

Safety Data Sheet

MAPEGROUT HI-FLOW

Safety Data Sheet dated: 04/02/2020 - version 3



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

1.1. Product identifier

Mixture identification:

Trade name: MAPEGROUT HI-FLOW

Trade code: 901375

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

Recommended use: Ready prepared cement mortar

Uses advised against: Data not available

1.3. Details of the supplier of the safety data sheet

Company: MAPEI U.K. Ltd - Mapei House Steel Park Road

Halesowen - West Midlands B62 8HD

www.mapei.co.uk (office hour 8:30-17:30)

Responsible: sicurezza@mapei.it

1.4. Emergency telephone number

call NHS 111 or a doctor/OHES Environmental Ltd +44(0)1684 299 886

phone: +44(0)121 508 6970 - fax: +44(0)121 5086 960

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Skin Irrit. 2 Causes skin irritation.

Eye Dam. 1 Causes serious eye damage.

Skin Sens. 1B May cause an allergic skin reaction.

STOT SE 3 May cause respiratory irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) n. 1272/2008 (CLP)

Pictograms and Signal Words



Danger

Hazard statements:

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

Precautionary statements:

P261 Avoid breathing dust.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

Special Provisions:

EUH208 Contains calcium aluminate sulfate. May produce an allergic reaction.

Contains:

Portland cement, Cr(VI) < 2 ppm
calcium oxide

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT/vPvB Ingredients are present

Other Hazards: No other hazards

Prolonged exposition and/or intensive inhalation of respirable free crystalline silica (average diameter less than 10 micron in accordance with ACGIH) can cause pulmonary fibrosis commonly referred to as silicosis.

This preparation contains cement. Contact between cement and body fluids (e.g. sweat and eye fluids) may cause irritation or burns.

SECTION 3: Composition/information on ingredients**3.1. Substances**

N.A.

3.2. Mixtures

Mixture identification: MAPEGROUT HI-FLOW

Hazardous components within the meaning of the CLP regulation and related classification:

Quantity	Name	Ident. Numb.	Classification	Registration Number
≥50 - <75 %	free crystalline silica (Ø >10 µ)	CAS:14808-60-7 EC:238-878-4		
≥25 - <50 %	Portland cement, Cr(VI) < 2 ppm	CAS:65997-15-1 EC:266-043-4	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Dam. 1, H318; STOT SE 3, H335	
≥1 - <2.5 %	calcium oxide	CAS:1305-78-8 EC:215-138-9	STOT SE 3, H335; Skin Irrit. 2, H315; Eye Dam. 1, H318	01-2119475325-36-XXXX
≥0.25 - <0.49 %	calcium aluminate sulfate	CAS:12005-25-3	Skin Sens. 1, H317	
≥0.025 - <0.05 %	free crystalline silica (Ø <10 µ)	CAS:14808-60-7 EC:238-878-4	STOT RE 2, H373	

SECTION 4: First aid measures**4.1. Description of first aid measures**

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose of safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

(see paragraph 4.1)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

Use suitable breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Take up mechanically and dispose of according to local/state/federal regulations

Scoop into containers and seal for disposal.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m ³	Long Term ppm	Short Term mg/m ³	Short Term ppm	Behaviour	Note
free crystalline silica (Ø >10 µ)	NDS	POLAND		0,300					frakcja respirabilna
	National	DENMARK		0,3					DENMARK, inhalable aerosol inhalable

Portland cement, Cr(VI) < 2 ppm				aerosol
	National	DENMARK	0,100	DENMARK, respirable aerosol respirable aerosol
	SUVA	GERMANY	0,150	50 µg/m ³ (Partikel Durchmesser < 12 µm) - TRGS 906
	National	SWITZERLAND	0,15	A
	ACGIH	NNN	0,025	(R), A2 - Pulm fibrosis, lung cancer
	National	NORWAY	0,300	K 7
	National	FINLAND	1	FINLAND, respirabel fraktion
	NDS	POLAND	6	frakcja wdychalna
	NDS	POLAND	2	frakcja respirabilna
	SUVA	SWITZERLAND	5	A4 - Not Classifiable as a Human Carcinogen; pulmonary function; respiratory symptoms; asthma
	DFG	GERMANY	15	
	National	SPAIN	4,000	5 mg/m ³ TWA (containing <1% of free Silica, respirable dust);10 mg/m ³ TWA (containing <1% of free Silica, total dust)
	National	FINLAND	5,000	
	National	FINLAND	1,000	
	National	PORTUGAL	10	
	National	BELGIUM	10	
	NDS	POLAND	6,000	
	NDS	POLAND	2,000	
	National	HUNGARY	10	
	Malaysian OEL	MALAYSIA	10,000	
	National	LATVIA	6,000	
	National	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	10,000	inhalable dust

