

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.08.2017

Version number 15

Revision: 30.08.2017

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

- **1.1 Product identifier**
- **Trade name:** KW 1620
- **Article number:** 160 644
- **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**
Hardness stabilisation and corrosion protection
Dispersing agent, Dispersant
- **Manufacturer/Supplier:**
Grünbeck Wasseraufbereitung GmbH
Josef-Grünbeck-Str. 1
D-89420 Höchstädt a.d. Donau
GERMANY
- **Further information obtainable from:**
Department PI-2-3 Chemicals management (This number is only staffed during office hours)
Phone +49 9074 41 0
Fax +49 9074 41 70516
e-mail chemie@gruenbeck.de
- **1.4 Emergency telephone number:** During normal opening times: +49 9074 41-0

SECTION 2: Hazards identification

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



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- **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**



GHS05



GHS09

- **Signal word** Danger
- **Hazard-determining components of labelling:**
zinc sulfate monohydrate
- **Hazard statements**
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face 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.

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P310 Immediately call a POISON CENTER/doctor.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**
- **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 substances listed below with nonhazardous additions.

• **Dangerous components:**

CAS: 37971-36-1 EINECS: 253-733-5	2-phosphonobutane-1,2,4-tricarboxylic acid ⚠ Met. Corr. 1, H290; ⚠ Eye Irrit. 2, H319	10-25%
CAS: 7446-19-7 EINECS: 231-793-3 Index number: 030-006-00-9	zinc sulfate monohydrate ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	10-25%

- **Additional information:** 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.
Seek medical treatment in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
Call a doctor immediately.
Protect unharmed eye.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Seek immediate medical advice.
- **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:**
Product itself does not burn
Use fire extinguishing methods suitable to surrounding conditions.
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Dispose of the material collected according to regulations.

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- **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.
- Prevent formation of aerosols.
- Avoid contact with the eyes and skin.
- See Section 8 for information on personal protection equipment.
- **Information about fire - and explosion protection:** No special measures required.

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

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

- Store only in the original receptacle.
- Provide acid-resistant floor.

- **Information about storage in one common storage facility:** Do not store together with alkalis (caustic solutions).

- **Further information about storage conditions:**

- Keep container tightly sealed.
- Store in a cool place.
- Protect from frost.

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

SECTION 8: Exposure controls/personal protection

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

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Do not eat, drink, smoke or sniff while working.
- Wash hands before breaks and at the end of work.
- Immediately remove all soiled and contaminated clothing
- Avoid contact with the eyes and skin.

- **Respiratory protection:** Use suitable respiratory protective device only when aerosol or mist is formed.

- **Protection of hands:**

- **Material of gloves**

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.

Nitrile rubber, NBR

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

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· **Body protection:** Protective work clothing**SECTION 9: Physical and chemical properties**· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form:	Fluid
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.

· **pH-value (10 g/l) at 20°C:** ~ 2 - 3· **Change in condition**

Melting point/freezing point:	~ -20°C
Initial boiling point and boiling range:	~ 100°C

· **Flash point:** Not applicable.· **Flammability (solid, gas):** Not applicable.· **Ignition temperature:**· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Product is not selfigniting.· **Explosive properties:** Product does not present an explosion hazard.· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapour pressure:** Not determined.

· Density at 20°C:	~ 1.24 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.· **Partition coefficient: n-octanol/water:** Not determined.· **Viscosity:**

Dynamic at 20°C:	~ 20 mPas
Kinematic:	Not determined.

· **Solvent content:**· **Organic solvents:** 0.0 %· **9.2 Other information** No further relevant information available.**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 alkali (lyes).· **10.4 Conditions to avoid** No further relevant information available.· **10.5 Incompatible materials:** No further relevant information available.· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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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 relevant for classification:**
- | | | |
|---|------|------------------|
| 7446-19-7 zinc sulfate monohydrate | | |
| Oral | LD50 | 2150 mg/kg (rat) |
- **Primary irritant effect:**
 - **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
 - **Serious eye damage/irritation**
Causes serious eye damage.
 - **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** Based on available data, the classification criteria are not met.
 - **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:** No further relevant information available.
- **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.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
- **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**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN3265

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· **14.2 UN proper shipping name**· **ADR**

3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2-phosphonobutane-1,2,4-tricarboxylic acid, zinc sulfate monohydrate), ENVIRONMENTALLY HAZARDOUS

· **IMDG**

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2-phosphonobutane-1,2,4-tricarboxylic acid, zinc sulfate monohydrate), MARINE POLLUTANT

· **IATA**

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2-phosphonobutane-1,2,4-tricarboxylic acid, zinc sulfate monohydrate)

· **14.3 Transport hazard class(es)**· **ADR**· **Class**

8 Corrosive substances.

· **Label**

8

· **IMDG, IATA**· **Class**

8 Corrosive substances.

· **Label**

8

· **14.4 Packing group**· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**

Product contains environmentally hazardous substances: zinc sulfate monohydrate

· **Marine pollutant:**

No

· **Special marking (ADR):**

Symbol (fish and tree)

· **14.6 Special precautions for user**

Warning: Corrosive substances.

· **Danger code (Kemler):**

80

· **EMS Number:**

F-A,S-B

· **Segregation groups**

Acids

· **Stowage Category**

A

· **Stowage Code**

SW2 Clear of living quarters.

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

Not applicable.

· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)**

5L

· **Transport category**

3

· **Tunnel restriction code**

E

· **UN "Model Regulation":**

UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2-PHOSPHONOBUTANE-1,2,4-TRICARBOXYLIC ACID, ZINC SULFATE MONOHYDRATE), 8, III, ENVIRONMENTALLY HAZARDOUS

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SECTION 15: Regulatory information

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

- **Labelling according to Regulation (EC) No 1272/2008**

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

- **Hazard pictograms**



GHS05 GHS09

- **Signal word** Danger

- **Hazard-determining components of labelling:**

zinc sulfate monohydrate

- **Hazard statements**

H318 Causes serious eye damage.

H411 Toxic to aquatic life with long lasting effects.

- **Precautionary statements**

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face 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.

P310 Immediately call a POISON CENTER/doctor.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **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

- **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.

- **Relevant phrases**

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

- **Department issuing SDS:** Department for product development, innovation management and service

- **Contact:** Department PI-2-3 Chemicals management

- **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

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr.1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
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.**

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