Description:** Mixture of several substances

- Dangerous components:

CAS: 141-78-6 EINECS: 205-500-4 Reg.nr.: 01-2119475103-46-xxxx	ethyl acetate Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	20-<40%
EC number: 921-024-6 Reg.nr.: 01-2119475514-35-xxxx	hydrocarbons, C6-C7 Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	20-<40%
CAS: 78-93-3 EINECS: 201-159-0 Reg.nr.: 01-2119457290-43-xxxx	butanone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	<10%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: Megabond

(Contd. of page 2)

CAS: 110-54-3 EINECS: 203-777-6 Reg.nr.: 01-2119474209-33-xxxx	n-hexane Flam. Liq. 2, H225; Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	<2%
CAS: 8050-09-7 EINECS: 232-475-7 Reg.nr.: 01-2119480418-32-xxxx	rosin Skin Sens. 1, H317	<1%
CAS: 8028-48-6 EINECS: 232-433-8 Reg.nr.: 01-2119493353-35-xxxx	Orange terpenes Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Skin Sens. 1, H317	<0.5%

- **SVHC** Doesn't contain SVHC-substances.

- **Additional information**

EC number 921-024-6: Outside Europe, this substance is allocated CAS no. 64742-49-0 (naphtha [petroleum], treated slightly with hydrogen);

mixture of isoalkanes, n-alkanes, cyclenes (benzene content [CAS no.: 71-43-2] < 0.1%, cyclohexane [CAS no.: 110-82-7] < 25%)

For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **After inhalation**

Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness bring patient into a stable side position for transport.

- **After skin contact**

Treat affected skin with cotton wool or cellulose. Then wash and rinse thoroughly with water and a mild cleaning agent.

- **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.

- **After swallowing** Do not induce vomiting; call for medical help immediately.

- **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents**

Water spray

Alcohol-resistant foam

Fire-extinguishing powder

Carbon dioxide

- **For safety reasons unsuitable extinguishing agents** Water with full jet.

- **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

- **5.3 Advice for firefighters**

- **Protective equipment:** Wear self-contained respiratory protective device.

GB

(Contd. on page 4)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: **Megabond**

(Contd. of page 3)

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Keep away from ignition sources

Use respiratory protective device against the effects of fumes/dust/aerosol.

- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

- 6.3 Methods and material for containment and cleaning up: Pick up mechanically.

- 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 Ensure good ventilation/exhaustion at the workplace.

- Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

- 7.2 Conditions for safe storage, including any incompatibilities

- Storage

- Requirements to be met by storerooms and receptacles: Prevent any seepage into the ground.

- Information about storage in one common storage facility: Store away from foodstuffs.

- Further information about storage conditions:

Protect from frost.

Keep receptacle tightly sealed.

Protect from heat and direct sunlight.

Store receptacle in a well ventilated area.

Store in dry conditions.

- Storage class (according german VCI-concept): 3

- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- 8.1 Control parameters

- Components with limit values that require monitoring at the workplace:

141-78-6 ethyl acetate

WEL (Great Britain) Short-term value: 400 ppm

Long-term value: 200 ppm

IOELV (European Union) Short-term value: 1468 mg/m³, 400 ppmLong-term value: 734 mg/m³, 200 ppm

78-93-3 butanone

WEL (Great Britain) Short-term value: 899 mg/m³, 300 ppmLong-term value: 600 mg/m³, 200 ppm

Sk, BMGV

IOELV (European Union) Short-term value: 900 mg/m³, 300 ppmLong-term value: 600 mg/m³, 200 ppm

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: Megabond

(Contd. of page 4)

110-54-3 n-hexane	
WEL (Great Britain)	Long-term value: 72 mg/m ³ , 20 ppm
IOELV (European Union)	Long-term value: 72 mg/m ³ , 20 ppm
8050-09-7 rosin	
WEL (Great Britain)	Short-term value: 0.15 mg/m ³ Long-term value: 0.05 mg/m ³ Sen

- DNELs

141-78-6 ethyl acetate		
Inhalative	worker (long-term exposure/systemic)	734 mg/m ³
	worker (long-term exposure/local)	734 mg/m ³
hydrocarbons, C6-C7		
Inhalative	worker (long-term exposure/systemic)	2,035 mg/m ³
78-93-3 butanone		
Inhalative	worker (long-term exposure/systemic)	600 mg/m ³
110-54-3 n-hexane		
Inhalative	worker (long-term exposure/systemic)	75 mg/m ³

- Ingredients with biological limit values:

78-93-3 butanone	
BMGV (Great Britain)	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

- Additional information:

The homogenous mixing of this product is safeguarded by continual physical testing. Raw materials which formerly had dust-like properties are completely incorporated into the liquid / paste-like mass. Subsequently, possible TLVs for solid substances are not given, as there is no more danger of inhaling these substances (when dealing with this mixture)!

- 8.2 Exposure controls
- Personal protective equipment
- General protective and hygienic measures

The usual precautionary measures should be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of the work.

Immediately remove all soiled and contaminated clothing

- Breathing equipment:

Not required with good ventilation and/or adequate extractor facilities

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Short term filter device:

A2 (DIN EN 14387 / DIN EN 141)

- Protection of hands:

Direct contact with the chemical preparation must be avoided by organizational measures. Apply skin protectant before working with gloves to avoid skin swellings and use a skin cleansing and skincare product after the work.

Compliance with the stated penetration time (starts with the first product contact) must be ensured!

The gloves need to be disposed of after the penetration time and new gloves used!