calcium oxide	National	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	4,000		respirable dust
	National	CROATIA	10,000	10,000	
	DFG	GERMANY C	15		
	ACGIH	AUSTRALIA	1,000		A4 - Not Classifiable as a Human Carcinogen; pulmonary function; respiratory symptoms; asthma
	Malaysi a OEL	MALAYSIA	10		5 mg/m3 TWA (containing <1% of free Silica, respirable dust);10 mg/m3 TWA (containing <1% of free Silica, total dust)
	National	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	10	30,000	5 mg/m3 TWA (containing <1% of free Silica, respirable dust);10 mg/m3 TWA (containing <1% of free Silica, total dust)
	National	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	10	12,000	
	National	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	4,000		
	National	ROMANIA	10		
	National	CROATIA	10,000		
	National	CROATIA	4,000	10	
	NDS	NNN	2		
	NDSch	NNN	6		
	ACGIH	NNN	2		URT irr
	National	SWEDEN	1	2,5	SWEDEN, Short-term value, 15 minutes average value
	National	FINLAND	2		
	National	NORWAY	2		NORWAY, T
	National	FINLAND	2		

National NORWAY	2	4
DFG GERMANY C		2
ACGIH	2	
National SWEDEN	1	
National FRANCE	2	
National SPAIN	1	4
National GREECE	1	4
National DENMARK	1	
National FINLAND	1	4
National GERMANY	1	
National PORTUGAL	2	
National NORWAY	1	2
National BELGIUM	2	
NDS POLAND	2	
NDS POLAND	1	
NDSch POLAND		6
NDSch POLAND		4
CHE SWITZERLAND		2
NDS NETHERLANDS	1	4
National CZECHIA	1	
National HUNGARY	1	4
Malaysia OEL	2	
National ESTONIA	1	4
National LATVIA	1	4
National CZECHIA C		4
National SLOVAKIA	5	
National SLOVENIA	5	5
National UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	1	4
National UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	1	6
National UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	2	4
National BULGARIA	1	4
National ROMANIA	1	4
National LITHUANIA	1	4
National CROATIA	1	4
free crystalline silica (Ø <10 µ)	National SWEDEN	0,100

upper
respiratory
tract
irritation

SWEDEN,
respirable
aerosol

National	NORWAY	0,100		K 7
NDS	POLAND	2,000		frakcja wdychalna
NDS	POLAND	0,300		frakcja respirabilna
National	DENMARK	0,3	0,600	DENMARK, inhalable aerosol inhalable aerosol
National	DENMARK	0,100	0,200	DENMARK, respirable aerosol respirable aerosol
EU	NNN	0,1		A2 (R) - Pulm fibrosis, lung cancer
ACGIH	NNN	0,025		(R), A2 - Pulm fibrosis, lung cancer
National	AUSTRIA	0,150		A

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC LIMIT	Exposure Route	Exposure Frequency	Remark
calcium oxide	1305-78-8	0,49 mg/l	Fresh Water		
		0,32 mg/l	Marine water		
		3 mg/l	Microorganisms in sewage treatments		
		1080 mg/kg	Soil		
		816 mg/l	Soil		

Derived No Effect Level. (DNEL)

Component	CAS-No.	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
calcium oxide	1305-78-8	4 mg/m3		4 mg/m3	Human Inhalation	Short Term, local effects	
		1 mg/m3		1 mg/m3	Human Inhalation	Long Term, local effects	

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; EN 374:

Polychloroprene - CR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Nitrile rubber - NBR: thickness $\geq 0,35\text{mm}$; breakthrough time $\geq 480\text{min}$.

