



Page 1 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 01.11.2021 / 0002
Replacing version dated / version: 08.04.2021 / 0001
Valid from: 01.11.2021
PDF print date: 01.11.2021
Vario-Sol FP 440 g
Art.: 9094731

**Safety data sheet
according to Regulation (EC) No 1907/2006, Annex II**

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

1.1 Product identifier

Vario-Sol FP 440 g
Art.: 9094731

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

Discs

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

BTI Befestigungstechnik GmbH & Co. KG
Salzstr. 51
74653 Ingelfingen
Tel.: +49 7940 141 141
Fax: +49 7940 141 9141
Email: info@bti.de
Homepage: www.bti.de

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (BRC)
+1 872 5888271 (BRC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

This is an article.

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)

This is an article.

Not applicable

2.3 Other hazards



Page 2 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 01.11.2021 / 0002
 Replacing version dated / version: 08.04.2021 / 0001
 Valid from: 01.11.2021
 PDF print date: 01.11.2021
 Vario-Sol FP 440 g
 Art.: 9094731

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
 The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
 The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

Calcium oxide	Substance for which an EU exposure limit value applies.
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	215-138-9
CAS	1305-78-8
content %	<2
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Eye Dam. 1, H318

Zinc oxide	
Registration number (REACH)	01-2119463881-32-XXXX
Index	030-013-00-7
EINECS, ELINCS, NLP, REACH-IT List-No.	215-222-5
CAS	1314-13-2
content %	<2
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

N-cyclohexylbenzothiazole-2-sulphenamide	
Registration number (REACH)	01-2119486796-16-XXXX
Index	613-136-00-6
EINECS, ELINCS, NLP, REACH-IT List-No.	202-411-2
CAS	95-33-0
content %	<2
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=10)

Sulfur	
Registration number (REACH)	01-2119487295-27-XXXX
Index	016-094-00-1
EINECS, ELINCS, NLP, REACH-IT List-No.	231-722-6
CAS	7704-34-9
content %	<2
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315



Page 3 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

Stearic acid	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	200-313-4
CAS	57-11-4
content %	<2
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

Inhalation

Typically no exposure pathway.

Skin contact

Wash thoroughly with soap and water.

Eye contact

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Typically no exposure pathway.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Adapt to the nature and extent of fire.

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Oxides of nitrogen

Oxides of sulphur

Toxic gases

5.3 Advice for firefighters

For personal protective equipment see Section 8.

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



Page 4 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 01.11.2021 / 0002
Replacing version dated / version: 08.04.2021 / 0001
Valid from: 01.11.2021
PDF print date: 01.11.2021
Vario-Sol FP 440 g
Art.: 9094731

Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.

Ensure sufficient ventilation, remove sources of ignition.

Avoid dust formation with solid or powder products.

Leave the danger zone if possible, use existing emergency plans if necessary.

No special measures required.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

Normally not necessary.

6.3 Methods and material for containment and cleaning up

Pick up mechanically and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Not to be stored in gangways or stair wells.

Store product closed and only in original packing.

Store at room temperature.

Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ⓒ

Page 5 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

Materials are integrated into the product and should not lead to any exposure under normal handling conditions.

Ⓒ	Chemical Name	Calcium oxide	Content %:<2
	WEL-TWA:	1 mg/m3 (9) (WEL, EU)	WEL-STEL: 4 mg/m3 (9) (WEL, EU) ---
	Monitoring procedures: ---		
	BMGV:	---	Other information: ---
Ⓒ	Chemical Name	Carbon black	Content %:
	WEL-TWA:	3,5 mg/m3	WEL-STEL: 7 mg/m3 ---
	Monitoring procedures: ---		
	BMGV:	---	Other information: ---
Ⓒ	Chemical Name	general dust limit	Content %:
	WEL-TWA:	10 mg/m3 (inhal. dust), 4 mg/m3 (respir. dust)	WEL-STEL: --- ---
	Monitoring procedures: ---		
	BMGV:	---	Other information: ---

Zinc oxide						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	20,6	µg/l	
	Environment - marine		PNEC	6,1	µg/l	
	Environment - sewage treatment plant		PNEC	100	µg/l	
	Environment - sediment, freshwater		PNEC	117,8	mg/kg	
	Environment - sediment, marine		PNEC	56,5	mg/kg	
	Environment - soil		PNEC	35,6	mg/kg	
Consumer	Human - inhalation	Short term, local effects	DNEL	3,1	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	1,5	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	83	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	2,5	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,83	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	83	mg/kg bw/day	
Workers / employees	Human - dermal	Short term, local effects	DNEL	6223	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, local effects	DNEL	83	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,5	mg/m3	



Page 6 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

Workers / employees	Human - oral	Short term, local effects	DNEL	62,2	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	6,2	mg/m ³	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	5	mg/m ³	

Carbon black						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,06	mg/m ³	

White mineral oil (Natural oil)						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - dermal	Long term, systemic effects	DNEL	92	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	35	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL	40	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	220	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	160	mg/m ³	



WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).

(8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).

(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

(13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14)

= The substance can cause sensitisation of the skin (Directive 2004/37/CE).



Page 7 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. EN 14042.

EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Normally not necessary.

Skin protection - Hand protection:

Normally not necessary.

If applicable

Leather gloves.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:

Normally not necessary.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.



Page 8 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 01.11.2021 / 0002
 Replacing version dated / version: 08.04.2021 / 0001
 Valid from: 01.11.2021
 PDF print date: 01.11.2021
 Vario-Sol FP 440 g
 Art.: 9094731

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Solid
Colour:	Black
Odour:	Odourless
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	Combustible.
Lower explosion limit:	Does not apply to solids.
Upper explosion limit:	Does not apply to solids.
Flash point:	Does not apply to solids.
Auto-ignition temperature:	Does not apply to solids.
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	<=20,5 mm ² /s (40°C)
Solubility:	Insoluble
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	There is no information available on this parameter.
Density and/or relative density:	n.a.
Relative vapour density:	Does not apply to solids.

9.2 Other information

Explosives:	There is no information available on this parameter.
Oxidizing solids:	There is no information available on this parameter.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

None known

10.5 Incompatible materials

None known

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information

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

Possibly more information on health effects, see Section 2.1 (classification).

Vario-Sol FP 440 g

Art.: 9094731

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes

®

Page 9 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Calcium oxide						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:						Intensely irritant
Respiratory or skin sensitisation:				Human being	IUCLID Chem. Data Sheet (ESIS)	Not sensitizing
Germ cell mutagenicity:				Salmonella typhimurium	IUCLID Chem. Data Sheet (ESIS)	Negative

Zinc oxide						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>15000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	> 2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>5,7	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol

Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:					(Ames-Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:				Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	Negative, Analogous conclusion
Symptoms:						breathing difficulties, chest pain (thorax pain), diarrhoea, fever, joint pain, coughing, headaches, circulatory disorders, metal fume fever, muscle pains, mucous membrane irritation, nausea and vomiting.

N-cyclohexylbenzothiazole-2-sulphenamide						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	5300	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	7940	mg/kg	Rabbit		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Mild irritant

®

Page 11 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

Serious eye damage/irritation:						Mild irritant
Respiratory or skin sensitisation:				Human being		Sensitising (skin contact)
Symptoms:						breathing difficulties, headaches, gastrointestinal disturbances, mucous membrane irritation, dizziness, nausea

Sulfur						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>9,23	mg/l/4h	Rat		
Acute toxicity, by inhalation:	LC50	>5,43	mg/l/4h	Rat	U.S. EPA 81-3	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:				Salmonella typhimurium	bacterial	Negative
Symptoms:						breathing difficulties, diarrhoea, mucous membrane irritation

Stearic acid						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes



Page 12 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

Acute toxicity, by oral route:	LD50	21500	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Serious eye damage/irritation:				Rabbit		Not irritant
Respiratory or skin sensitisation:						No indications of such an effect.
Germ cell mutagenicity:					(Ames-Test)	Negative, No indications of such an effect.
Carcinogenicity:						Negative
Symptoms:						mucous membrane irritation

Carbon black						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>3000	mg/kg			
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:				Mouse		Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEL	0,0011	mg/l			References, Target organ(s): lung90d
Aspiration hazard:						No
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	137	mg/kg	Mouse		



Page 13 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 01.11.2021 / 0002
 Replacing version dated / version: 08.04.2021 / 0001
 Valid from: 01.11.2021
 PDF print date: 01.11.2021
 Vario-Sol FP 440 g
 Art.: 9094731

Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	52	mg/kg	Rat		
---	-------	----	-------	-----	--	--

11.2. Information on other hazards

Vario-Sol FP 440 g Art.: 9094731						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties:						Does not apply to mixtures.
Other information:						No other relevant information available on adverse effects on health.

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

Vario-Sol FP 440 g Art.: 9094731							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.



Page 14 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

12.7. Other adverse effects:							No information available on other adverse effects on the environment.
Other information:							DOC-elimination degree(comp lexing organic substance)>= 80%/28d: n.a.

Calcium oxide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1070	mg/l		IUCLID Chem. Data Sheet (ESIS)	
Water solubility:			1650	mg/l			

Zinc oxide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.2. Persistence and degradability:							Not relevant for inorganic substances.
12.3. Bioaccumulative potential:							Not relevant for inorganic substances.
12.4. Mobility in soil:	Log Koc		2,2				
12.1. Toxicity to fish:	LC50	96h	1,1-2,5	ppm	Oncorhynchus mykiss		
12.1. Toxicity to fish:	LC50	96h	3,31-8,062	mg/l	Brachydanio rerio		
12.1. Toxicity to fish:	LC50	96h	>320	mg/l	Lepomis macrochirus		
12.1. Toxicity to daphnia:	EC50	48h	1	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	EC50	48h	0,413-0,83	mg/l	Ceriodaphnia spec.	U.S. EPA ECOTOX Database	

12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,058	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	0,17	mg/l	Selenastrum capricornutum		
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,017	mg/l	Pseudokirchneriella subcapitata		
12.1. Toxicity to algae:	EC50	72h	0,136	mg/l	Scenedesmus quadricauda	OECD 201 (Alga, Growth Inhibition Test)	
12.4. Mobility in soil:			158,5	L/kg			
12.5. Results of PBT and vPvB assessment							Not relevant for inorganic substances.

N-cyclohexylbenzothiazole-2-sulphenamide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	7,9	mg/l	Lepomis macrochirus		
12.1. Toxicity to fish:	LC50	96h	5,4	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Pimephales promelas		
12.1. Toxicity to fish:	NOEC/NOEL	14d	0,14	mg/l	Oryzias latipes		
12.1. Toxicity to daphnia:	EC50	48h	0,79	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,0084	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	IC50	96h	0,9	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	

Sulfur							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	866	mg/l	Brachydanio rerio		



Page 16 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

12.1. Toxicity to daphnia:	EC0	24h	>1000 0	mg/l	Daphnia magna		
12.2. Persistence and degradability:							Not relevant for inorganic substances.
12.3. Bioaccumulative potential:							Not to be expected
Toxicity to bacteria:	EC50	3h	>1900	mg/l	0		

Stearic acid

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	48h	>1000	mg/l	Cyprinus caprio		
12.2. Persistence and degradability:		28d	>70	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Toxicity to bacteria:	EC50	16h	>100	mg/l	Pseudomonas putida		

Carbon black

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Water solubility:							Insoluble, Product floats on the water surface.
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	24h	>5600	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	NOEC/NOEL	3d	10000	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Not biodegradable
12.3. Bioaccumulative potential:							Not to be expected



Page 17 of 21
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 01.11.2021 / 0002
 Replacing version dated / version: 08.04.2021 / 0001
 Valid from: 01.11.2021
 PDF print date: 01.11.2021
 Vario-Sol FP 440 g
 Art.: 9094731

Toxicity to bacteria:	EC0	3h	>=800	mg/l	activated sludge	Regulation (EC) 440/2008 C.22 (SOIL MICROORGANISMS - CARBON TRANSFORMATION TEST)	
-----------------------	-----	----	-------	------	------------------	--	--

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

07 02 13 waste plastic

20 01 39 Plastics

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. dispose at suitable refuse site.

E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations.

Recommendation:

Recycling

15 01 01 paper and cardboard packaging

SECTION 14: Transport information

General statements

14.1. UN number or ID number: n.a.

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

14.3. Transport hazard class(es):

n.a.

14.4. Packing group:

n.a.

Classification code:

n.a.

LQ:

n.a.

14.5. Environmental hazards:

Not applicable

Tunnel restriction code:

Transport by sea (IMDG-code)

14.2. UN proper shipping name:

14.3. Transport hazard class(es):

n.a.

14.4. Packing group:

n.a.



Page 18 of 21
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 01.11.2021 / 0002
Replacing version dated / version: 08.04.2021 / 0001
Valid from: 01.11.2021
PDF print date: 01.11.2021
Vario-Sol FP 440 g
Art.: 9094731

Marine Pollutant: n.a.
14.5. Environmental hazards: Not applicable
Transport by air (IATA)
14.2. UN proper shipping name:
14.3. Transport hazard class(es): n.a.
14.4. Packing group: n.a.
14.5. Environmental hazards: Not applicable

14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

14.7. Maritime transport in bulk according to IMO instruments

Non-dangerous material according to Transport Regulations.

SECTION 15: Regulatory information

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

Observe restrictions:
General hygiene measures for the handling of chemicals are applicable.

Directive 2010/75/EU (VOC): < 0,01 %

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 1-16

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Not applicable

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Eye Dam. — Serious eye damage
Aquatic Acute — Hazardous to the aquatic environment - acute
Aquatic Chronic — Hazardous to the aquatic environment - chronic
Skin Sens. — Skin sensitization
Skin Irrit. — Skin irritation

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
Guidelines for the preparation of safety data sheets as amended (ECHA).

Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).

Safety data sheets for the constituent substances.

ECHA Homepage - Information about chemicals.

GESTIS Substance Database (Germany).

German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).

EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU)

2017/164, (EU) 2019/1831, each as amended.

National Lists of Occupational Exposure Limits for each country as amended.

Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ASTM ASTM International (American Society for Testing and Materials)

ATE Acute Toxicity Estimate

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BSEF The International Bromine Council

bw body weight

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)

EC European Community

ECHA European Chemicals Agency

ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ErCx, EµCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)



Page 20 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

etc. et cetera
EU European Union
EVAL Ethylene-vinyl alcohol copolymer
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
Koc Adsorption coefficient of organic carbon in the soil
Kow octanol-water partition coefficient
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC (Code) International Bulk Chemical (Code)
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database
IUPAC International Union for Pure Applied Chemistry
LC50 Lethal Concentration to 50 % of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
Log Kow, Log Pow Logarithm of octanol-water partition coefficient
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute for Occupational Safety and Health (USA)
NLP No-longer-Polymer
NOEC, NOEL No Observed Effect Concentration/Level
OECD Organisation for Economic Co-operation and Development
org. organic
OSHA Occupational Safety and Health Administration (USA)
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
TOC Total organic carbon
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
wwt wet weight

®

Page 21 of 21

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 01.11.2021 / 0002

Replacing version dated / version: 08.04.2021 / 0001

Valid from: 01.11.2021

PDF print date: 01.11.2021

Vario-Sol FP 440 g

Art.: 9094731

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.