



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

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BONDERITE L-FG F 31 ACHESON known as DELTAFORGE F-31

SDS No. : 364191
V006.1

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

1.1. Product identifier

BONDERITE L-FG F 31 ACHESON known as DELTAFORGE F-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

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Germany

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For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or www.henkel-adhesives.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

Contains: 2,2',2''-(hexahydro-1,3,5- triazine-1,3,5-triyl)triethanol; Isothiazolinone mixture (C(M)IT/MIT (3:1)) May produce an allergic reaction.
Safety data sheet available on request.

2.3. Other hazards

None if used properly.

Following substances are present in a concentration \geq the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration \geq the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

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.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4 225-208-0 01-2119529226-41	0,01- < 0,1 %	Acute Tox. 4, Oral, H302 Acute Tox. 2, Inhalation, H330 Skin Sens. 1, H317 Eye Irrit. 2, H319 STOT RE 1, Inhalation, H372	Skin Sens. 1; H317; C \geq 0,1 %	
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9 01-2120764691-48	0,0001- < 0,0015 % (1 ppm- < 15 ppm)	Acute Tox. 2, Dermal, H310 Skin Corr. 1C, H314 Aquatic Chronic 1, H410 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Acute Tox. 2, Inhalation, H330 Eye Dam. 1, H318 Acute Tox. 3, Oral, H301	Eye Dam. 1; H318; C \geq 0,6 % Eye Irrit. 2; H319; C 0,06 - < 0,6 % Skin Corr. 1C; H314; C \geq 0,6 % Skin Irrit. 2; H315; C 0,06 - < 0,6 % Skin Sens. 1A; H317; C \geq 0,0015 % ===== M acute = 100 M chronic = 100	

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.

7.3. Specific end use(s)

Metal forming product

SECTION 8: Exposure controls/personal protection

8.1. Control parameters**Occupational Exposure Limits**

Valid for
Germany

Ingredient [Regulated substance]	ppm	mg/m ³	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		1,25	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Graphite 7782-42-5		10	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
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				
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	aqua (freshwater)		0,00339 mg/l				
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	aqua (marine water)		0,00339 mg/l				
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	sewage treatment plant (STP)		0,23 mg/l				
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	sediment (freshwater)				0,027 mg/kg		
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	sediment (marine water)				0,027 mg/kg		
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Soil				0,01 mg/kg		
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	aqua (intermittent releases)		0,00339 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
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/m ³	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Workers	inhalation	Long term exposure - local effects		0,02 mg/m ³	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Workers	inhalation	Acute/short term exposure - local effects		0,04 mg/m ³	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	General population	inhalation	Long term exposure - local effects		0,02 mg/m ³	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	General population	inhalation	Acute/short term exposure - local effects		0,04 mg/m ³	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	General population	oral	Long term exposure - systemic effects		0,09 mg/kg	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	General population	oral	Acute/short term exposure - systemic effects		0,11 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 eye equipment should conform to EN166.

Protective goggles

Skin protection:

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

Suitable protective clothing

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

Physical state	liquid
Delivery form	liquid
Colour	black
Odor	ammoniacal
Melting point	Not applicable, Product is a liquid
Solidification temperature	0 °C (32 °F) Water based.
Initial boiling point	100 °C (212 °F)
Flammability	The product is not flammable.
Explosive limits	Not applicable, The product is not flammable.
Flash point	Not applicable, No flash point up to 100°C. Aqueous preparation., Aqueous solution
Auto-ignition temperature	Not applicable, The product is not flammable.
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH (20 °C (68 °F); Conc.: 100 % product)	11,0 - 11,4 no method
Viscosity (kinematic) (40 °C (104 °F);)	> 20,5 mm ² /s thixotropic
Viscosity, dynamic (Brookfield; Instrument: RVT; 20 °C (68 °F); speed of rotation: 20 min ⁻¹)	700 - 1.000 mPa.s no method
Solubility (qualitative) (Solvent: Water)	Miscible
Partition coefficient: n-octanol/water	Not applicable Mixture
Vapour pressure (20 °C (68 °F))	23,4 hPa Values referring to water
Density (20 °C (68 °F))	1,090 g/cm ³ no method
Relative vapour density: (20 °C)	< 1
Particle characteristics	Not applicable Product is a liquid

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with strong acids.

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:

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 hazard classes as defined in Regulation (EC) No 1272/2008

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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	LD50	1.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	LD50	66 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	LD50	> 4.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	LC50	0,371 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	corrosive	4 h	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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	Category 1 (irreversible effects on the eye)		rabbit	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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	sensitising	Mouse local lymphnode assay (LLNA)	mouse	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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	positive	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	ambiguous	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	positive	in vitro mammalian chromosome aberration test	with and without		EPA OPP 84-2 (Mutagenicity Testing)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	positive	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro	not applicable		OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	oral: gavage		mouse	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	oral: feed		Drosophila melanogaster	OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	oral: gavage		rat	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	oral: gavage		rat	EPA OPP 84-2 (Mutagenicity Testing)

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
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	not carcinogenic	oral: drinking water	2 y daily	rat	male/female	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.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	NOAEL P 30 ppm NOAEL F1 300 ppm NOAEL F2 300 ppm	Two generation study	oral: drinking water	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
2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4	NOAEL 100 mg/kg	oral: gavage	12 weeks daily, 5 d/week	rat	EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral))
2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4	NOAEL 64 mg/kg	oral: gavage	3 months continuously	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
2,2',2''-(hexahydro-1,3,5- triazine-1,3,5- triy)triethanol 4719-04-4	NOAEL 250 mg/kg	dermal	90 d 6 h/d, 5 d/week	rat	EPA OPPTS 870.3250 (Subchronic Dermal Toxicity 90 Days)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	NOAEL 16,3 mg/kg	oral: drinking water	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	NOAEL 0.34 mg/m3	inhalation: aerosol	90 d 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	NOAEL 2,625 mg/kg	dermal	90 d 6 h/d	rat	EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days)

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

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

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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	LC50	16,07 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	LC50	0,22 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	EC50	11,9 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	EC50	0,12 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
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	NOEC	1,56 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	EC50	6,66 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	NOEC	0,00064 mg/l	48 h	Skeletonema costatum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	EC50	0,0063 mg/l	72 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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	EC20	170 mg/l	30 min	activated sludge, domestic	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	readily biodegradable	aerobic	> 90 - 100 %	8 d	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	inherently biodegradable	aerobic	100 %	28 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	readily biodegradable	aerobic	> 60 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	3,6			calculation	QSAR (Quantitative Structure Activity Relationship)

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	-2	24 °C	EU Method A.8 (Partition Coefficient)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol 4719-04-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. 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

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.

080120

SECTION 14: Transport information

- 14.1. UN number or ID 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. Maritime transport in bulk according to IMO instruments**
not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EU)	0 %

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Germany):

WGK:	WGK 1: slightly hazardous to water (Ordinance on facilities for handling substances that are hazardous to water (AwSV)) Classification according to AwSV, Annex 1 (5.2)
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:

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
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.
H410 Very toxic to aquatic life with long lasting effects.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

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.

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