



Safety Data Sheet according to Regulation (EC) No 1907/2006

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SDS No. : 142760
V005.0

BONDERITE C-AK 1563-1 known as Ridoline 1563-1

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

1.1. Product identifier

BONDERITE C-AK 1563-1 known as Ridoline 1563-1

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

Intended use:

Cleaners for industrial metal working

1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA

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40589 Düsseldorf

Germany

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1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no. +49-(0)211-797-3350 for exceptional cases.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin corrosion

Category 1

H314 Causes severe skin burns and eye damage.

Serious eye damage

Category 1

H318 Causes serious eye damage.

Specific target organ toxicity - single exposure

Category 3

H335 May cause respiratory irritation.

Target organ: respiratory tract irritation

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

Potassium carbonate

Tripotassium orthophosphate

Signal word: Danger**Hazard statement:** H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.**Supplemental information** Contains Maleic acid. May produce an allergic reaction.**Precautionary statement:** P260 Do not breathe mist/spray.
Prevention P280 Wear protective gloves/protective clothing/eye protection/face protection.**Precautionary statement:** P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
Response 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 or doctor.**2.3. Other hazards**

None if used properly.

The classification as corrosive H314 category 1 is due to the extreme pH.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Declaration of the ingredients according to CLP (EC) No 1272/2008:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Potassium carbonate 584-08-7	209-529-3 01-2119532646-36	20- 40 %	Skin Irrit. 2; Dermal H315 Eye Irrit. 2 H319 STOT SE 3; Inhalation H335
Tripotassium orthophosphate 7778-53-2	231-907-1 01-2119971078-30	5- < 10 %	Eye Dam. 1 H318 STOT SE 3 H335
Potassium hydroxide 1310-58-3	215-181-3 01-2119487136-33	0,5- < 2 %	Skin Corr. 1A H314 Acute Tox. 4 H302 Met. Corr. 1 H290
Maleic acid 110-16-7	203-742-5 01-2119488705-25	0,01- < 0,1 %	Acute Tox. 4; Oral H302 Acute Tox. 4; Dermal H312 Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 STOT SE 3 H335

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

Declaration of ingredients according to Detergent Regulation 648/2004/EC

< 5 % phosphates

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation:**

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 15 minutes. Hold eyelid wide-open. Seek a doctor/hospital, eye flushing should continue during transportation to a doctor.

Ingestion:

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.

Immediate medical treatment necessary.

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

Causes burns.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

All common extinguishing agents are suitable.

Extinguishing media which must not be used for safety reasons:

None known

5.2. Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in fires.

5.3. Advice for firefighters

Wear protective equipment.

Wear self-contained breathing apparatus.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid skin and eye contact.

Ensure that workrooms are adequately ventilated.

When diluting/dissolving always slowly stir the product into water. Do not add product to hot water or hot solutions. Heating with vigorous, sudden delayed boiling is possible! Scalding hazard!

See advice in section 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Wash contaminated clothing before reuse.

The workplace should be equipped with an emergency shower and eye-rinsing facility.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Keep container tightly sealed.

Keep away from highly acidic substances.

7.3. Specific end use(s)

Cleaners for industrial metal working

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational Exposure Limits**

Valid for

Germany

None

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Maleic acid 110-16-7	aqua (freshwater)		0,1 mg/l				
Maleic acid 110-16-7	aqua (intermittent releases)		0,4281 mg/l				
Maleic acid 110-16-7	sediment (freshwater)				0,334 mg/kg		
Maleic acid 110-16-7	sewage treatment plant (STP)		44,6 mg/l				
Maleic acid 110-16-7	aqua (marine water)		0,01 mg/l				
Maleic acid 110-16-7	sediment (marine water)				0,0334 mg/kg		
Maleic acid 110-16-7	Soil				0,0415 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Tripotassium orthophosphate 7778-53-2	Workers	inhalation	Long term exposure - systemic effects		23,09 mg/m3	
Tripotassium orthophosphate 7778-53-2	General population	inhalation	Long term exposure - systemic effects		9,9 mg/m3	
Potassium hydroxide 1310-58-3	Workers	inhalation	Long term exposure - local effects		1 mg/m3	
Potassium hydroxide 1310-58-3	General population	inhalation	Long term exposure - local effects		1 mg/m3	
Maleic acid 110-16-7	Workers	dermal	Acute/short term exposure - local effects		0,55 mg/cm2	
Maleic acid 110-16-7	Workers	dermal	Long term exposure - local effects		0,04 mg/cm2	
Maleic acid 110-16-7	Workers	dermal	Acute/short term exposure - systemic effects		58 mg/kg	
Maleic acid 110-16-7	Workers	dermal	Long term exposure - systemic effects		3,3 mg/kg	
Maleic acid 110-16-7	Workers	inhalation	Acute/short term exposure - local effects		3 mg/m3	
Maleic acid 110-16-7	Workers	inhalation	Long term exposure - systemic effects		3 mg/m3	
Maleic acid 110-16-7	Workers	inhalation	Long term exposure - local effects		3 mg/m3	
Maleic acid 110-16-7	Workers	inhalation	Acute/short term exposure - systemic effects		3 mg/m3	

Biological Exposure Indices:

None

8.2. Exposure controls:**Engineering controls:**

Ensure good ventilation/suction at the workplace.

Respiratory protection:

In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter (EN 14387).

This recommendation should be matched to local conditions.

