

SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

Budel Zink Gypsum

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

1.1. Product identifier

Product name	: Budel Zink Gypsum
Synonyms	: Budel Zink Gips; Budel Zink Gypse; sulfuric acid, calcium salt (1:1)
Registration number REACH	: 01-2119444918-26-0131 (Nyrstar Budel BV)
Product type REACH	: Substance/mono-constituent
CAS number	: 7778-18-9
EC number	: 231-900-3
Molecular mass	: 136.14 g/mol
Formula	: CaSO4

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

1.2.1 Relevant identified uses

Chemical raw material

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

Nyrstar Budel B.V. on behalf of Nyrstar Sales & Marketing A.G. Hoofdstraat 1 6024 AA Budel-Dorplein ☎ +32 14 44 96 80 ➡ +32 14 44 95 52 infoSDS@nyrstar.com

Manufacturer of the product

Nyrstar Sales & Marketing SA 1 Rue de Jargonnant CH-1207 Geneva infoSDS@nyrstar.com

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :

+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

2.2. Label elements

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

2.3. Other hazards

The criteria of PBT and vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006 do not apply to inorganic substances

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	CAS No	Conc. (C)	Classification according to CLP	Note	Remark	M-factors and
REACH Registration No	EC No					ATE
calcium sulfate	7778-18-9	C≥98 %		(2)	Constituent	
01-2119444918-26	231-900-3					
zinc hydroxide	20427-58-1	C<0.5 %	Aquatic Acute 1; H400	(1)	Impurity	M: 1 (Acute,
01-2119484821-33	243-814-3		Aquatic Chronic 2; H411			ECHA)
(1) For H- and EUH-statements	s in full: see section 16	•	•	•	•	•
(2) Substance with a Commun	ity workplace exposure limit					

(2) Substance with a Community workplace exposure limit

3.2. Mixtures

Not applicable

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG) Technische Schoolstraat 43 A, B-2440 Geel http://www.big.be © BIG vzw Reason for revision: 2020/878 Revision number: 0400 Publication date: 2004-09-28 Date of revision: 2022-01-13 16274-031-en

878-2

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

If you feel unwell, seek medical advice.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Rinse with water. Do not apply (chemical) neutralizing agents without medical advice. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Do not apply (chemical) neutralizing agents without medical advice. Immediately after ingestion: give lots of water to drink. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms After inhalation:

EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Irritation of the nasal mucous membranes.

After skin contact: No effects known. After eye contact: Slight irritation. After ingestion: No effects known.

4.2.2 Delayed symptoms No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

- Adapt extinguishing media to the environment for surrounding fires.
- 5.1.2 Unsuitable extinguishing media:
- Not applicable.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (sulphur oxides) and formation of metal oxides.

5.3. Advice for firefighters

5.3.1 Instructions:

Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

- 6.1.1 Protective equipment for non-emergency personnel
- See section 8.2
- 6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Suitable protective clothing

See section 8.2

6.2. Environmental precautions

Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply.

6.3. Methods and material for containment and cleaning up

Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

See section 13.

Reason for revision: 2020/878

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Storage temperature: < 50 °C. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, (strong) acids.

