



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

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BONDERITE L-FG 31 ACHESON known as DELTAFORGE 31

SDS No. : 364187  
V003.0

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

#### 1.1. Product identifier

BONDERITE L-FG 31 ACHESON known as DELTAFORGE 31

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

Intended use:

Metal forming 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

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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):

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 Isothiazolinone mixture 3:1 (CIT/MIT). 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:

Pigment  
alkalis

##### 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
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9		0,0001 - < 0,0015 % ( 1 ppm - < 15 ppm)	Acute Tox. 2 H330 Acute Tox. 2 H310 Acute Tox. 3 H301 Skin Corr. 1B H314 Skin Sens. 1A H317 Aquatic Acute 1 H400 Aquatic Chronic 1 H410 M factor (Acute Aquat Tox): 100 M factor (Chron Aquat Tox): 10

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:

Immediately wash skin thoroughly with soap and water.  
In case of adverse health effects seek medical advice.

##### 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.

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).

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.

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.

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

Metal forming product

<b>SECTION 8: Exposure controls/personal protection</b>
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**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				

**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/m <sup>3</sup>	
ammonia, aqueous solution 1336-21-6	Workers	Inhalation	Acute/short term exposure - local effects		36 mg/m <sup>3</sup>	
ammonia, aqueous solution 1336-21-6	Workers	Inhalation	Long term exposure - systemic effects		47,6 mg/m <sup>3</sup>	
ammonia, aqueous solution 1336-21-6	Workers	Inhalation	Long term exposure - local effects		14 mg/m <sup>3</sup>	
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/m <sup>3</sup>	
ammonia, aqueous solution 1336-21-6	General population	Inhalation	Acute/short term exposure - local effects		7,2 mg/m <sup>3</sup>	
ammonia, aqueous solution 1336-21-6	General population	Inhalation	Long term exposure - systemic effects		23,8 mg/m <sup>3</sup>	
ammonia, aqueous solution 1336-21-6	General population	Inhalation	Long term exposure - local effects		2,8 mg/m <sup>3</sup>	
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	

**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:**

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))	11,0 - 11,4
Melting point	0 °C (32 °F)
Solidification temperature	No data available / Not applicable
Initial boiling point	100 °C (212 °F)
Flash point	Not available.
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))	124 mbar
Vapour pressure (55 °C (131 °F))	158 mbar
Relative vapour density:	No data available / Not applicable
Density (20 °C (68 °F))	1,090 g/cm <sup>3</sup>
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	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 (Brookfield; Instrument: RVT; 20 °C (68 °F); speed of rotation: 20 min <sup>-1</sup> )	250 - 350 mPa.s
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

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

### General toxicological information:

To the best of our knowledge no harmful effects are to be expected if the product is handled and used properly.

### 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
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	LD50	53 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
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	LD50	87,12 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

**Acute inhalative 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	Test atmosphere	Exposure time	Species	Method
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	LC50	0,171 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

**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
ammonia, aqueous solution 1336-21-6	corrosive		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**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
ammonia, aqueous solution 1336-21-6	corrosive			not specified

**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
ammonia, aqueous solution 1336-21-6	not sensitising	not specified	guinea pig	not specified

**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
ammonia, aqueous solution 1336-21-6	negative	bacterial reverse mutation assay (e.g Ames test)	not specified		OECD Guideline 471 (Bacterial Reverse Mutation Assay)

**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
ammonia, aqueous solution 1336-21-6	not carcinogenic	oral: feed	104 w daily	rat		OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

**Reproductive toxicity:**

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

<b>Hazardous substances CAS-No.</b>	<b>Result / Value</b>	<b>Test type</b>	<b>Route of application</b>	<b>Species</b>	<b>Method</b>
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)

**STOT-single exposure:**

No data available.

**STOT-repeated exposure::**

No data available.

**Aspiration hazard:**

No data available.

## SECTION 12: Ecological information

### General ecological information:

Do not empty into drains / surface water / ground water.  
Inorganic product: Decomposition not affected.

### 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
ammonia, aqueous solution 1336-21-6	LC50	0,16 - 1,1 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)
ammonia, aqueous solution 1336-21-6	NOEC	< 0,048 mg/l	31 d	Channel catfish	OECD Guideline 215 (Fish, Juvenile Growth Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	LC50	0,22 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOEC	0,098 mg/l	28 d	Oncorhynchus mykiss	OECD Guideline 210 (fish early lite stage toxicity test)

#### 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
ammonia, aqueous solution 1336-21-6	EC50	25,4 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	EC50	0,1 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
ammonia, aqueous solution 1336-21-6	NOEC	0,79 mg/l	96 h	Daphnia magna	EPA OPPTS 850.1300 (Daphnid Chronic Toxicity Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOEC	0,0036 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

#### 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
ammonia, aqueous solution 1336-21-6	EC50	> 1.000 mg/l	72 h	Skeletonema costatum	ISO 10253 (Water quality)
ammonia, aqueous solution 1336-21-6	NOEC	1.000 mg/l	72 h	Skeletonema costatum	ISO 10253 (Water quality)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	EC50	0,0052 mg/l	48 h	Skeletonema costatum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOEC	0,00064 mg/l	48 h	Skeletonema costatum	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
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	EC20	0,97 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

#### 12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9		aerobic	97 %	48 h	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	readily biodegradable		> 60 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

#### 12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentratio n factor (BCF)	Exposure time	Temperature	Species	Method
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	3,6			calculation	not specified

#### 12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
ammonia, aqueous solution 1336-21-6	-1,14		EU Method A.8 (Partition Coefficient)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	-0,71 - 0,75	20 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

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

Hazardous substances CAS-No.	PBT / vPvB
ammonia, aqueous solution 1336-21-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	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



**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.
- H301 Toxic if swallowed.
- H310 Fatal in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H330 Fatal if inhaled.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- 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.**