Hand protection:

Chemical-resistant protective gloves (EN 374). Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >=1 mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Polychloroprene (CR; >= 1 mm thickness) or natural rubber (NR; >=1 mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

Skin protection:

Protective clothing that covers arms and legs.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid clear light brown
Odor	no valuation
Odour threshold	No data available / Not applicable
pH (20 °C (68 °F); Conc.: 1 Weight%; Solvent: Demineralised water)	11,2 - 12,0
pH (20 °C (68 °F); Conc.: 100 % product)	> 13
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	> 100 °C (> 212 °F)
Flash point	No flash point up to 100°C. Aqueous preparation.
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure (50 °C (122 °F))	< 100 mbar
Relative vapour density:	No data available / Not applicable
Density (20 °C (68 °F))	1,37 - 1,41 g/cm ³
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	fully miscible
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with acids: production of heat and carbon dioxide.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

None if used for intended purpose.

In case of fire toxic gases can be released.

SECTION 11: Toxicological information**General toxicological information:**

The classification as corrosive H314 category 1 is due to the extreme pH.

11.1. Information on toxicological effects**Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Potassium carbonate 584-08-7	LD50	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Tripotassium orthophosphate 7778-53-2	LD50	> 2.000 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
Potassium hydroxide 1310-58-3	LD50	388 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
Maleic acid 110-16-7	LD50	708 mg/kg	rat	not specified

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Potassium carbonate 584-08-7	LD50	> 2.000 mg/kg	rabbit	other guideline:
Tripotassium orthophosphate 7778-53-2	LD50	> 5.000 mg/kg	rabbit	not specified
Maleic acid 110-16-7	LD50	1.560 mg/kg	rabbit	not specified

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Potassium hydroxide 1310-58-3	corrosive	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Maleic acid 110-16-7	irritating	24 h	human	Patch Test

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Potassium hydroxide 1310-58-3	corrosive		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Maleic acid 110-16-7	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Potassium hydroxide 1310-58-3	not sensitising	Intracutaneous test	guinea pig	Landsteiner & Jacobs Method
Maleic acid 110-16-7	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Maleic acid 110-16-7	sensitising	Mouse local lymphnode assay (LLNA)	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Potassium hydroxide 1310-58-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
Maleic acid 110-16-7	negative	bacterial reverse mutation assay (e.g Ames test)	no data		Ames Test
Maleic acid 110-16-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Maleic acid 110-16-7	not carcinogenic	oral: feed	2 y daily	rat	male/female	OECD Guideline 451 (Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Maleic acid 110-16-7	NOAEL F1 150 mg/kg NOAEL F2 55 mg/kg	Two generation study	oral: gavage	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Maleic acid 110-16-7	NOAEL >= 40 mg/kg	oral: feed	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

The product does not contain surface-active substances as defined in the EU Detergent Regulation (EC/648/2004).

12.1. Toxicity**Toxicity (Fish):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Potassium carbonate 584-08-7	LC50	68 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	other guideline:
Tripotassium orthophosphate 7778-53-2	LC50	> 900 mg/l	48 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Potassium hydroxide 1310-58-3	LC50	80 mg/l	96 h	Western mosquitofish (Gambusia affinis)	not specified
Maleic acid 110-16-7	LC50	> 245 mg/l	48 h	Leuciscus idus	DIN 38412-15

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Potassium carbonate 584-08-7	EC50	265 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Tripotassium orthophosphate 7778-53-2	EC50	> 100 mg/l	48 h	Daphnia magna	not specified
Potassium hydroxide 1310-58-3	EC50	> 100 mg/l		Daphnia sp.	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Maleic acid 110-16-7	EC50	42,81 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Maleic acid 110-16-7	NOEC	10 mg/l	21 d	Daphnia magna	other guideline:

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Potassium carbonate 584-08-7	EC50	137 mg/l	5 d	Nitzschia sp.	OECD Guideline 201 (Alga, Growth Inhibition Test)
Maleic acid 110-16-7	EC50	74,35 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Maleic acid 110-16-7	EC10	11,8 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Potassium carbonate 584-08-7	EC0	200 mg/l	30 min		not specified
Potassium hydroxide 1310-58-3	EC0	> 100 mg/l	30 min		not specified
Maleic acid 110-16-7	EC10	44,6 mg/l	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Maleic acid 110-16-7	readily biodegradable	aerobic	97,08 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
Maleic acid 110-16-7	-1,3	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
Potassium carbonate 584-08-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Tripotassium orthophosphate 7778-53-2	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.
Potassium hydroxide 1310-58-3	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.
Maleic acid 110-16-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

If acidic or alkaline products are discharged into wastewater installations care must be taken that the discharged wastewater has a pH in the range pH 6 - 10, as pH variations could cause disorders in wastewater channels and biological sewage treatment plants. The local discharge regulations take precedence.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Product disposal:

In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

EWC/EAK 070608

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

14.1. UN number

ADR	1814
RID	1814
ADN	1814
IMDG	1814
IATA	1814

14.2. UN proper shipping name

ADR	POTASSIUM HYDROXIDE SOLUTION
RID	POTASSIUM HYDROXIDE SOLUTION
ADN	POTASSIUM HYDROXIDE SOLUTION
IMDG	POTASSIUM HYDROXIDE SOLUTION
IATA	Potassium hydroxide solution

14.3. Transport hazard class(es)

ADR	8
RID	8
ADN	8
IMDG	8
IATA	8

14.4. Packing group

ADR	II
RID	II
ADN	II
IMDG	II
IATA	II

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

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

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

VOC content 0 %
(2010/75/EU)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK: WGK = 1, slightly water endangering mixture. Classification according to the mixture rules in German AwSV regulation annex 1, number 5.2 from 18. April 2017.

Storage class according to TRGS 510: 8B

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Further information:

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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.