

**VB-P10, U160, U80, TW20 weiß,
U40, TW40, U10, TW10, TW05 weiß,
FE20, RB/50, V1/30HF, V1/60HF**

Version number: 3.1
Replaces version of: 2019-11-28 (2)

Revision: 2021-07-06
First version: 2017-07-11

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

1.1 Product identifier

Trade name VB-P10, U160, U80, TW20 weiß, U40, TW40, U10, TW10, TW05 weiß, FE20, RB/50, V1/30HF, V1/60HF

Registration number (REACH) Not relevant (mixture).

CAS number not relevant (mixture)

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

Relevant identified uses Building material

1.3 Details of the supplier of the safety data sheet

PAGEL Spezial-Beton GmbH & Co. KG Telephone: +49 201/68504-0
Wolfsbankring 9 Telefax: +49 201/68504-31
45355 Essen e-mail: info@pagel.com
Germany Website: www.pagel.com

e-mail (competent person) schempershofe@pagel.de, labor@pagel.de

1.4 Emergency telephone number

Poison centre		
Name	Telephone	Telefax
Giftnotruf Mainz	+49 (0) 6131-19240	+49 (0) 6131 - 23 2468

Beratung in deutscher oder englischer Sprache.
As above or nearest toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

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Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335

For full text of abbreviations: see SECTION 16

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word danger

Pictograms

GHS05, GHS07



Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P261 Avoid breathing dust.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous ingredients for labelling portland cement
 flue dust, portland cement

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2.3 Other hazards

The product develops an alkaline pH value with moisture and can cause irritation. The product contains chromate reducer, which results in a content of water-soluble chrome (VI) of less than 0.0002 %. In case of improper storage (moisture ingress) or storage exceeding the recommended storage time, however, the contained chromate reducer may lose its effect prematurely and a sensitising effect of the cement/binder can occur upon skin contact (H317 and EUH203). The preparation is low in chromium. The content of soluble chromium (VI) compounds has been lowered with agent to below 2 ppm in the cement portion. Proper storage and compliance with the expiration date is a prerequisite for the effectiveness of the chromate reduction.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients					
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
quartz	CAS No 14808-60-7 EC No 238-878-4	< 75	-	-	IOELV
portland cement	CAS No 65997-15-1 EC No 266-043-4	25 - < 50	Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1B / H317 STOT SE 3 / H335		-
flue dust, portland cement	CAS No 68475-76-3 EC No 270-659-9	< 5	Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1 / H317 STOT SE 3 / H335		-

Notes

IOELV: Substance with a community indicative occupational exposure limit value

for full text of H-phrases: see SECTION 16

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SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

In case of respiratory tract irritation, consult a physician.

Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.

Brush off loose particles from skin.

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

Following eye contact

Rinse immediately carefully and thoroughly with eye shower or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Get immediate medical advice/attention.

Following ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting.

Get immediate medical advice/attention.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

Cough, pain, choking, and breathing difficulties.

Risk of serious damage to eyes.

4.3 Indication of any immediate medical attention and special treatment needed

None.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water, foam, alcohol resistant foam, fire extinguishing powder, Co-ordinate firefighting measures to the fire surroundings

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Deposited combustible dust has considerable explosion potential.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Co-ordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

self-contained breathing apparatus (SCBA)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Control of dust.

Do not breathe dust.

Do not get in eyes, on skin, or on clothing.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

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6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.

Collect spillage.

Vacuuming techniques.

Approved industrial vacuum cleaner.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Keep away from sources of ignition - No smoking.

Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

When diluting, always stir the product into standing water.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Remove contaminated clothing and protective equipment before entering eating areas.

Do not breathe dust.

Do not get in eyes, on skin, or on clothing.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Removal of dust deposits.

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Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

humidity

Consideration of other advice

Keep away from food, drink and animal feeding stuffs.

Store in a dry place. Store in a closed container.

Ventilation requirements

Provision of sufficient ventilation.

Packaging compatibilities

Keep only in original container.

Unsuitable materials: Aluminium.

7.3 Specific end use(s)

Industry or sector specific available guidance(s): GISCODE ZP 1.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
EU	silica, crystalline	14808-60-7	IOELV	-	0.1	-	-	r	2017/2398/EU
GB	dust	-	WEL	-	10	-	-	i	EH40/2005
GB	dust	-	WEL	-	4	-	-	r	EH40/2005
GB	silica, crystalline	14808-60-7	WEL	-	0.1	-	-	r	EH40/2005
GB	portland cement	65997-15-1	WEL	-	10	-	-	i	EH40/2005
GB	portland cement	65997-15-1	WEL	-	4	-	-	r	EH40/2005
GB	silica, amorphous	69012-64-2	WEL	-	6	-	-	i	EH40/2005

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Occupational exposure limit values (Workplace Exposure Limits)									
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Notation	Source
GB	silica, amorphous	69012-64-2	WEL	-	2.4	-	-	r	EH40/2005

Notation

i inhalable fraction

r respirable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
flue dust, portland cement	68475-76-3	DNEL	0.84 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects

Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
flue dust, portland cement	68475-76-3	PNEC	282 µg/l	freshwater
flue dust, portland cement	68475-76-3	PNEC	28 µg/l	marine water
flue dust, portland cement	68475-76-3	PNEC	6 mg/l	sewage treatment plant (STP)
flue dust, portland cement	68475-76-3	PNEC	875 µg/kg	freshwater sediment
flue dust, portland cement	68475-76-3	PNEC	88 µg/kg	marine sediment
flue dust, portland cement	68475-76-3	PNEC	5 mg/kg	sediments

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

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Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
NBR: acrylonitrile-butadiene rubber	≥ 0,15 mm	no information available

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

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.