7.2.3 Suitable packaging material: No data available

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

alcium (sulfate de) (anhydrate, hemihydrate, ihydrate, gypse)		Time-weighted avera	Time-weighted average exposure limit 8 h		
ance					
alcium (sulfate de)		Time-weighted avera réglementaire indicat	ge exposure limit 8 h (VL: Valeur n tive)	on 10 mg/m³	
ermany					
alciumsulfat		Time-weighted avera	ge exposure limit 8 h (TRGS 900)	6 mg/m³	
ustria					
alciumsulfat		Tagesmittelwert (MA	К)	5 mg/m ³	
		Kurzzeitwert 60(Miw) 2x (MAK)	10 mg/m³	
SA (TLV-ACGIH)					
alcium sulfate		Time-weighted avera	ge exposure limit 8 h (TLV - Adopte	ed Value) 10 mg/m ³ (I)	
oduct name		Test	Number		
National biological limit value limit values are applicable and		ted below.			
Sampling methods					
		Test	Number		
		huocu	6004		
,		NIOSH	6004		
nc & Cpds (as Zn) Applicable limit values when u		NIOSH ixture as intended	6004 7030		
nc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values NEL/DMEL - Workers alcium sulfate	and available these wi	NIOSH ixture as intended	7030	Bemark	
inc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values <u>NEL/DMEL - Workers</u> <u>alcium sulfate</u> Effect level (DNEL/DMEL)	and available these wi	NIOSH ixture as intended II be listed below.	7030 Value	Remark	
nc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values <u>NEL/DMEL - Workers</u> <u>alcium sulfate</u> <u>Effect level (DNEL/DMEL)</u>	and available these wi Type Long-term systemic	NIOSH ixture as intended II be listed below.	7030 Value 21.17 mg/m ³	Remark	
nc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values <u>NEL/DMEL - Workers</u> <u>alcium sulfate</u> <u>Effect level (DNEL/DMEL)</u> DNEL	and available these wi	NIOSH ixture as intended II be listed below.	7030 Value	Remark	
nc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values <u>NEL/DMEL - Workers</u> <u>alcium sulfate</u> <u>Effect level (DNEL/DMEL)</u> DNEL <u>nc hydroxide</u>	and available these wi Type Long-term systemic	NIOSH ixture as intended II be listed below.	7030 Value 21.17 mg/m ³ 5082 mg/m ³	Remark Remark	
nc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values <u>NEL/DMEL - Workers</u> <u>alcium sulfate</u> <u>Effect level (DNEL/DMEL)</u> DNEL <u>nc hydroxide</u> <u>Effect level (DNEL/DMEL)</u>	and available these wi Type Long-term systemic Acute systemic effe Type Type	NIOSH ixture as intended II be listed below. c effects inhalation ects inhalation	7030 Value 21.17 mg/m ³ 5082 mg/m ³ Value		
inc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values <u>NEL/DMEL - Workers</u> <u>alcium sulfate</u> <u>Effect level (DNEL/DMEL)</u> DNEL <u>nc hydroxide</u>	and available these wi Type Long-term systemic Acute systemic effe Type Long-term systemic	NIOSH ixture as intended II be listed below. c effects inhalation c cts inhalation c effects inhalation	7030 Value 21.17 mg/m ³ 5082 mg/m ³ Value 5 mg/m ³		
inc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values NEL/DMEL - Workers alcium sulfate Effect level (DNEL/DMEL) DNEL nc hydroxide Effect level (DNEL/DMEL) DNEL DNEL MEL/DMEL - General populatic	and available these wi Type Long-term systemic Acute systemic effe Type Long-term systemic Long-term systemic	NIOSH ixture as intended II be listed below. c effects inhalation c cts inhalation c effects inhalation	7030 Value 21.17 mg/m ³ 5082 mg/m ³ Value		
nc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values NEL/DMEL - Workers alcium sulfate Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL MEL/DMEL - General population alcium sulfate	and available these wi Type Long-term systemic Acute systemic effe Type Long-term systemic Long-term systemic	NIOSH ixture as intended II be listed below. c effects inhalation c cts inhalation c effects inhalation	7030 Value 21.17 mg/m ³ 5082 mg/m ³ Value 5 mg/m ³		