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: **Megabond**

(Contd. of page 5)

- **For the permanent contact gloves made of the following materials are suitable:**
If longer exposure to the chemical preparation is necessary, a sturdy overglove against mechanical strain is recommended in combination with the "Barrier 02-100" underglove from Ansell (penetration time 480 min).
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Butyl rubber (0.7mm - penetration time 15 min)
- **As protection from splashes gloves made of the following materials are suitable:**
Recommended for protection from splashes: disposable nitrile gloves (minimum thickness 0.12 mm) with long cuffs. After contact with the chemical preparation, take the disposable nitrile glove off immediately and put on a new disposable nitrile glove.
- **Eye protection:** Safety glasses

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- Appearance:

Form:	Fluid
Colour:	Amber coloured
- Odour:	Solvent-like
- Odour threshold:	Not determined.

- Change in condition

Initial boiling point and boiling range: 76 °C

- Flash point: -15 °C

- Ignition temperature: > 200 °C

- Explosion limits:

Lower:	0,6 Vol %
Upper:	11,5 Vol %

- Vapour pressure: 104 hPa

- Specific gravity at 20 °C: 0,9 g/cm³

- Vapour density: Not determined.

- Evaporation rate: Not determined.

- Solubility in / Miscibility with

Water: Partly soluble

- Partition coefficient: n-octanol/water: Not determined.

- Viscosity:

dynamic at 20 °C:	1.200 mPas (Brookfield)
kinematic:	Not determined.

- Solvent content:

Organic solvents:	78,6 %
VOC (EU):	707.1 g/l
VOC (EU):	78.57 %
VOC (CH):	78.57 %

- 9.2 Other information: No further relevant information available.

GB

(Contd. on page 7)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: **Megabond**

(Contd. of page 6)

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with oxidizing agents
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
In case of fire, the following substance(s) may occur:
Hydrogen chloride (HCl)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

LD/LC50 values that are relevant for classification:**141-78-6 ethyl acetate**

Oral	LD50	4,935 mg/kg (rbt)
Inhalative	LC50/4 h	1,600 mg/l (rat)

78-93-3 butanone

Oral	LD50	2,500 mg/kg (rat)
Dermal	LD50	13,000 mg/kg (rbt)
Inhalative	LC50/4 h	40 mg/l (mus)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Do not allow product to reach ground water, water course or sewage system.

(Contd. on page 8)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: Megabond

(Contd. of page 7)

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal in accordance with official regulations
- **EWC-Code(s):**

To be treated as industrial waste: do not dispose of in or on soil, in watercourses or bodies, or through a sewage system. These EU refuse code numbers are recommendations for waste accruing through the use of adhesives and sealants. Any waste produced from organic solvents or other dangerous substances listed under item 3 of this safety datasheet is itself classified as dangerous (*).

Waste accruing during application:

080409* waste adhesives and sealants containing organic solvents or other dangerous substances
080410 waste adhesives and sealants other than those mentioned in 080409

Waste accruing during cleaning:

08 04 11* adhesive and sealant sludges containing organic solvents or other dangerous substances
08 04 12 adhesive and sealant sludges other than those mentioned in 080411

Soiled waste packaging:

15 01 10* packaging containing residues of or contaminated by dangerous substances.

Clean waste packaging:

15 01 01 paper and cardboard packaging

15 01 02 plastic packaging

15 01 04 metallic packaging

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR/RID/ADN, IMDG, IATA**

UN1133

- **14.2 UN proper shipping name**

- **ADR/RID/ADN**

1133 ADHESIVES, ENVIRONMENTALLY
HAZARDOUS

- **IMDG**

ADHESIVES (hydrocarbons, C6-C7), MARINE
POLLUTANT

- **IATA**

ADHESIVES

(Contd. on page 9)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: Megabond

(Contd. of page 8)

- 14.3 Transport hazard class(es)
- ADR/RID/ADN, IMDG


- Class 3 Flammable liquids.
- Label 3

- IATA


- Class 3 Flammable liquids.
- Label 3

- 14.4 Packing group

- ADR/RID/ADN, IMDG, IATA II

- 14.5 Environmental hazards:

- Marine pollutant: Yes
Symbol (fish and tree)
- Special marking (ADR/RID/ADN): Symbol (fish and tree)

- 14.6 Special precautions for user

Warning: Flammable liquids.
- Danger code (Kemler): 33
- EMS Number: F-E,S-D
- Stowage Category B

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

Not applicable.

- Transport/Additional information:
- ADR/RID/ADN

- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
- Transport category 2
- Tunnel restriction code D/E
- Remarks: (Packing group III, if content of packaging ≤ 450l, according 2.2.3.1.4 ADR)

- IMDG

- Limited quantities (LQ) 5L
- Excepted quantities (EQ) Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
- Remarks: (Packing group III, if content of packaging ≤ 30l, according 2.3.2.2 IMDG)

(Contd. on page 10)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: Megabond

(Contd. of page 9)

- IATA	
- Remarks:	(Packing group III, if content of packaging \leq 30l, according 3.3.3.1.1 IATA)
- UN "Model Regulation":	UN 1133 ADHESIVES, 3, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Directive 2012/18/EU
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations**
- **Information about limitation of use:**
Employment restrictions concerning young persons must be observed.
- **Disturbance regulations:**
Critical quantity values according to the regulations on accidents should be adhered to.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

For industrial use only.

- **Legend of H- and R-phrases, concerning the in chapter 3 mentioned substances (marking of product please see chapter 2)**
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
- **Department issuing SDS:**
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association

(Contd. on page 11)

GB

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 03.01.2018

Version number 5

Revision: 22.12.2017

Trade name: Megabond

(Contd. of page 10)

GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOCV: Lenkungsabgabe auf flüchtigen organischen Verbindungen, Schweiz (Swiss Ordinance on volatile organic compounds)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

- * **Data compared to the previous version altered.**

GB