

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

Printing date 21.06.2018

Version number 3

Revision: 21.06.2018

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

- 1.1 Product identifier
- Trade name: Verbundankerpatrone VPK-SF
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Application of the substance / the mixture      Construction industry.
- 1.3 Details of the supplier of the safety data sheet
- Address and telephone number of the supplier:  
KALM Befestigungssysteme  
Marie-Curie-Straße 5  
67661 Kaiserslautern  
Germany  
Phone: +49 6301 32010-0
- Competent person responsible for the Material Safety Data Sheet:  
Product Safety: info@kalm.de
- 1.4 Emergency telephone number:  
KALM Befestigungssysteme, Tel.: +49 6301 32010-0 (during regular business hours: from 8 am till 4 pm)

\* **SECTION 2: Hazards identification**

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



Skin Sens. 1H317 May cause an allergic skin reaction.

- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008  
The product is labelled according to the CLP regulation.
- Hazard pictograms



- Signal word    Warning
- Hazard-determining components of labelling:  
ethylene dimethacrylate  
methacrylic acid, monoester with propane-1,2-diol  
dibenzoyl peroxide
- Hazard statements  
H317 May cause an allergic skin reaction.
- Precautionary statements  
P280                    Wear protective gloves/protective clothing/eye protection/face protection.  
P272                    Contaminated work clothing should not be allowed out of the workplace.

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- P302+P352 IF ON SKIN: Wash with plenty of water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash it before reuse.

· 2.3 Other hazards Other hazards have not been identified for this product.

**SECTION 3: Composition/information on ingredients**

- 3.2 mixtures
- Description: Mixture consisting of the below mentioned chemicals and harmless additives

· Dangerous components:

CAS: 97-90-5 EINECS: 202-617-2 Index number: 607-114-00-5	ethylene dimethacrylate ⚠ Skin Sens. 1, H317; STOT SE 3, H335	5 - 10%
CAS: 27813-02-1 EINECS: 248-666-3 Index number: 607-125-00-5	methacrylic acid, monoester with propane-1,2-diol ⚠ Eye Irrit. 2, H319; Skin Sens. 1, H317	2.5 - 10%
CAS: 94-36-0 EINECS: 202-327-6 Index number: 617-008-00-0	dibenzoyl peroxide ⚠ Org. Perox. B, H241; ⚠ Eye Irrit. 2, H319; Skin Sens. 1, H317	< 2.5%
CAS: 872-50-4 EINECS: 212-828-1 Index number: 606-021-00-7	N-methyl-2-pyrrolidone ⚠ Repr. 1B, H360; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0.1 - 1%

· SVHC

872-50-4 N-methyl-2-pyrrolidone

· Additional information For the wording of the listed risk/hazard phrases refer to section 16.

**SECTION 4: First aid measures**

- 4.1 Description of first aid measures
  - General information Personal protection for the First Aider.
  - After inhalation Supply fresh air; consult doctor in case of symptoms.
  - After skin contact
    - Remove contaminated clothing immediately.
    - IF ON SKIN: Wash with plenty of soap and water.
    - If skin irritation or rash occurs: Get medical advice/attention.
  - After eye contact
    - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - After swallowing
    - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
    - Call a doctor immediately.
- 4.2 Most important symptoms and effects, both acute and delayed Allergic skin reactions.
- 4.3 Indication of any immediate medical attention and special treatment needed  
No further relevant information available.

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**SECTION 5: Firefighting measures**

- 5.1 Extinguishing media
- Suitable extinguishing agents Water spray jet, extinguishing powder, CO<sub>2</sub>, foam.
- Unsuitable extinguishing agents for reasons of safety: None
- 5.2 Special hazards arising from the substance or mixture  
 In case of fire, toxic incineration products may be released such as:  
 Carbon monoxide (CO)  
 Nitrogen oxides (NO<sub>x</sub>)  
 Under certain fire conditions, e.g. lack of oxygen, the formation of traces of toxic gases must be expected.
- 5.3 Advice for firefighters
- Protective equipment: Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures**

- 6.1 Personal precautions, protective equipment and emergency procedures  
 Wear protective clothing (see item 8).  
 Keep unprotected persons away.
- 6.2 Environmental precautions: Do not allow product to reach water courses or sewage system.
- 6.3 Methods and material for containment and cleaning up: Collect mechanically.
- 6.4 Reference to other sections None.

**SECTION 7: Handling and storage**

- 7.1 Precautions for safe handling Ensure good exhaust ventilation at the workplace.
- Information about protection against explosion and fire: No special measures required.
- 7.2 Conditions for safe storage, including any incompatibilities
- Storage
- Requirements to be met by storerooms and containers: Store in cool location.
- Information about storage in a common storage facility: None
- Further information about storage conditions: None
- Maximum storage temperature: 25 °C.
- Minimum storage temperature: 5 °C
- Sensitivity against UV-radiation and heat: Protect from heat and direct sunlight.
- Storage class: 10
- 7.3 Specific end use(s) No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

· 8.1 Control parameters

· Components with critical values that require monitoring at the workplace:

872-50-4N-methyl-2-pyrrolidone (< 2.5%)

WEL (Great Britain)

Short-term value: 80 mg/m<sup>3</sup>, 20 ppm  
 Long-term value: 40 mg/m<sup>3</sup>, 10 ppm  
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IOELV (European Union)	Short-term value: 80 mg/m <sup>3</sup> , 20 ppm Long-term value: 40 mg/m <sup>3</sup> , 10 ppm Skin
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- Additional information: Information valid at the time of review of safety data sheet.
- 8.2 Exposure controls
- Personal protective equipment
- General protective and hygienic measures:  
 Use skin cream for skin protection.  
 Avoid contact with the eyes and the skin.  
 Wash hands during work breaks and at the end of the shift.  
 Do not eat, drink or smoke at work.  
 Avoid eye and skin contact.
- Respiratory protection: Not required
- Protection of hands:



Chemical protective gloves according to DIN EN 374 with CE-labelling.

Avoid direct contact with the chemical/ the product/ the preparation by organisational measures.  
 Do not wear protective gloves longer than necessary.

After use of gloves apply skin-cleaning agents and skin cosmetics.

- Material of gloves: Nitrile rubber, NBR
- Penetration time of glove material:  
 Thickness: 0.4 mm; break-through time: 480 min; material: Nitrile; permeation: level 6
- Gloves made of the following materials are not suitable:  
 Gloves for mechanical protection do not provide protection against chemicals.
- Eye protection:



Hoder/temple spectacles with side protection. (EN 166).

- Body protection:



Protective clothing.

- Risk management measures  
 The operators shall be instructed adequately.  
 The workplace shall be inspected regularly by competent personnel e.g. the safety representative.

**SECTION 9: Physical and chemical properties**

- 9.1 Information on basic physical and chemical properties
- General Information
- Appearance:



The Chemical Anchor capsule consists of a resin mixture and a small tube filled with hardener.

Form: Liquid  
 Chunks

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- Colour: yellowish  
Grey
- Odour: Ester-like
- Odour threshold: Not determined.
- pH-value: Not determined.
- Change in condition
- Melting point/Melting range: Not applicable.
- Boiling point/Boiling range: 240 °C
- Flash point: 110 °C
- Flammability (solid, gaseous) Not applicable.
- Ignition temperature: 355 °C
- Decomposition temperature: 55 °C (SADT)
- Self-inflammability: Product is not self-igniting.
- Danger of explosion: Product is not explosive.
- Vapour pressure at 20 °C: 0.1 hPa
- Density at 20 °C: 1.1-1.2 g/cm<sup>3</sup> (Harz/Härter)
- Evaporation rate: Not applicable.
- Solubility in / Miscibility with  
  Water: Not miscible or difficult to mix
- 9.2 Other information: No further relevant information available.

## SECTION 10: Stability and reactivity

- 10.1 Reactivity  
Up to now, no dangers resulting from a reactivity of the mixture have been identified.
- 10.2 Chemical stability
- Conditions to be avoided:  
Before handling, the product should not be diluted or mixed with other chemicals, in order to avoid any negative influences on the ingredient(s).
- 10.3 Possibility of hazardous reactions: No dangerous reactions known.
- 10.4 Conditions to avoid: No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products:  
None, if storage and handling is done according to specification.

## SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity:

· LD/LC50 values that are relevant for classification:

Oral	ATE mix	> 5000 mg/kg (calculated)
Dermal	ATE mix	> 5000 mg/kg (calculated)
Inhalation	ATE mix vapour	> 5 mg/l (calculated)

- Evaluation:  
Based on the available data the classification criteria for hazard classes acute toxicity are not fulfilled.

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- Primary irritant effect:
- on the skin: No irritant effect
- on the eye: No irritant effect
- Sensitisation: Sensitization possible by skin contact.
- Specific target organ toxicity (STOT):  
 Based on the available data the classification criteria for hazard classes STOT SE and STOT RE are not fulfilled.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):  
 Based on the available data the classification criteria for hazard classes "CMR" are not fulfilled.

### SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity:
- Evaluation:  
 Based on the available data the classification criteria for hazard classes aquatic acute toxicity are not fulfilled.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No relevant information available.
- Behaviour in environmental systems:
- 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- PBT: This mixture does not contain substances that meet the PBT-criteria of REACH, annex XIII.
- vPvB: This mixture does not contain substances that meet the vPvB-criteria of REACH, annex XIII.
- 12.6 Other adverse effects Any other adverse effects on the environment are not expected.
- 12.7 Additional information
- Heavy metals and their compounds according Directive 2006/11/EC: None
- Adsorbable organic halogen compounds (AOX - DIN EN ISO 9562):  
 The product does not contain substances, which can influence the AOX of waste water.

### SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- Recommendation  
 Must be specially treated under adherence to official regulations.  
 Appropriate disposal operations according to Directive 2008/98/EC on waste: D 10 Incineration on land

#### · European waste catalogue

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 04 00	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 99	wastes not otherwise specified
20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 27*	paint, inks, adhesives and resins containing dangerous substances

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- Contaminated packaging:
- Recommendation: Dispose of packaging according to regulations on the disposal of packagings.

**SECTION 14: Transport information**

- 14.1 UN-Number  
 · ADR, IMDG, IATA None
- 14.2 UN proper shipping name  
 · ADR, IMDG, IATA None
- 14.3 Transport hazard class(es)  
 · ADR, IMDG, IATA  
 · Class None
- 14.4 Packing group  
 · ADR, IMDG, IATA None
- 14.5 Environmental hazards:  
 · Marine pollutant: No
- 14.6 Special precautions for user Not applicable.
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- Transport/Additional information: Not hazardous for transport according to a.m. regulations.
- UN "Model Regulation": -

**SECTION 15: Regulatory information**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Information about limitation of use:  
 Take note of Directive 94/33/EC on the protection of young people at work.  
 Take note of Directive 92/85/EC on the safety and health of pregnant women at work.
- Regulations which may apply in event of accident: Control of Major Accident Hazards (COMAH)  
 This substance/mixture is not subject to ordinance on industrial accidents (Seveso Directive; substance list, Annex I).
- Other regulations, limitations and prohibitive regulations
- Substances of very high concern (SVHC) according to REACH, Article 57  
 872-50-4N-methyl-2-pyrrolidone
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

This data is based on our current knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship.

- Relevant phrases  
 H241 Heating may cause a fire or explosion.  
 H315 Causes skin irritation.

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- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H360 May damage fertility or the unborn child.
- R2 Risk of explosion by shock, friction, fire or other sources of ignition.
- R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.
- R36 Irritating to eyes.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R37 Irritating to respiratory system.
- R43 May cause sensitisation by skin contact.
- R61 May cause harm to the unborn child.
- R7 May cause fire.

· Training hints

Further information regarding the directions for use can be found in the Product Data Sheet.

· Classification according to Regulation (EC) No 1272/2008

The classification includes the relevant available information about the mixture or the substances contained therein.

The evaluation of the available information within the scope of classification refers to the forms and aggregate states in which the mixture has been placed on the market and will be used most likely.

· Contact for technical information: Mr Kries

· Abbreviations and acronyms:

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)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Org. Perox. B: Organic Peroxides, Type B

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Repr. 1B: Reproductive toxicity, Hazard Category 1B

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· Key literature references and sources for data: None.

· \* Data altered since the previous version.