nc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values NEL/DMEL - Workers alcium sulfate Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL MEL/DMEL - General population alcium sulfate Effect level (DNEL/DMEL)	and available these wi Type Long-term systemic effe Acute systemic effe Long-term systemic Long-term systemic n	NIOSH ixture as intended II be listed below. c effects inhalation c effects inhalation c effects dermal	7030 Value 21.17 mg/m ³ 5082 mg/m ³ Value 5 mg/m ³ 83 mg/kg bw/day	Remark	
nc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values NEL/DMEL - Workers alcium sulfate Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL MEL/DMEL - General population alcium sulfate Effect level (DNEL/DMEL)	and available these wi Type Long-term systemic effe Type Long-term systemic Long-term systemic n Type Type Type Type Type Type Type Type	NIOSH ixture as intended II be listed below. c effects inhalation c effects inhalation c effects dermal c effects inhalation	Value 21.17 mg/m³ 5082 mg/m³ Value 5 mg/m³ 83 mg/kg bw/day Value	Remark	
nc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values NEL/DMEL - Workers alcium sulfate Effect level (DNEL/DMEL) DNEL MEL/DMEL - General population alcium sulfate Effect level (DNEL/DMEL) NEL/DMEL - General population alcium sulfate Effect level (DNEL/DMEL)	and available these wi Type Long-term systemic effe Type Long-term systemic Long-term systemic n Type Long-term systemic n Type Long-term systemic	NIOSH ixture as intended II be listed below. c effects inhalation c effects inhalation c effects dermal c effects inhalation c effects inhalation c effects inhalation	Value 21.17 mg/m³ 5082 mg/m³ Value 5 mg/m³ 83 mg/kg bw/day Value 5.29 mg/m³	Remark	
inc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values NEL/DMEL - Workers alcium sulfate Effect level (DNEL/DMEL) DNEL Effect level (DNEL/DMEL) DNEL MEL/DMEL - General population alcium sulfate	Type Long-term systemic Acute systemic effe Type Long-term systemic Long-term systemic Long-term systemic In Type Long-term systemic Acute systemic Acute systemic Long-term systemic Acute systemic effe	NIOSH ixture as intended II be listed below. c effects inhalation c effects inhalation c effects dermal c effects inhalation c effects inhalation c effects oral	7030 Value 21.17 mg/m³ 5082 mg/m³ Value 5 mg/m³ 83 mg/kg bw/day Value 5.29 mg/m³ 3811 mg/m³	Remark	
inc & Cpds (as Zn) Applicable limit values when u limit values are applicable Threshold values NEL/DMEL - Workers alcium sulfate Effect level (DNEL/DMEL) DNEL inc hydroxide Effect level (DNEL/DMEL) DNEL NEL NEL/DMEL - General population alcium sulfate Effect level (DNEL/DMEL) DNEL	Type Long-term systemic Acute systemic effe Type Long-term systemic Long-term systemic Long-term systemic Long-term systemic Acute systemic effe Long-term systemic Long-term systemic Long-term systemic Long-term systemic Long-term systemic Long-term systemic Acute systemic effe Long-term systemic	NIOSH ixture as intended II be listed below. c effects inhalation c effects inhalation c effects dermal c effects inhalation c effects inhalation c effects oral	Value 21.17 mg/m³ 5082 mg/m³ Value 5 mg/m³ 83 mg/kg bw/day Value 5.29 mg/m³ 3811 mg/m³ 1.52 mg/kg bw/day 11.4 mg/kg bw/day	Remark Remark Remark	
DNEL nc hydroxide Effect level (DNEL/DMEL) DNEL NEL/DMEL - General population alcium sulfate Effect level (DNEL/DMEL)	Type Long-term systemic Acute systemic effe Type Long-term systemic Long-term systemic Long-term systemic Long-term systemic Acute systemic effe Long-term systemic Long-term systemic Long-term systemic Long-term systemic Long-term systemic Long-term systemic Acute systemic effe Long-term systemic	NIOSH ixture as intended II be listed below. c effects inhalation c effects inhalation c effects dermal c effects inhalation c effects inhalation c effects oral	Value 21.17 mg/m³ 5082 mg/m³ Value 5 mg/m³ 83 mg/kg bw/day Value 5.29 mg/m³ 3811 mg/m³ 1.52 mg/kg bw/day	Remark Remark	

