



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

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SDS No. : 364353  
V003.1

BONDERITE L-CA HKKS ACHESON BUL

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

#### 1.1. Product identifier

BONDERITE L-CA HKKS ACHESON BUL

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

Intended use:

Gravity die casting product

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

Henkel AG & Co. KGaA

Henkelstr. 67

40589 Düsseldorf

Germany

Phone: +49 (211) 797 0

Fax-no.: +49 (211) 798 4008

ua-productsafety.de@henkel.com

#### 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):

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

#### 2.2. Label elements

##### Label elements (CLP):

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

##### Supplemental information

EUH210 Safety data sheet available on request.

Contains 1,3,5-Tris(2-hydroxyethyl)hexahydro-1,3,5-triazine. May produce an allergic reaction.

#### 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:**Aqueous solution of  
Pigment**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
ammonia, aqueous solution 1336-21-6	215-647-6 01-2119488876-14	0,1- < 1 %	Met. Corr. 1 H290 Skin Corr. 1B H314 Aquatic Acute 1 H400 Aquatic Chronic 2 H411
1,3,5-Tris(2-hydroxyethyl)hexahydro-1,3,5- triazine 4719-04-4	225-208-0 01-2119529226-41	0,01- < 0,1 %	Acute Tox. 2; Inhalation - dust and mist H330 Acute Tox. 4 H302 Skin Sens. 1 H317 STOT RE 1 H372 Eye Irrit. 2 H319

**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:**

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:**

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

**Ingestion:**

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

No data available.

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

See section: Description of first aid measures

**SECTION 5: Firefighting measures****Combustion behaviour:**

Non-flammable (aqueous solution).

### **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**

May produce fumes like carbon dioxide when heated to decomposition.

### **5.3. Advice for firefighters**

Wear protective equipment.

#### **Additional information:**

Cool endangered containers with water spray jet.

## **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**

Dispose of contaminated material as waste according to Section 13.

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

### **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.

See advice in section 8

#### **Hygiene measures:**

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

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

Ensure good ventilation/extraction.

Avoid strictly temperatures below + 5 °C and above + 60 °C.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

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

Gravity die casting product

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

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Graphite 7782-42-5		10	Exposure limit(s):	2	TRGS 900
Graphite 7782-42-5			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Graphite 7782-42-5		1,25	Exposure limit(s):		TRGS 900

**Predicted No-Effect Concentration (PNEC):**

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
ammonia, aqueous solution 1336-21-6	aqua (freshwater)					0,001 mg/L	
ammonia, aqueous solution 1336-21-6	aqua (marine water)					0,001 mg/L	
ammonia, aqueous solution 1336-21-6	aqua (intermittent releases)					0,0068 mg/L	
2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	aqua (freshwater)		0,0066 mg/l				
2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	aqua (marine water)		0,00066 mg/l				
2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	aqua (intermittent releases)		0,06 mg/l				
2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	sediment (freshwater)				0,0304 mg/kg		
2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	sediment (marine water)				0,00304 mg/kg		
2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	soil				0,00219 mg/kg		
2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	sewage treatment plant (STP)		5,5 mg/l				

**Derived No-Effect Level (DNEL):**

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
ammonia, aqueous solution 1336-21-6	Workers	dermal	Acute/short term exposure - systemic effects		6,8 mg/kg	
ammonia, aqueous solution 1336-21-6	Workers	dermal	Long term exposure - systemic effects		6,8 mg/kg	
ammonia, aqueous solution 1336-21-6	Workers	Inhalation	Acute/short term exposure - systemic effects		47,6 mg/m3	
ammonia, aqueous solution 1336-21-6	Workers	Inhalation	Acute/short term exposure - local effects		36 mg/m3	
ammonia, aqueous solution 1336-21-6	Workers	Inhalation	Long term exposure - systemic effects		47,6 mg/m3	
ammonia, aqueous solution 1336-21-6	Workers	Inhalation	Long term exposure - local effects		14 mg/m3	
ammonia, aqueous solution 1336-21-6	General population	dermal	Acute/short term exposure - systemic effects		68 mg/kg	
ammonia, aqueous solution 1336-21-6	General population	dermal	Long term exposure - systemic effects		68 mg/kg	
ammonia, aqueous solution 1336-21-6	General population	Inhalation	Acute/short term exposure - systemic effects		23,8 mg/m3	
ammonia, aqueous solution 1336-21-6	General population	Inhalation	Acute/short term exposure - local effects		7,2 mg/m3	
ammonia, aqueous solution 1336-21-6	General population	Inhalation	Long term exposure - systemic effects		23,8 mg/m3	
ammonia, aqueous solution 1336-21-6	General population	Inhalation	Long term exposure - local effects		2,8 mg/m3	
ammonia, aqueous solution 1336-21-6	General population	oral	Acute/short term exposure - systemic effects		6,8 mg/kg	
ammonia, aqueous solution 1336-21-6	General population	oral	Long term exposure - systemic effects		6,8 mg/kg	
2,2',2''-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	Workers	inhalation	Long term exposure - local effects		0,2 mg/m3	

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

Engineering controls:

Ensure good ventilation/extraction.

