

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Opticool 462(E)

Revision date: 12.10.2017

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

##### 1.1. Product identifier

Opticool 462(E)

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

###### Use of the substance/mixture

Metal working fluids

###### Uses advised against

No information available.

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

Company name:	Chesterton International GmbH	
Street:	Am Lenzenfleck 23	
Place:	DE-85737 Ismaning GERMANY	
Telephone:	+49 89 99 65 46 - 0	Telefax: +49 89 99 65 46 - 50
e-mail:	eu-sds@chesterton.com	
e-mail (Contact person):	eu-sds@chesterton.com	
Internet:	www.chesterton.com	
Responsible Department:	eu-sds@chesterton.com	

##### 1.4. Emergency telephone number:

+49(0) 551 - 1 92 40 (GIZ-Nord, 24h)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Regulation (EC) No. 1272/2008

Hazard categories:

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1

Hazard Statements:

Causes serious eye irritation.

May cause an allergic skin reaction.

##### 2.2. Label elements

###### Regulation (EC) No. 1272/2008

###### Hazard components for labelling

a,a',a''-trimethyl-1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol

Signal word: Warning

Pictograms:



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#### Hazard statements

H317 May cause an allergic skin reaction.

#### Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P302+P352 IF ON SKIN: Wash with plenty of water.

#### 2.3. Other hazards

No information available.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
64742-53-6	Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic			15-20 %
	265-156-6	649-466-00-2	01-2119480375-34	
	Asp. Tox. 1; H304			
10043-35-3	Boric acid			< 5,5 %
	233-139-2	005-007-00-2	01-2119486683-25	
	Repr. 1B; H360FD			
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether			1-5 %
	203-961-6	603-096-00-8	01-2119475104-44	
	Eye Irrit. 2; H319			
25254-50-6	a,a',a''-trimethyl-1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol			1-5 %
	246-764-0			
	Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2A, Skin Sens. 1; H332 H302 H315 H319 H317			

Full text of H and EUH statements: see section 16.

#### Further Information

No information available.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

Remove victim out of the danger area. If unconscious place in recovery position and seek medical advice.

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When in doubt or if symptoms are observed, get medical advice.

#### **After inhalation**

Remove casualty to fresh air and keep warm and at rest. Where appropriate artificial ventilation. In case of respiratory tract irritation, consult a physician.

#### **After contact with skin**

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.

#### **After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

#### **After ingestion**

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person or a person with cramps. Where appropriate artificial ventilation. Do NOT induce vomiting.

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

No information available.

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

First Aid, decontamination, treatment of symptoms.

### SECTION 5: Firefighting measures

#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

Dry extinguishing powder. Carbon dioxide (CO<sub>2</sub>). alcohol resistant foam. Water spray jet

##### **Unsuitable extinguishing media**

High power water jet

#### **5.2. Special hazards arising from the substance or mixture**

Nitrogen oxides (NO<sub>x</sub>), Carbon dioxide (CO<sub>2</sub>), Carbon monoxide

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

Special protective equipment for firefighters: Chemical protection clothing

In case of fire: Wear self-contained breathing apparatus.

#### **Additional information**

In case of fire and/or explosion do not breathe fumes. Remove persons to safety. Move undamaged containers from immediate hazard area if it can be done safely. Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

#### **6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protection equipment. Remove persons to safety. Avoid contact with skin, eyes and clothes.

Provide adequate ventilation. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Ventilate affected area.

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#### **6.2. Environmental precautions**

Cover drains. Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

#### **6.3. Methods and material for containment and cleaning up**

For containment:

Cover drains. Stop and contain spill/release if it can be done safely. If this cannot be done, allow fire to burn under control. Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up:

Wipe up with absorbent material (eg. cloth, fleece). Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal. Ventilate affected area. Clean contaminated articles and floor according to the environmental legislation.

#### **6.4. Reference to other sections**

See protective measures under point 7 and 8.

SECTION 12: Ecological information

Disposal: see section 13

## **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

Wear personal protection equipment (refer to section 8). Use only in well-ventilated areas. Handle and open container with care. Always close containers tightly after the removal of product. Avoid contact with skin, eyes and clothes. Do not breathe gas/fumes/vapour/spray. Special danger of slipping by leaking/spilling product.

##### **Advice on protection against fire and explosion**

Usual measures for fire prevention.

##### **Further information on handling**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets.

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

##### **Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Only use containers specifically approved for the substance/product. Protect containers against damage.