Butyl rubber - IIR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Fluorinated rubber - FKM: thickness $\geq 0,4\text{mm}$; breakthrough time $\geq 480\text{min}$.

Nitrile gloves are suggested (1,3 mm; 480 min). Not recommended gloves: not waterproof gloves

Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN 374 for gloves and EN 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

A dust mask (P2) should be worn if above exposure limits (EN 149)

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Hygienic and Technical measures

N.A.

Appropriate engineering controls:

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid

Appearance and colour: Powder grey

Odour: Cement like

Odour threshold: N.A.

pH: N.A.

pH(water dispersion,10%): 12.50

Melting point / freezing point: N.A.

Initial boiling point and boiling range: N.A.

Flash point: N.A.

Evaporation rate: N.A.

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: N.A.

Apparent density: 1.2-1.3

Solubility in water: partly soluble

Partition coefficient (n-octanol/water): N.A. - This product is a mixture

Auto-ignition temperature: N.A. - No explosive or spontaneous ignition in contact with air at room temperature

Decomposition temperature: N.A.

Viscosity: N.A.

Explosive properties: == - No components with explosive properties

Oxidizing properties: N.A. - No component with oxidizing properties

Solid/gas flammability: N.A.

9.2. Other information

No additional information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Contains cement. Cement gives a strong alkaline reaction with water and body fluids (e.g. sweat and eye fluids), therefore the contact with skin and eyes should be carefully avoided.

Toxicological information of the mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

free crystalline silica (Ø a) acute toxicity LD50 Oral > 2000 mg/kg
>10 µ)

LD50 Skin > 2000 mg/kg

calcium oxide	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg LD50 Skin Rat > 2500 mg/kg LD50 Oral Rat = 500 mg/kg
free crystalline silica (Ø <10 µ)	a) acute toxicity	LD50 Oral Rat = 500 mg/kg

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure
- k) Toxicological kinetics, metabolism and distribution information
- i) STOT-repeated exposure
- j) aspiration hazard

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
calcium oxide	CAS: 1305-78-8 - EINECS: 215-138-9	a) Aquatic acute toxicity : LC50 Fish = 457 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia = 49,1 mg/L 48 b) Aquatic chronic toxicity : NOEC Daphnia = 32 mg/L - 14 d a) Aquatic acute toxicity : LC50 Fish = 50,6 mg/L 96 a) Aquatic acute toxicity : LC50 Daphnia = 158 mg/L 96 a) Aquatic acute toxicity : EC50 Algae = 184,57 mg/L 72 b) Aquatic chronic toxicity : NOEC Algae = 48 mg/L 72 a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 1070 mg/L 96h IUCLID

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

12.6. Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Product:

Do not dispose of waste into sewers.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to an authorized waste disposal service.

Contaminated packaging:

Empty remaining content.

Dispose of as unused product.

Do not re-use empty containers.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number

N.A.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

N.A.

14.6. Special precautions for user

N.A.

Road and Rail (ADR-RID):

N.A.

ADR-Hazard identification number: NA

Air (IATA):

N.A.

Sea (IMDG):

N.A.

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

N.A.

SECTION 15: Regulatory information

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

VOC (2004/42/EC) : N.A. g/l

The product contains Cr (VI) under the limits established by annex. XVII pt.47. Respect the duration according to the information described on the packaging.

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EU) 2015/830

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

German Water Hazard Class

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 40

Restrictions related to the substances contained: None

SVHC Substances:

No Data Available

Produktregisteret Norge: 19274

MAL-kode: 00-4 (1993)

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure .

Code	Hazard class and hazard category	Description
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
3.2/2	Calculation method
3.3/1	Calculation method
3.4.2/1B	Calculation method
3.8/3	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound
CSA: Chemical Safety Assessment
CSR: Chemical Safety Report
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level.
DPD: Dangerous Preparations Directive
DSD: Dangerous Substances Directive
EC50: Half Maximal Effective Concentration
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances.
ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- 2. HAZARDS IDENTIFICATION
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES