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

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BONDERITE L-GP EB 020A EU ACHESON known as DAG EB-020A EU

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

1.1. Product identifier
BONDERITE L-GP EB 020A EU ACHESON known as DAG EB-020A EU

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Battery coating

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
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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):
Serious eye irritation — Category 2
H319 Causes serious eye irritation.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:

Signal word: Warning

Hazard statement: H319 Causes serious eye irritation.

Supplemental information Contains Formaldehyde. May produce an allergic reaction.

Precautionary statement: Prevention P280 Wear eye protection/face protection.

2.3. Other hazards
None if used properly.

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
1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde, methylated 68002-20-0		1- < 5 %	Aquatic Chronic 3 H412
2-Methylpropan-1-ol 78-83-1	201-148-0 01-2119484609-23	1- < 3 %	Flam. Liq. 3 H226 STOT SE 3 H335 Skin Irrit. 2 H315 Eye Dam. 1 H318 STOT SE 3 H336
2-Dimethylaminoethanol 108-01-0	203-542-8 01-2119492298-24	0,1- < 1 %	Acute Tox. 3; Inhalation H331 Acute Tox. 4; Oral H302 Flam. Liq. 3 H226 Acute Tox. 4; Dermal H312 Skin Corr. 1B H314
Formaldehyde 50-00-0	200-001-8 01-2119488953-20	0,02- < 0,2 %	Carc. 1B H350 Muta. 2 H341 Acute Tox. 3; Dermal H311 Acute Tox. 3; Inhalation H331 Acute Tox. 3; Oral H301 Skin Corr. 1B H314 Skin Sens. 1 H317

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:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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
EYE: Irritation, conjunctivitis.

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:
Foam, extinguishing powder, carbon dioxide.
Water spray jet

Extinguishing media which must not be used for safety reasons:
High pressure waterjet

5.2. Special hazards arising from the substance or mixture
Non combustible - Danger of decomposition if exposed to heat.
Formation of toxic gases is possible during heating or in fires.

5.3. Advice for firefighters
Wear protective equipment.

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 skin and eye contact.
Danger of slipping on spilled product.

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).
Wash away residue with plenty of water.
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.
Use only in well-ventilated areas.

7.2. Conditions for safe storage, including any incompatibilities

Temperatures between + 5 °C and + 30 °C

7.3. Specific end use(s)

Battery coating

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Germany

Ingredient [Regulated substance]	ppm	mg/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
Graphite 7782-42-5			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Graphite 7782-42-5		10	Exposure limit(s):	2	TRGS 900
Graphite 7782-42-5		1,25	Exposure limit(s):		TRGS 900
2-Methylpropan-1-ol 78-83-1	100	310	Exposure limit(s):	1 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
2-Methylpropan-1-ol 78-83-1			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
2-Methylpropan-1-ol 78-83-1	aqua (freshwater)					0,4 mg/L	
2-Methylpropan-1-ol 78-83-1	aqua (marine water)					0,04 mg/L	
2-Methylpropan-1-ol 78-83-1	aqua (intermittent releases)					11 mg/L	
2-Methylpropan-1-ol 78-83-1	STP					10 mg/L	
2-Methylpropan-1-ol 78-83-1	sediment (freshwater)				1,52 mg/kg		
2-Methylpropan-1-ol 78-83-1	sediment (marine water)				0,152 mg/kg		
2-Methylpropan-1-ol 78-83-1	soil				0,0699 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
2-Methylpropan-1-ol 78-83-1	Workers	Inhalation	Long term exposure - local effects		310 mg/m3	
2-Methylpropan-1-ol 78-83-1	general population	Inhalation	Long term exposure - local effects		55 mg/m3	
2-Methylpropan-1-ol 78-83-1	general population	oral	Long term exposure - systemic effects		25 mg/kg bw/day	

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. 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.

Skin protection:
Wear protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid dispersion dark grey
Odor	alcohol-like
Odour threshold	No data available / Not applicable
pH (20 °C (68 °F); Conc.: 100 % product)	9,5 - 9,8
Initial boiling point	No data available / Not applicable
Flash point	Not applicable
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	No data available / Not applicable
Bulk density	No data available / Not applicable
Viscosity (; 20 °C (68 °F); speed of rotation: 20 min-1)	500 - 1.000 mPa.s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable

Solubility (qualitative) (20 °C (68 °F); 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 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Eye irritation:
Causes serious eye irritation.