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;  $\geq 1$  mm thickness) or natural rubber (NR;  $\geq 1$  mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Polychloroprene (CR;  $\geq 1$  mm thickness) or natural rubber (NR;  $\geq 1$  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:**

Protective goggles

Protective eye equipment should conform to EN166.

**Skin protection:**

Suitable protective clothing

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 liquid black
Odor	ammoniacal
Odour threshold	No data available / Not applicable
pH (20 °C (68 °F); Conc.: 100 % product)	10,5 - 11,4
Initial boiling point	100 °C (212 °F)
Flash point	No flash point up to 100°C. Aqueous preparation.
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density (20 °C (68 °F))	1,127 g/cm <sup>3</sup>
Bulk density	No data available / Not applicable
Viscosity (Brookfield; Instrument: RVT; 20 °C (68 °F); speed of rotation: 20 min-1)	12.000 - 18.000 mPa.s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Miscible
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	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**

None if used for intended purpose.

**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**

None if used properly.

**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.

**Sensitizing:**

May cause allergic reaction.

**Acute oral toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
1,3,5-Tris(2-hydroxyethyl)hexahydro-1,3,5-triazine 4719-04-4	LD50	1.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)

**Acute inhalative toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
1,3,5-Tris(2-hydroxyethyl)hexahydro-1,3,5-triazine 4719-04-4	LC50	0,371 mg/l	aerosol	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

**Acute dermal toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
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**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
ammonia, aqueous solution 1336-21-6	corrosive		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
1,3,5-Tris(2-hydroxyethyl)hexahydro-1,3,5-triazine 4719-04-4	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
ammonia, aqueous solution 1336-21-6	corrosive			not specified

**Respiratory or skin sensitization:**

Hazardous components CAS-No.	Result	Test type	Species	Method
ammonia, aqueous solution 1336-21-6	not sensitising	not specified	guinea pig	not specified
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4	sensitising	Open epicutaneo us test	guinea pig	not specified

**Germ cell mutagenicity:**

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
ammonia, aqueous solution 1336-21-6	negative	bacterial reverse mutation assay (e.g Ames test)	not specified		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
ammonia, aqueous solution 1336-21-6	negative	not specified		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified

**Carcinogenicity:**

Hazardous components CAS-No.	Result	Species	Sex	Exposure timeFrequency of treatment	Route of application	Method
ammonia, aqueous solution 1336-21-6	not carcinogenic	rat		104 w daily	oral: unspecified	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

**Reproductive toxicity:**

Hazardous substances CAS-No.	Result / Classification	Species	Exposure time	Species	Method
ammonia, aqueous solution 1336-21-6	NOAEL P = 408 mg/kg	screening oral: unspecified		rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

**Repeated dose toxicity**

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4	LOAEL=100 mg/kg	oral: gavage	12 weeks once daily 5 times a week	rat	EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral))
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4	NOAEL=30 mg/kg	oral: gavage	12 weeks once daily 5 times a week	rat	EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral))
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4		inhalation: aerosol	6 hours per day, on 5 consecut	rat	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)

**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.

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
ammonia, aqueous solution 1336-21-6	LC50	0,16 - 1,1 mg/l	Fish	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)
	NOEC	< 0,048 mg/l	Fish	31 d	Channel catfish	OECD Guideline 215 (Fish, Juvenile Growth Test)
ammonia, aqueous solution 1336-21-6	EC50	25,4 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
ammonia, aqueous solution 1336-21-6	EC50	> 1.000 mg/l	Algae	72 h	Skeletonema costatum	ISO 10253 (Water quality)
	NOEC	1.000 mg/l	Algae	72 h	Skeletonema costatum	ISO 10253 (Water quality)
ammonia, aqueous solution 1336-21-6	NOEC	0,79 mg/l	chronic Daphnia	96 h	Daphnia magna	EPA OPPTS 850.1300 (Daphnid Chronic Toxicity Test)
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4	LC50	16,07 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
	EC50	11,9 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4	NOEC	1,56 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	6,66 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4	EC20	170 mg/l	Bacteria	30 min	activated sludge, domestic	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

**12.2. Persistence and degradability**

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4	readily biodegradable	aerobic	> 90 - 100 %	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)

**12.3. Bioaccumulative potential / 12.4. Mobility in soil**

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
ammonia, aqueous solution 1336-21-6	-1,14					EU Method A.8 (Partition Coefficient)
1,3,5-Tris(2- hydroxyethyl)hexahydro- 1,3,5-triazine 4719-04-4	-2				24 °C	EU Method A.8 (Partition Coefficient)

**12.5. Results of PBT and vPvB assessment**

Hazardous components CAS-No.	PBT/vPvB
ammonia, aqueous solution 1336-21-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
1,3,5-Tris(2-hydroxyethyl)hexahydro-1,3,5-triazine 4719-04-4	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

080120

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

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

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

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.4. Packing group

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.5. Environmental hazards

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 14.6. Special precautions for user

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

#### 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 product. Classification according to the mixture rules in German VwVwS regulation annex 4 from 27.July 2005

Storage class according to TRGS 510: 10

**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.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H330 Fatal if inhaled.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

**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.**