

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

### 1.1. Product identifier

# Hardener red/brown

CAS No.: --  
EG No.: --  
INDEX No.: --  
REACH No.: --

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

Relevant identified uses: Hardener for Condensation cross-linking Erkodent-silicons  
Uses advised against: Other

### 1.3. Details of the supplier of the safety data sheet

#### Manufacturer

ERKODENT Erich Kopp GmbH  
Siemensstrasse 3  
--  
D 72285 Pfalzgrafenweiler

Telephone: +49 7445 8501 0  
Telefax: +49 7445 2092

#### Supplier (manufacturer/importer/only representative/downstream user/distributor)

ERKODENT Erich Kopp GmbH  
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#### Information contact

ERKODENT Erich Kopp GmbH

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E-mail (competent person): w.heuchert@erkodent.com  
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### 1.4. Emergency telephone number

ERKODENT Erich Kopp GmbH  
Only available during office hours.

Telephone: +49 7445 8501 0

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008:  
Skin Irrit. 2, H315; STOT RE 2, H373

### 2.2. Label elements

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

**Hazard pictograms:**



**Signal word:**

GHS07, GHS08

Warning

**Hazard statements:**

H315 Causes skin irritation.  
H373 May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

**Precautionary statements:**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash .? thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302+352 IF ON SKIN: Wash with plenty of water/.?.  
P314 Get medical advice/attention if you feel unwell.  
P321 Specific treatment (see .? on this label).  
P332+313 If skin irritation occurs: Get medical advice/attention.  
P362+364 Take off contaminated clothing and wash it before reuse.  
P501 Dispose of contents/container to .?.

**Hazardous component(s) for labelling**

Bis(neodecanoyloxy)dioctylstannan; Tetrakis(2-butoxyethyl)orthosilicat

**Special labelling of particular preparations:**

none

**2.3. Other hazards**

none

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

**3.1. Substances**

Mixtures

**3.2. Mixtures**

Mixture with, among others, the following ingredients and other non-hazardous admixtures

**Composition/information on ingredients**

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008 (CLP):
Tetrakis(2-butoxyethyl)orthosilicat	242-560-0	18765-38-3			21	Skin Irrit. 2, H315
Bis(neodecanoyloxy)dioctylstannan	269-595-4	68299-15-0			12,5	STOT RE 2, H373; Aquatic Chronic 4, H413

(Full text of H- and EUH-phrases: see section 16.)

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**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information:** Remove contaminated clothing immediately and dispose off safely.

**Following inhalation:** Move victim to fresh air. Put victim at rest and keep warm. In case of irregular breathing or respiratory arrest provide artificial respiration.

- Following skin contact:** After contact with skin, wash immediately with plenty of water and soap. Seek medical attention if problems persist. In case of skin irritation, consult a physician. Take off immediately all contaminated clothing.
- After eye contact:** In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.
- After ingestion:** If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting.

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

In all cases of doubt, or when symptoms persist, seek medical advice.

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

No information available.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media:** Carbon dioxide (CO<sub>2</sub>). Extinguishing powder. Sand. Foam.

**Unsuitable extinguishing media:** Water.

#### 5.2. Special hazards arising from the substance or mixture

No information available.

#### 5.3. Advice for firefighters

##### General information

Use water spray jet to protect personnel and to cool endangered containers.

##### Special protective equipment for firefighters:

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

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Wear personal protection equipment. Remove all sources of ignition. Avoid contact with skin, eyes and clothes.

#### 6.2. Environmental precautions

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

#### 6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

#### 6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advices on safe handling

Protect against: Heat UV-radiation/sunlight

**Precautions against fire and explosion**

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep in a cool, well-ventilated place. Put lids on containers immediately after use.

**Hints on joint storage**

Keep away from food, drink and animal feedingstuffs.

**Storage class:** 10

**7.3. Specific end use(s)**

Observe instructions for use.

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

**8.1. Control parameters**

**Occupational exposure limit value**

Substance:	CAS-No.:	Source :	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m³]	Limitation of exposure peaks:	Remark:

**Substance with a common (EC) occupational exposure limit value**

Substance:	CAS-No.:	Source :	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m³]	Limitation of exposure peaks:	Remark:

**DNEL-/PNEC-values**

**DNEL value**

Substance:	CAS-No.:	DNEL/DMEL

**PNEC Value**

Substance:	CAS-No.:	PNEC

**Remark:**

Occupational exposure limit value: TRGS 900

**8.2. Exposure controls**

**Occupational exposure controls**

none

**General protection and hygiene measures**

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Take off immediately all contaminated clothing.

**Personal protection equipment**

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. Technical ventilation of workplace.

**Hand protection**

Suitable gloves type: NBR (Nitrile rubber). PVC (Polyvinyl chloride). CR (polychloroprene, chloroprene rubber).

