



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

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BONDERITE C-AK ALUM ETCH 2 AERO

SDS No. : 197965
V001.5

Revision: 15.11.2017
printing date: 18.11.2020

Replaces version from: 06.11.2013

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

1.1. Product identifier

BONDERITE C-AK ALUM ETCH 2 AERO

Contains:

Sodium hydroxide

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

Intended use:

Etching Agents for Metals

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000

Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Corrosive to metals

Category 1

H290 May be corrosive to metals.

Skin corrosion

Category 1A

H314 Causes severe skin burns and eye damage.

Serious eye damage

Category 1

H318 Causes serious eye damage.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Signal word:	Danger
Hazard statement:	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
Precautionary statement: Prevention	P260 Do not breathe dust. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement: Response	P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. 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.

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Base substances of preparation:

alkalis
Phosphates

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Sodium hydroxide 1310-73-2	215-185-5 01-2119457892-27	80- 100 %	Met. Corr. 1 H290 Skin Corr. 1A H314
Trisodium orthophosphate 7601-54-9	231-509-8 01-2119489800-32	10- 20 %	Skin Irrit. 2; Dermal H315 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.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person from dust-contaminated zone.

Immediate medical treatment necessary.

Skin contact:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing.

Seek medical attention from a specialist.

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.

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:

Carbon dioxide.
extinguishing powder

Extinguishing media which must not be used for safety reasons:

Water

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:

The product itself does not burn. Any fire extinguishing action should be appropriate to the surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation.
Avoid skin and eye contact.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Remove mechanically.
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

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!
Avoid dust formation.
Avoid skin and eye contact.
Ensure that workrooms are adequately ventilated.
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 only in the original container.
Do not use packing made of metal.
Keep container in a well ventilated place.
Keep container tightly sealed.
Store in a dry place.
Keep only in original container.
Do not store together with strong acids.

7.3. Specific end use(s)

Etching Agents for Metals

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

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Sodium hydroxide 1310-73-2 [SODIUM HYDROXIDE]		2	Short Term Exposure Limit (STEL):		EH40 WEL

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Sodium hydroxide 1310-73-2 [SODIUM HYDROXIDE]		2	Short Term Exposure Limit (STEL):		IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Sodium hydroxide 1310-73-2	aqua (freshwater)		6,4 mg/l				
Sodium hydroxide 1310-73-2	aqua (marine water)		0,64 mg/l				
Sodium hydroxide 1310-73-2	aqua (intermittent releases)		3,1 mg/l				
Sodium hydroxide 1310-73-2	sewage treatment plant (STP)		51 mg/l				
Sodium hydroxide 1310-73-2	sediment (freshwater)				23 mg/kg		
Sodium hydroxide 1310-73-2	sediment (marine water)				2,3 mg/kg		
Sodium hydroxide 1310-73-2	soil				0,853 mg/kg		
Trisodium orthophosphate 7601-54-9	aqua (freshwater)		0,05 mg/l				
Trisodium orthophosphate 7601-54-9	aqua (marine water)		0,005 mg/l				
Trisodium orthophosphate 7601-54-9	aqua (intermittent releases)		0,5 mg/l				
Trisodium orthophosphate 7601-54-9	sewage treatment plant (STP)		50 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Sodium hydroxide 1310-73-2	Workers	inhalation	Long term exposure - local effects		1 mg/m ³	
Sodium hydroxide 1310-73-2	General population	inhalation	Long term exposure - local effects		1 mg/m ³	
Sodium hydroxide 1310-73-2	Workers	dermal	Acute/short term exposure - local effects		< 2 %	
Sodium hydroxide 1310-73-2	Workers	oral	Long term exposure - systemic effects		2,3 mg/kg	
Sodium hydroxide 1310-73-2	Workers	dermal	Long term exposure - systemic effects		11718 mg/kg	
Sodium hydroxide 1310-73-2	General population	dermal	Long term exposure - systemic effects		11718 mg/kg	
Sodium hydroxide 1310-73-2	Workers	inhalation	Long term exposure - systemic effects		2,1 mg/m ³	
Sodium hydroxide 1310-73-2	General population	inhalation	Acute/short term exposure - local effects		2,5 mg/m ³	
Sodium hydroxide 1310-73-2	General population	inhalation	Long term exposure - systemic effects		5,7 mg/m ³	
Trisodium orthophosphate 7601-54-9	Workers	inhalation	Long term exposure - systemic effects		4,07 mg/m ³	
Trisodium orthophosphate 7601-54-9	General population	inhalation	Long term exposure - systemic effects		3,04 mg/m ³	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:
Thorough dedusting.

Respiratory protection:

In case of dust formation, we recommend wearing of appropriate respiratory protection equipment with particle filter P (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	solid material powder white
Odor	no valuation
Odour threshold	No data available / Not applicable
pH (20 °C (68 °F); Conc.: 1,0 %; Solvent: Water)	12,5 - 13,5
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	Not applicable
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density (ρ)	3,0 kg/l
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	fully soluble

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

Reacts with water: generation of heat.

Reacts with acids: Heat released.

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

11.1. Information on toxicological effects

General toxicological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Skin irritation:

Causes severe skin burns and eye damage.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Sodium hydroxide 1310-73-2	LDLo	500 mg/kg	oral		rabbit	OECD Guideline 401 (Acute Oral Toxicity)
Trisodium orthophosphate 7601-54-9	LD50	> 2.000 mg/kg	oral		rat	

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
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Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
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Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Sodium hydroxide 1310-73-2	corrosive		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Sodium hydroxide 1310-73-2	not sensitising	Patch-Test	human	not specified

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Sodium hydroxide 1310-73-2	negative	bacterial reverse mutation assay (e.g Ames test)	no data		not specified

SECTION 12: Ecological information**General ecological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Locally harmful for aquatic and landliving organisms because of high pH and corrosive properties.

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

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.

12.1. Toxicity

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Sodium hydroxide 1310-73-2	LC50	45,4 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Sodium hydroxide 1310-73-2	EC50	40,4 mg/l	Daphnia	48 h	Ceriodaphnia sp.	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Sodium hydroxide 1310-73-2	EC0	> 100 mg/l	Bacteria	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)
Trisodium orthophosphate 7601-54-9	LC50	1.650 mg/l	Fish		Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Trisodium orthophosphate 7601-54-9	EC50	190 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Trisodium orthophosphate 7601-54-9	EC0	1.650 mg/l	Bacteria	30 min		not specified

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential / 12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
Sodium hydroxide 1310-73-2	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.
Trisodium orthophosphate 7601-54-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

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

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.

060299

SECTION 14: Transport information**14.1. UN number**

ADR	1823
RID	1823
ADN	1823
IMDG	1823
IATA	1823

14.2. UN proper shipping name

ADR	SODIUM HYDROXIDE, SOLID (mixture)
RID	SODIUM HYDROXIDE, SOLID (mixture)
ADN	SODIUM HYDROXIDE, SOLID (mixture)
IMDG	SODIUM HYDROXIDE, SOLID (mixture)
IATA	Sodium hydroxide, solid (mixture)

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 (Great Britain):

Remarks	Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, e.g COSHH Essentials. EH40 Occupational Exposure Limits Chemicals (Hazard Information & Packaging for Supply) Regulations. The Personnel Protective Equipment at Work Regulations. The Carriage of Dangerous Goods by Road Regulations. The Health & Safety at Work Act 1974. (Note: Use latest editions/amendments of above referenced documents.)
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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.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

Further information:

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.