Reasor

zinc hydroxide								
Effect level (DNEL/DMEL)	Туре	Value	Remark					
DNEL	Long-term systemic effects inhalation	2.5 mg/m ³						
	Long-term systemic effects dermal	83 mg/kg bw/day						
	Long-term systemic effects oral	0.83 mg/m ³						

PNEC calcium su

<u>calcium sulfate</u>			
Compartments	Value	Remark	
STP	100 mg/l		
zinc hydroxide			
Compartments	Value	Remark	
Fresh water	20.6 μg/l		
Marine water	6.1 μg/l		
STP	100 μg/l		
Fresh water sediment	117.8 mg/kg sediment dw		
Marine water sediment	56.5 mg/kg sediment dw		
Soil	35.6 mg/kg soil dw		

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Do not eat, drink or smoke during work.

a) Respiratory protection:

Respiratory protection not required in normal conditions.

b) Hand protection:

Protective gloves against chemicals (EN 374).

Materials	Remark
nitrile rubber	Good resistance
PVC	Good resistance

c) Eye protection:

Safety glasses (EN 166).

d) Skin protection:

Protective clothing (EN 14605 or EN 13034).

8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Moist solid
Odour	Odourless
Odour threshold	Not applicable
Colour	White-brown
Particle size	No data available in the literature
Explosion limits	No data available in the literature
Flammability	Not classified as flammable
Log Kow	Not applicable
Dynamic viscosity	Not applicable (solid)
Kinematic viscosity	Not applicable (solid)
Melting point	No data available in the literature
Boiling point	No data available in the literature
Relative vapour density	Not applicable (solid)
Vapour pressure	< 0.1 hPa ; 20 °C
Solubility	Water ; insoluble
Relative density	No data available in the literature
Absolute density	No data available in the literature
Decomposition temperature	No data available in the literature
Auto-ignition temperature	No data available in the literature
Flash point	Not applicable (solid)
рН	3 - 5

9.2. Other information

Evaporation rate	Not applicable (solid)

Reason for revision: 2020/878

SECTION 10: Stability and reactivity

10.1. Reactivity

Acid reaction.

10.2. Chemical stability No data available.

10.3. Possibility of hazardous reactions No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

(strong) acids.

10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (sulphur oxides) and formation of metal oxides.

SECTION 11: Toxicological information

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

11.1.1 Test results

Acute toxicity

Budel Zink Gypsum

No (test)data available

calcium sulfate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	OECD 420	> 1581 mg/kg bw		Rat (female)	Experimental value	Converted value
Dermal						Data waiving	
Inhalation (dust)	LC50	OECD 403	> 2.61 mg/l air		Rat (male / female)	Experimental value	Converted value

zinc hydroxide

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value	Remark
						determination	
Oral	LD50	Equivalent to OECD 401	> 5000 mg/kg bw		Rat (male / female)	Read-across	
Dermal						Data waiving	
Inhalation (dust)	LC50	OECD 403	> 5.410 mg/l air	4 h	Rat (male / female)	Read-across	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Budel Zink Gypsum

No (test)data available

calcium sulfate

Result	Method	Exposure time	Time point	Species	Value	Remark
					determination	
Not irritating	OECD 405		24; 48; 72 hours			Single treatment
Not irritating	OECD 404	4 h	24; 48; 72 hours			
	Not irritating	Not irritating OECD 405	Not irritating OECD 405	Not irritating OECD 405 24; 48; 72 hours	Not irritating OECD 405 24; 48; 72 hours Rabbit Not irritating OECD 404 4 h 24; 48; 72 hours Rabbit	Not irritating OECD 405 24; 48; 72 hours Rabbit Experimental value

Route of exposure	Result	Method	Exposure time	Time point		Value determination	Remark
Eye	Not irritating	OECD 405	24 h	24; 48; 72 hours	Rabbit	Read-across	
Skin	Not irritating	Other	5 day(s)		Rabbit	Read-across	

Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

Budel Zink Gypsum

Reason for revision: 2020/878

. . ----

Route of exposure	Result		Method		Expos	ure time	Obser	vation time	Species	Val	ue determinatio	n Remark
Skin		ing	OECD 406				point		Cuinco pig	Evi	orimontal value	
	Not sensitiz	ing	UECD 406						Guinea pig (male)	EX	perimental value	
Route of exposure	Result		Method		Expos	ure time	Obser	vation time	Species	Va	ue determinatio	n Remark
Skin			0560 406		•		point			Da		
SKIN	Not sensitiz	ing	OECD 406						Guinea pig (female)	ке	ad-across	
Not classified as sensi ic target organ toxici e <u>l Zink Gypsum</u> o (test)data available <u>calcium sulfate</u>		alatio	on									
Route of exposure	e Paramet	er Me	ethod	Value		Organ	Effe	ect	Exposure time		Species	Value determinatio
Oral (stomach	NOAEL	OE	ECD 422	79 mg/l	•		No	effect	35 day(s)		Rat (male)	Experimenta
tube) Oral (stomach tube)	LOAEL	OE	ECD 422	bw/day 237 mg bw/day	/kg		hae e/b	ange in the emogramm blood nposition	35 day(s)		Rat (male)	value Experimenta value
Oral (stomach tube)	NOAEL	OE	ECD 422	790 mg bw/day				effect	41 day(s) - 43 c	lay(s)	Rat (female)	Experimenta value
Dermal												Data waiving
inc hydroxide Route of exposure	e Paramet	er Me	ethod	Value		Organ	Effe	oct	Exposure time		Species	Value
						Julgan			Exposure time		species	value
Oral (diet)	NOAEL	OE	ECD 408	31.52 m		Ulgan		effect	13 weeks (daily	y)	Rat (male /	
nclusion			ECD 408	31.52 m bw/day					-	y)		determinatio
nclusion Not classified for subo genicity (in vitro) el Zink Gypsum No (test)data availab calcium sulfate Result Negative with me activation, negati without metaboli activation Negative with me activation, negati	chronic toxic le tabolic Of c of tabolic Of ve c Of		71	bw/day	, Test sub Bacteria and E. c	ostrate a (S. typhimi	urium		-	Value (Experi	Rat (male / female)	determinatio
nclusion Not classified for subo genicity (in vitro) el Zink Gypsum No (test)data availab calcium sulfate Result Negative with me activation, negati without metaboli activation, negati without metaboli activation, negati without metaboli activation, negati	chronic toxic le tabolic Of c of tabolic Of ve c Of	ity ethod CD 4	71	bw/day	, Bacteria and E. c Mouse	ostrate a (S. typhimi oli)	urium	effect Effect No effect	-	Value (Experi	Rat (male / female) determination mental value	determination Read-across
nclusion Not classified for subo genicity (in vitro) el Zink Gypsum No (test)data availab ialcium sulfate Result Negative with me activation, negati without metaboli activation Negative with me activation, negati without metaboli activation, negati without metaboli activation negative with me activation negati without metaboli activation	chronic toxic le tabolic Of c Of tabolic Of c Of c Of c Of c Of c Of c Of c Of	ethod CCD 4 ⁻¹	71	bw/day	Fest sub Bacteria and E. c Mouse cells)	ostrate a (S. typhimi oli) (lymphoma ostrate	urium L5178Y	effect Effect No effect	-	Value o Experi Experi Value	determination mental value determination	determination Read-across
nclusion Not classified for subo genicity (in vitro) el Zink Gypsum No (test)data availab calcium sulfate Result Negative with me activation, negati without metaboli activation, negati without metaboli activation, negati without metaboli activation, negati without metaboli activation	chronic toxic le tabolic Of c Of tabolic Of c Of tabolic Of ve c Of tabolic Of ve c Of tabolic Of ve	ethod CCD 4 ⁻¹	71	bw/day	Fest sub Bacteria and E. c Mouse cells)	ostrate a (S. typhimi oli) (lymphoma	urium L5178Y	effect Effect No effect No effect	-	Value o Experi Experi	determination mental value determination	determination Read-across
nclusion Not classified for subo genicity (in vitro) el Zink Gypsum No (test)data availab calcium sulfate Result Negative with me activation, negati without metaboli activation Negative with me activation, negati without metaboli activation Exercise Result Negative with me activation, negati without metaboli activation, negati without metaboli activation Sepnicity (in vivo) el Zink Gypsum	chronic toxic le tabolic Of c Of tabolic Of c Of tabolic Of c Of tabolic Of c Of c Of c Of c Of c Of c Of c Of	ethod CCD 4 ⁻¹	71	bw/day	Fest sub Bacteria and E. c Mouse cells)	ostrate a (S. typhimi oli) (lymphoma ostrate	urium L5178Y	effect Effect No effect No effect	-	Value e Experi Experi Value	determination mental value determination	determination Read-across
nclusion Not classified for subo genicity (in vitro) el Zink Gypsum No (test)data availab calcium sulfate Result Negative with me activation, negati without metaboli activation Negative with me activation, negati without metaboli activation Execut Negative with me activation, negati without metaboli activation, negati without metaboli activation, negati without metaboli activation Seguicity (in vivo)	chronic toxic le tabolic Of c Of tabolic Of c Of tabolic Of c Of tabolic Of c Of c Of c Of c Of c Of c Of c Of	ethod CCD 4 ⁻¹	71	bw/day	Fest sub Bacteria and E. c Mouse cells)	ostrate a (S. typhimi oli) (lymphoma ostrate	urium L5178Y	effect Effect No effect No effect	13 weeks (dail)	Value e Experi Experi Value	Aat (male / female)	determination Read-across