**Eye/face protection**

Eye protection: not required.

**Body protection**

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

**Environmental exposure controls**

refer to chapter 7. No further action is necessary. Do not allow to enter into surface water or drains.

**Consumer exposure controls**

refer to chapter 7. No further action is necessary.

**Exposure Scenario**

none

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Appearance:

Physical state: Paste  
 Colour: red brown  
 Odour: like: ester  
 Odour threshold: No data available

**Safety relevant basis data**

	Parameter	Value	Unit	Remark
pH:				not determined
Melting point/freezing point:		45 - 65	°C	
Initial boiling point and boiling range:				not determined
Flash point:		130	°C	
Evaporation rate:				not applicable
Flammability (solid, gas):				not determined
Explosive properties:				not explosive.
Lower flammability or explosive limits:				not determined
Upper flammability or explosive limits:				not determined
Vapour pressure:				not applicable
Vapour density:				not applicable
Relative density:				not determined
Density:	approx.	0,96	g/cm <sup>3</sup>	
Solubility(ies):	:			not determined
Water solubility:				slightly soluble
Fat solubility:				not determined
Partition coefficient: n-octanol/water:				not determined
Auto-ignition temperature:				none Risk of selfignition.
Decomposition temperature:				not determined
Viscosity:				not determined
Oxidising properties:				not determined
Solvent content:				not determined

**9.2. Other information**

No information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Polymerization.

### 10.2. Chemical stability

none slow decomposition spontaneous decomposition

### 10.3. Possibility of hazardous reactions

Can polymerise exothermically if heated, exposed to air, sunlight or by addition of free radical initiators.

### 10.4. Conditions to avoid

Keep away from heat.

### 10.5. Incompatible materials

Acids Base Oxidizing agents.

### 10.6. Hazardous decomposition products

Carbon dioxide (CO<sub>2</sub>) Carbon monoxide. Nitrogen oxides (NO<sub>x</sub>)

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Toxicological data are not available.

**M-factor:** --

**Acute toxicity (dermal):** --

**Acute toxicity (oral):** --

**Acute toxicity (inhalative):** --

#### Acute toxicity

Substance:	CAS-No.:	Toxicological information
Tetrakis(2-butoxyethyl)orthosilicat	18765-38-3	LD50 oral (rat) > 2000 mg/kg LD50 dermal > 2000 mg/kg

#### Skin corrosion/irritation

Irritating to skin.

#### Serious eye damage/irritation

Irritating to eyes.

#### Respiratory or skin sensitisation

Toxicological data are not available.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

Toxicological data are not available.

Germ cell mutagenicity

Toxicological data are not available.

Reproductive toxicity

Toxicological data are not available.

#### STOT-single exposure

No information available.

**STOT-repeated exposure**

No information available.

**Aspiration hazard**

No information available.

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## SECTION 12: Ecological information

### 12.1. Toxicity

Do not allow to enter into surface water or drains. There are no data available on the mixture itself.

#### Ecotoxicity

Substance:	CAS-No.:	Ecotoxicity
Tetrakis(2-butoxyethyl)orthosilicat	18765-38-3	LC50 > 90 mg/l EC50 Algae (72 h) > 161 mg/l

### 12.2. Persistence and degradability

There are no data available on the mixture itself.

### 12.3. Bioaccumulative potential

There are no data available on the mixture itself.

### 12.4. Mobility in soil

There are no data available on the mixture itself.

### 12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

### 12.6. Other adverse effects

There are no data available on the mixture itself.

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Appropriate disposal/Product:**

Do not allow to enter into surface water or drains. Dispose of waste in own country; otherwise, follow EC regulations. Waste disposal according to EC Directives 75/442/EEC and 91/689/EEC on waste and hazardous waste in their latest versions.

**Appropriate disposal / Package:**

Dispose of waste according to applicable legislation.

**List of proposed waste codes/waste designations in accordance with EWC**

Consult the appropriate local waste disposal expert about waste disposal.

**Waste code product:** --

**Waste code packaging:** --

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## SECTION 14: Transport information

### 14.1. UN number

UN No.: --

### 14.2. UN proper shipping name

ADR / RID

--  
--

IMDG / ICAO-TI / IATA-DGR

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#### 14.3. Transport hazard class(es)

Hazard label(s):: -- Classification Code: --

#### 14.4. Packing group

Packing Group: --

#### 14.5. Environmental hazards

Labelling environmentally hazardous substances

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR:  yes /  no

Marine Pollutant:  yes /  no

#### 14.6. Special precautions for user

Land transport (ADR/RID)

Transport category: -- Tunnel restriction code: --

Special provisions: -- Limited quantity (LQ): --

Sea transport (IMDG)

EmS-No: --

Special provisions: -- Limited quantity (LQ): --

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

Remark: No dangerous good in sense of these transport regulations.

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### SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register:

No information available.

Regulation (EC) No 1005/2009 on substance that deplete the ozone layer:

No information available.

Regulation (EC) No 648/2004 on detergents:

No information available.

Regulation (EC) No 850/2004 on persistent organic pollutants:

No information available.

Regulation (EU) No 649/2012 concerning the export and import of dangerous chemicals:

No information available.

Restrictions according to Title VIII of Regulation (EC) No 1907/2006:

No information available.



### National regulations

Observe in addition any national regulations!

### Restrictions of occupation

No information available.

### Other regulations, restrictions and prohibition regulations

No information available.

## 15.2. Chemical Safety Assessment

**A chemical safety assessment has been carried out for this substance:** --

For this substance a chemical safety assessment has not been carried out.

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## SECTION 16: Other information

### Relevant H- and EUH-phrases (Number and full text)

#### Hazard statements

H315 Causes skin irritation.

H373 May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

H413 May cause long lasting harmful effects to aquatic life.

#### Training advice

none

#### Recommended restrictions of use

none

#### Further information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

#### Documentation of changes

none

#### Key literature references and sources for data

none

#### Abbreviations and acronyms

AC: Artikelkategorie (Article Category)  
ACGIH: Rat für Arbeitsschutz und Gefahrstoffe, Amerika (American Conference of Government Industrial Hygienists)  
ADN: Europäisches Übereinkommen über die internationale Beförderung gefährlicher Güter auf Binnengewässern (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)  
ADR: Europäisches Übereinkommen über die internationale Beförderung gefährlicher Güter auf der Straße (Accord européen relatif transport des marchandises dangereuses par route)  
AGW: Arbeitsplatzgrenzwert  
AOX: Adsorbierbare organisch gebundene Halogene (Adsorbable Organic halogen compounds)  
Bw: Körpergewicht (Body weight)  
CMR: Stoffe klassifiziert als Krebserzeugend, Mutagen oder Reproduktionstoxisch (Carcinogenic, Mutagenic, toxic for Reproduction)  
CSR: Stoffsicherheitsbericht (Chemical Safety Report)  
DIN: Deutsches Institut für Normung / Deutsche Industrienorm  
DNEL: Grenzwert, unterhalb dessen der Stoff keine Wirkung ausübt (Derived No Effect Level)  
DPD: Zubereitungsrichtlinie / Richtlinie 1999-45-EC (Dangerous Preparations Directive)  
DSD: Stoffrichtlinie / Richtlinie 67-548-EC (Dangerous Substances Directive)  
DU: Nachgeschalteter Anwender (Downstream User)  
EC50: Wirksame Konzentration 50% (Effective Concentration 50%)  
EWC/EWL: Europäischer Abfallartenkatalog (European Waste Catalogue)  
IATA: Verband für den internationalen Lufttransport (International Air Transport Association)  
IBC: Großpackmittel (Intermediate Bulk Container)  
ICAO: Internationale Zivilluftfahrt-Organisation (International Civil Aviation Organization)  
IMDG Code: Gefahrgutvorschriften für den internationalen Seetransport (International Maritime Dangerous Goods Code)  
IMO: Internationale Seeschiffahrts-Organisation (International Maritime Organization)  
ISO: Internationale Normungsorganisation (International Standards Organisation)  
LC50: Lethale (Tödliche) Konzentration 50%  
LD50: Lethale (Tödliche) Dosis 50%  
LEV: Lokale Absaugung (Local exhaust ventilation)  
MAK: Maximale Arbeitsplatzkonzentration – DFG  
OEL: Arbeitsplatzgrenzwert (Occupational Exposure Limit)  
PBT: persistent, bioakkumulierbar, giftig (persistent, bioaccumulative, toxic)  
PNEC: Abgeschätzte Nicht-Effekt-Konzentration (Predicted No Effect Concentration)  
PPE/PSA: Persönliche Schutzausrüstung (Personal Protective Equipment)  
REACH: Registrierung, Bewertung und Zulassung von Chemikalien (Registration, Evaluation and Authorization of Chemicals)  
RID: Gefahrgutvorschriften für den Transport mit der Eisenbahn (Règlement International concernant le transport de marchandises dangereuses par chemin de fer)  
STEL: Grenzwert für Kurzzeitexposition (Short-term Exposure Limit)  
SVHC: Stoff sehr hoher Besorgnis (Substance of Very High Concern)  
TLV: Arbeitsplatzgrenzwert (Threshold Limit Value)  
VOC: Flüchtige organische Kohlenwasserstoffe (Volatile Organic Compounds)  
vPvB: sehr persistent, sehr bioakkumulierbar (very persistent, very bioaccumulative)