Other protection measures

Protective clothing for use against solid particulates.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Particulate filter device (EN 143).

P1 (filters at least 80 % of airborne particles, colour code: White).

P2 (filters at least 94 % of airborne particles, colour code: White).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid (powder)
Colour	grey - white
Odour	characteristic
Melting point/freezing point	>1,250 °C
Boiling point or initial boiling point and boiling range	not determined
Flammability	this material is combustible, but will not ignite readily

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Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	not applicable (solid)
Decomposition temperature	not relevant
pH (value)	alkaline (suspension)
Viscosity	not relevant (solid)
Solubility(ies)	
Water solubility	not determined
Partition coefficient n-octanol/water (log value)	not determined
Vapour pressure	not determined
Density and/or relative density	
Density	2.6 – 3.2 g/cm ³ (calculated)
Relative vapour density	information on this property is not available
Particle characteristics	no data available
9.2 Other information	
Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Reactions with light metals to form hydrogen.

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10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Protect from moisture.

10.5 Incompatible materials

acids, aluminium, ammonium compounds, metals

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

SECTION 11: Toxicological information

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

Classification procedure

If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Test data are not available for the complete mixture.

Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
flue dust, portland cement	68475-76-3	oral	LD0	>1,848 mg/kg	rat	OECD Guideline 422	ECHA
flue dust, portland cement	68475-76-3	dermal	LD0	≥2,000 mg/kg	rat	OECD Guideline 402	ECHA
flue dust, portland cement	68475-76-3	inhalation: dust/mist	LC50	>6.04 mg/l/4h	rat	OECD Guideline 436	ECHA

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

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U40, TW40, U10, TW10, TW05 weiß,
FE20, RB/50, V1/30HF, V1/60HF**

Respiratory or skin sensitisation

Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

There is no additional information.

Endocrine disrupting properties

None of the ingredients are listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

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U40, TW40, U10, TW10, TW05 weiß,
FE20, RB/50, V1/30HF, V1/60HF**

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
flue dust, portland cement	68475-76-3	ErC50	72 h	28.2 mg/l	algae (Desmod-esmus sub-spicatus)	OECD Guideline 201	ECHA
flue dust, portland cement	68475-76-3	ErC50	72 h	22.4 mg/l	algae (Desmod-esmus sub-spicatus)	OECD Guideline 201	ECHA

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
flue dust, portland cement	68475-76-3	EL10	21 d	68.2 mg/l	daphnia magna	OECD Guideline 211	ECHA
flue dust, portland cement	68475-76-3	NOEC	48 h	100 mg/l	daphnia magna	OECD Guideline 202	ECHA
flue dust, portland cement	68475-76-3	NOEC	96 h	11.1 mg/l	zebra fish (Danio rerio)	OECD Guideline 203	ECHA

12.2 Persistence and degradability

Biodegradation

The study does not need to be conducted, the relevant substances in the mixture are inorganic.

Persistence

No data available.

12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number or ID number	not assigned
14.2 UN proper shipping name	-
14.3 Transport hazard class(es)	-
14.4 Packing group	-
14.5 Environmental hazards	-
14.6 Special precautions for user	-
14.7 Maritime transport in bulk according to IMO instruments	-

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SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Name	Name acc. to inventory	CAS No	Restriction
flue dust, portland cement	chromium(VI) compounds	-	R47

Legend

- R47
1. Cement and cement-containing mixtures shall not be placed on the market, or used, if they contain, when hydrated, more than 2 mg/kg (0,0002 %) soluble chromium VI of the total dry weight of the cement.
 2. If reducing agents are used, then without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of cement or cement-containing mixtures is visibly, legibly and indelibly marked with information on the packing date, as well as on the storage conditions and the storage period appropriate to maintaining the activity of the reducing agent and to keeping the content of soluble chromium VI below the limit indicated in paragraph 1.
 3. By way of derogation, paragraphs 1 and 2 shall not apply to the placing on the market for, and use in, controlled closed and totally automated processes in which cement and cement-containing mixtures are handled solely by machines and in which there is no possibility of contact with the skin.
 4. The standard adopted by the European Committee for Standardization (CEN) for testing the water-soluble chromium (VI) content of cement and cement-containing mixtures shall be used as the test method for demonstrating conformity with paragraph 1.
 5. Leather articles coming into contact with the skin shall not be placed on the market where they contain chromium VI in concentrations equal to or greater than 3 mg/kg (0,0003 % by weight) of the total dry weight of the leather.
 6. Articles containing leather parts coming into contact with the skin shall not be placed on the market where any of those leather parts contains chromium VI in concentrations equal to or greater than 3 mg/kg (0,0003 % by weight) of the total dry weight of that leather part.
 7. Paragraphs 5 and 6 shall not apply to the placing on the market of second-hand articles which were in end-use in the Union before 1 May 2015.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

Seveso Directive

Not assigned.

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

None of the ingredients are listed.

Regulation on the marketing and use of explosives precursors

Not all ingredients are listed.

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Regulation on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

Regulation concerning the export and import of hazardous chemicals (PIC)

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Indication of changes: Section 1, 8, 15

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2017/2398/EU	Directive of the European Parliament and of the Council amending Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control

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Abbr.	Descriptions of used abbreviations
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

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Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
Regulation (EC) No. 1907/2006 (REACH).

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Responsible for the safety data sheet

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Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.