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

Budel Zink Gypsum

Reason for revision: 2020/878

Publication date: 2004-09-28 Date of revision: 2022-01-13

Revision number: 0400

No (test)data available sulfat

cium sulfate								
Route of	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
exposure								
Oral (diet)	NOAEL	Carcinogenic toxicity study	256 mg/kg bw/day	104 weeks (daily)	Rat (male)	No carcinogenic effect		Experimental value
Oral (diet)	NOAEL	Carcinogenic toxicity study	284 mg/kg bw/day	104 weeks (daily)	Rat (female)	No carcinogenic effect		Experimental value

Conclusion Not classified for carcinogenicity

Reproductive toxicity

Budel Zink Gypsum

No (test)data available

calcium sulfate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	Equivalent to OECD 414	1600 mg/kg bw/day	10 day(s)	Rat	No effect	General	Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	Equivalent to OECD 414	1600 mg/kg bw/day	10 days (gestation, daily)	Rat	No effect		Experimental value
Effects on fertility (Oral (stomach tube))	NOAEL	OECD 422	790 mg/kg bw/day	2 week(s)	Rat (male / female)	No effect		Experimental value

zinc hydroxide

	Parameter	Method	Value	Exposure time	Species	Effect	 Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL (F1)	Developmenta I toxicity study	0, 0	10 day(s)	Rat	No effect	Read-across
Maternal toxicity (Oral (stomach tube))	NOAEL	Developmenta I toxicity study	0, 0	10 day(s)	Rat	No effect	Read-across
Effects on fertility (Oral (stomach tube))	NOAEL	Equivalent to OECD 416	7.5 mg/kg bw/day		Rat (male / female)	No effect	Read-across

Conclusion

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

Budel Zink Gypsum No (test)data available

Chronic effects from short and long-term exposure

Budel Zink Gypsum No effects known.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

Budel Zink Gypsum

No (test)data available calcium sulfate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		2980 mg/l	96 h	Lepomis macrochirus			Literature study
Acute toxicity crustacea	LC50	OECD 202	> 79 mg/l	48 h	Daphnia magna		Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	NOEC	OECD 201	2.1 g/l	72 h	Pseudokirchneri ella subcapitata			Experimental value; Greater than the water solubility
Toxicity aquatic micro- organisms	NOEC	OECD 209	1000 mg/l	3 h	Activated sludge			Experimental value; Nominal concentration