##### **Advice on storage compatibility**

Do not store together with: Food and feedingstuffs

Keep away from: Oxidising agent

##### **Further information on storage conditions**

Recommended storage temperature: 5-40°C

Protect against: Heat, UV-radiation/sunlight, Frost

storage stability: ~ 12 Mon

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

No information available.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
112-34-5	2-(2-Butoxyethoxy)ethanol	10	67.5		TWA (8 h)	WEL
		15	101.2		STEL (15 min)	WEL

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#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
64742-53-6	Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic			
Worker DNEL, long-term		inhalation	systemic	2,7 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	local	5,6 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	1 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	1,2 mg/m <sup>3</sup>
Consumer DNEL, long-term		oral	systemic	0,74 mg/kg bw/day
10043-35-3	Boric acid			
Worker DNEL, long-term		inhalation	systemic	8,3 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	392 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	4,15 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	196 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,98 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,98 mg/kg bw/day
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether			
Worker DNEL, long-term		inhalation	systemic	67,5 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	local	67,5 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	local	101,2 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	83 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	40,5 mg/m <sup>3</sup>
Consumer DNEL, long-term		inhalation	local	40,5 mg/m <sup>3</sup>
Consumer DNEL, acute		inhalation	local	60,7 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	50 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	5 mg/kg bw/day

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#### PNEC values

CAS No	Substance	Value
Environmental compartment		
64742-53-6	Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic	
Secondary poisoning		9,33 mg/kg
10043-35-3	Boric acid	
Freshwater		2,9 mg/l
Freshwater (intermittent releases)		13,7 mg/l
Marine water		2,9 mg/l
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		5,7 mg/kg
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	
Freshwater		1,1 mg/l
Freshwater (intermittent releases)		11 mg/l
Marine water		0,11 mg/l
Freshwater sediment		4,4 mg/kg
Marine sediment		0,44 mg/kg
Secondary poisoning		56 mg/kg
Micro-organisms in sewage treatment plants (STP)		200 mg/l
Soil		0,32 mg/kg

#### 8.2. Exposure controls

##### Appropriate engineering controls

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. Technical measures and the application of suitable work processes have priority over personal protection equipment.

##### Protective and hygiene measures

When using do not eat, drink, smoke, sniff.

Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Wash contaminated clothing prior to re-use. Apply skin care products after work.

##### Eye/face protection

Suitable eye protection:

Eye glasses with side protection  
goggles

##### Hand protection

Tested protective gloves must be worn: DIN EN 374

NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)

Thickness of the glove material  $\geq 0,7$  mm

Breakthrough times and swelling properties of the material must be taken into consideration.

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For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Wearing time with occasional contact (splashes): max. 480 min. (NBR (Nitrile rubber))

Wearing time with permanent contact 240 - 480 min (NBR (Nitrile rubber))

Observe the wear time limits as specified by the manufacturer.

#### Skin protection

Wear suitable protective clothing.

#### Respiratory protection

No special measures are necessary. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Respiratory protection necessary at: insufficient ventilation, aerosol or mist formation

#### Environmental exposure controls

No special measures are necessary.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	light brown
Odour:	characteristic

	Test method
pH-Value (at 20 °C):	8,8-9 DIN 51369

#### Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	>100 °C
Sublimation point:	not determined
Softening point:	not determined
Pour point:	<-20 °C
Flash point:	>140 °C DIN ISO 2592

#### Flammability

Solid:	not determined
Gas:	not determined

#### Explosive properties

not explosive according to EU A.14

Lower explosion limits:	0,6 vol. %
Upper explosion limits:	6,5 vol. %
Ignition temperature:	>240 °C

#### Auto-ignition temperature

Solid:	not determined
Gas:	not determined



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Decomposition temperature:

not determined

#### **Oxidizing properties**

No information available.

Vapour pressure:

not determined

Density (at 15 °C):

0,98 g/cm<sup>3</sup>

Water solubility:  
(at 20 °C)

miscible

#### **Solubility in other solvents**

No information available.

Partition coefficient:

not applicable

Viscosity / kinematic:  
(at 40 °C)

~150 mm<sup>2</sup>/s DIN EN ISO 3104

#### **9.2. Other information**

No information available.

### SECTION 10: Stability and reactivity

#### **10.1. Reactivity**

The product is stable under storage at normal ambient temperatures.

#### **10.2. Chemical stability**

The substance is chemically stable under recommended conditions of storage, use and temperature.

#### **10.3. Possibility of hazardous reactions**

Exothermic reaction with: Acid

#### **10.4. Conditions to avoid**

No information available.

#### **10.5. Incompatible materials**

Oxidising agent, strong

#### **10.6. Hazardous decomposition products**

Does not decompose when used for intended uses.

### SECTION 11: Toxicological information

#### **11.1. Information on toxicological effects**

##### **Acute toxicity**

Based on available data, the classification criteria are not met.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64742-53-6	Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402
10043-35-3	Boric acid				
	oral	LD50 3450 mg/kg	Rat	Toxicology and Applied Pharmacology 23:	other: No data
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1982)	other: FIFRA
	inhalative (4 h) aerosol	LC50 > 2,12 mg/l	Rat	Study report (1997)	OECD Guideline 403
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether				
	oral	LD50 2410 mg/kg	Mouse	Study report (1981)	OECD Guideline 401
	dermal	LD50 2764 mg/kg	Rabbit	Study report (1981)	OECD Guideline 402
25254-50-6	a,a',a''-trimethyl-1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol				
	oral	ATE 500 mg/kg			
	inhalative vapour	ATE 11 mg/l			
	inhalative aerosol	ATE 1,5 mg/l			

#### Irritation and corrosivity

Based on available data, the classification criteria are not met.

#### Sensitising effects

May cause an allergic skin reaction. (a,a',a''-trimethyl-1,3,5-triazine-1,3,5(2H,4H,6H)-triethanol)

#### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
64742-53-6	Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic					
	Fish toxicity	NOEC >= 1000 mg/l	14 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a
10043-35-3	Boric acid					
	Acute fish toxicity	LC50 79,7 mg/l	96 h	Pimephales promelas	Study report (2010)	other: ASTM E729-95 Standard Guide for C
	Acute algae toxicity	ErC50 66 mg/l	72 h	Phaeodactylum tricorutum	Study report (2011)	ISO 10253
	Acute crustacea toxicity	EC50 109 mg/l	48 h	Ceriodaphnia dubia	Study report (2010)	other: ASTM E729-95 Standard Guide for C
	Fish toxicity	NOEC 11,2 mg/l	32 d	Pimephales promelas	Study report (2010)	other: ASTM E1241-05 Standard Guide for
	Algae toxicity	NOEC 17,5 mg/l	3 d	Pseudokirchneriella subcapitata	Study report (2000)	OECD Guideline 201
	Crustacea toxicity	NOEC 33,1 mg/l	28 d	Americamysis bahia	Study report (2011)	EPA OPPTS 850.1350
	Acute bacteria toxicity	(> 10000 mg/l)	3 h	activated sludge of a predominantly domestic sewage	Study report (2001)	OECD Guideline 209
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether					
	Acute fish toxicity	LC50 1300 mg/l	96 h	Lepomis macrochirus	J Haz Mat, 1, p303-18 (1977)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 100 mg/l	96 h	Desmodesmus subspicatus	Study report (1992)	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	Study report (1992)	EU Method C.2

#### 12.2. Persistence and degradability

No information available.

#### 12.3. Bioaccumulative potential

No information available.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
10043-35-3	Boric acid	-1,09
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	1

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#### BCF

CAS No	Chemical name	BCF	Species	Source
10043-35-3	Boric acid	0,558	Oncorhynchus nerka	Water Research Vol.

#### 12.4. Mobility in soil

No information available.

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

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

#### 12.6. Other adverse effects

No information available.

#### Further information

Do not allow uncontrolled discharge of product into the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Advice on disposal

Dispose of waste according to applicable legislation.

##### Contaminated packaging

Dispose of waste according to applicable legislation.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### Inland waterways transport (ADN)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### Marine transport (IMDG)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### Air transport (ICAO-TI/IATA-DGR)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
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**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.

**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.

**14.4. Packing group:** No dangerous good in sense of this transport regulation.

#### **14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

#### **14.6. Special precautions for user**

No information available.

#### **14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

No information available.

### SECTION 15: Regulatory information

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

##### **EU regulatory information**

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):

Boric acid

Restrictions on use (REACH, annex XVII):

Entry 28: Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic

Entry 30: Boric acid

Entry 55: 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether

##### **National regulatory information**

Water contaminating class (D): 1 - slightly water contaminating

#### **15.2. Chemical safety assessment**

For the following substances of this mixture a chemical safety assessment has been carried out:

Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic

Boric acid

2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether

### SECTION 16: Other information

#### **Changes**

This data sheet contains changes from the previous version in section(s): 1.

#### **Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer

(Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

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ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures,  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
EC50: Effectice concentration, 50 percent  
DNEL: Derived No Effect Level  
PNEC: Predicted No Effect Concentration  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

#### Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method

#### Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360FD	May damage fertility. May damage the unborn child.

#### Further Information

This information is based solely on data provided by suppliers of the materials used, not on the mixture itself.  
No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose.  
The user must make their own determination as to suitability.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*