Sensitizing:
May cause allergic reaction.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
2-Methylpropan-1-ol 78-83-1	LD50	> 2.830 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
2-Dimethylaminoethanol 108-01-0	LD50	1.182,7 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Formaldehyde 50-00-0	Acute toxicity estimate (ATE)	100 mg/kg	oral			Expert judgement
Formaldehyde 50-00-0	LD50	800 mg/kg			rat	

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
2-Methylpropan-1-ol 78-83-1	LC50	> 6,5 mg/l		4 h	rat	BASF Test
2-Dimethylaminoethanol 108-01-0	Acute toxicity estimate (ATE)	5,98 mg/l	Aerosol			Expert judgement
2-Dimethylaminoethanol 108-01-0	LC50	1641 ppm	Vapor.	4 d	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
2-Methylpropan-1-ol 78-83-1	LD50	2.460 mg/kg	dermal		rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Formaldehyde 50-00-0	LD50	270 mg/kg	dermal		rabbit	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
2-Methylpropan-1-ol 78-83-1	moderately irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
2-Dimethylaminoethanol 108-01-0	corrosive		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
2-Methylpropan-1-ol 78-83-1	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
2-Dimethylaminoethanol 108-01-0	highly irritating		rabbit	

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
2-Dimethylaminoethanol 108-01-0	ambiguous		mouse	

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
2-Methylpropan-1-ol 78-83-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		
2-Dimethylaminoethanol 108-01-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		
Formaldehyde 50-00-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		
	negative	bacterial reverse mutation assay (e.g Ames test)	without		Ames Test

Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
2-Methylpropan-1-ol 78-83-1	NOAEL=> 16000 ppm	oral: drinking water	3 Monatekontinuierlich	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
2-Dimethylaminoethanol 108-01-0	NOAEL=0,18	oral: feed	90 daysdaily	rat	
2-Dimethylaminoethanol 108-01-0	LOAEL=0,89	oral: feed	90 daysdaily	rat	
2-Dimethylaminoethanol 108-01-0	NOAEL=24 mg/l	inhalation	13 weeks6 h/d, 5 d/w	rat	

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 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Other adverse effects:
Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
2-Methylpropan-1-ol 78-83-1	LC50	1.430 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Methylpropan-1-ol 78-83-1	EC50	1.030 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Methylpropan-1-ol 78-83-1	EC0	350 mg/l	Algae			OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	> 350 mg/l	Algae			OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Methylpropan-1-ol 78-83-1	NOEC	4 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
2-Dimethylaminoethanol 108-01-0	LC50	81 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Dimethylaminoethanol 108-01-0	EC50	98,77 mg/l	Daphnia	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
2-Dimethylaminoethanol 108-01-0	EC50	35 mg/l	Algae	72 h	Scenedesmus sp.	OECD Guideline 201 (Alga, Growth Inhibition Test)
Formaldehyde 50-00-0	LC50	6,7 mg/l	Fish	96 h	Morone saxatilis	OECD Guideline 203 (Fish, Acute Toxicity Test)
Formaldehyde 50-00-0	EC50	42 mg/l	Daphnia	24 h	Daphnia magna	
Formaldehyde 50-00-0	EC50	4,5 mg/l	Algae	48 h		OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method

2-Methylpropan-1-ol 78-83-1	readily biodegradable	aerobic	> 90 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Formaldehyde 50-00-0	readily biodegradable	aerobic	93 - 95 %	EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
2-Methylpropan-1-ol 78-83-1	0,79				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
2-Dimethylaminoethanol 108-01-0	-0,55				23 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Formaldehyde 50-00-0	0,35					

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
2-Methylpropan-1-ol 78-83-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2-Dimethylaminoethanol 108-01-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Formaldehyde 50-00-0	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. Packaging 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 73/78 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 (1999/13/EC) 1,6 %

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:

H226 Flammable liquid and vapor.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
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.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H412 Harmful 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.