Reason for revision: 2020/878

<u>zinc hydroxide</u>							_	
	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		0.50 mg/l - 0.78 mg/l	96 h	Pimephales promelas	Static system	Fresh water	Read-across; Zinc ion
Acute toxicity crustacea	EC50	EPA 600/4- 85/013	0.86 mg/l	48 h	Daphnia magna	Static system	Fresh water	Read-across; Zinc ion
Toxicity algae and other aquatic plants	IC50	OECD 201	0.136 mg/l	72 h	Pseudokirchneri ella subcapitata	Static system	Fresh water	Read-across; Zinc ion
	NOEC	OECD 201	0.024 mg/l	72 h	Pseudokirchneri ella subcapitata	Static system	Fresh water	Read-across; Zinc ion
Long-term toxicity fish	NOEC	OECD 215	0.095 mg/l	30 day(s)	Oncorhynchus mykiss	Flow- through system	Fresh water	Read-across; Zinc ion
Long-term toxicity aquatic crustacea	NOEC	OECD 211	0.082 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Read-across; Zinc ion
Toxicity aquatic micro- organisms	IC50	ISO 9509:2006	0.35 mg/l	4 h	Activated sludge	Static system	Fresh water	Experimental value; Zinc ion

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

Water

Biodegradability: not applicable

12.3. Bioaccumulative potential

Budel Zink Gypsum

Method	Remark	Value	Temperature	Value determination
	Not applicable			

calcium sulfate

Log Kow

	Method	Remark	Value	Temperature	Value determination
		Not applicable (inorganic)			
zin	<u>hydroxide</u>		•		

BCE othor aquatic organisms

Parameter	Method		Value	Duration	Species		Value determination
BCF			≤ 28960; Dry weight	28 day(s)	Palaemo	on elegans	Read-across
og Kow							
Method		Remark		Value		Temperature	Value determination
		No data available					

Conclusion

Bioaccumulation: not applicable

12.4. Mobility in soil

zinc hydroxide

Percent distribution

raction air	 	Fraction soil	Fraction water	Value determination
.11E-8 %	0.0717 %	73.8 %	26.2 %	Calculated value
		sediment	sediment	sediment

Conclusion

No (test)data on mobility of the substance available

12.5. Results of PBT and vPvB assessment

The criteria of PBT and vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006 do not apply to inorganic substances.

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

12.7. Other adverse effects

Budel Zink Gypsum

Greenhouse gases

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014) Ozone-depleting potential (ODP) Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009) Water ecotoxicity pH

water cootoxicity

pH shift

Reason for revision: 2020/878

zinc hydroxide

Groundwater

Groundwater pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

European Union

Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

17 08 02 (gypsum-based construction material: gypsum-based construction materials other than those mentioned in 17 08 01). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

No data available

SECTION 14: Transport information

Road (ADR), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

14. <u>1. UN number</u>						
Transport	Not subject					
14.2. UN proper shipping name						
14.3. Transport hazard class(es)						
Hazard identification number						
Class						
Classification code						
4.4. Packing group						
Packing group						
Labels						
14. <u>5. Environmental hazards</u>						
Environmentally hazardous substance mark	no					
14.6. Special precautions for user						
Special provisions						
Limited quantities						
14.7. Maritime transport in bulk according to IMO instruments						
Annex II of MARPOL 73/78	Not applicable					

SECTION 15: Regulatory information

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

VOC content Directive 2010/75/EU

[VOC content	Remark	
[Not applicable (inorganic)	
atio	nal legislation Belgium		

No data available

Na

National legislation The Netherlands

Wa	aterbezwaarlijkheid	B (4); Algemene Beoordelingsmethodiek (ABM)

National legislation France

No data available

National legislation Germany

	WGK	1; Verordnung über Anlagen zum Umgang mit wassergefähr	denden Stoffen (AwSV) - 18. April 2017
	TA-Luft	5.2.1	
<u>Nati</u>	<u>onal legislation Austria</u> No data available		
<u>Nati</u>	<u>onal legislation United Kingdom</u> No data available		
<u>Othe</u>	<u>er relevant data</u> No data available		
son for revision: 2020/878			Publication date: 2004-09-28

Reason for revision: 2020/878

Date of revision: 2022-01-13

15.2. Chemical safety assessment

A chemical safety assessment has been performed.

SECTION 16: Other information

Full text of any H- and EUH-statements referred to under section 3: H400 Very toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

Reason for revision: 2020/878

Publication date: 2004-09-28 Date of revision: 2022-01-13

Revision number: 0400