

# Safety Data Sheet as per regulation (EC) 1907/2006

Commercial Product Name : FS10 – 900 EFFEKTBINDEMITTEL

Article-No. : 15640-900

Revision Date : 23.06.2016

Version : 7.0 /en

**FOLMANN**

Replaces version from : 08.02.2016

Print date : 11.11.2016

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

### 1.1 Product identifier

Commercial Product Name                      **FS10 – 900 EFFEKTBINDEMITTEL**

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

\*Relevant identified uses                      printing ink

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

Address    Follmann GmbH & Co. KG  
Postfach 12 63  
D-32372 Minden  
Telephone : +49 (571) 93 39 -0  
FAX : +49 (571) 93 39 -300

Responsible Department                      Environmental Department +49 (571) 9339-176

E-mail (competent person)                      sicherheitsdatenblatt@follmann.de

### 1.4 Emergency telephone number

Emergency telephone number                      Outside USA: -001 703 527 3887 (D813)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008                      This product is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

### 2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]                      The product does not have to be labelled according to Regulation (EC) No. 1272/2008 [CLP].

### \*Further information

EUH208: Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol; 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH210: Safety data sheet available on request.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixture

Chemical characterization                      Acrylat

### Hazardous ingredients

Ingredient		Classification (EC) 1272/2008	Concentration
2,2' -oxybisethanol	CAS No. : 111-46-6 EC-No. : 203-872-2 Index-No. : 603-140-00-6 REACH No. : 01-2119457857-21-xxxx	Acute Tox. 4; H302 STOT RE 2; H373	1.0 – 5.0 % by weight
2,4,7,9-Tetramethyldec-5-in-4,7-diol	CAS No. : 126-86-3 EC-No. : 204-809-1 REACH No. : 01-2119954390-39-xxxx	Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 3; H412	0.1 – 1.0 % by weight
1,2-benzisothiazol-3(2H)-one	CAS No. : 2634-33-5 EC-No. : 220-120-9 Index-No. : 613-088-00-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	< 0.01 % by weight

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## **SECTION 4: First aid measures**

### **4.1 Description of first aid measures**

General advice	Move out of dangerous area. Take off all contaminated clothing immediately. Do not leave the victim unattended. Show this safety data sheet to the doctor in attendance.
In case of skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation occurs, seek medical advice/attention.
In case of eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If swallowed	Rinse mouth. Do NOT induce vomiting. Call a physician immediately.

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

Suitable extinguishing media Carbon dioxide (CO<sub>2</sub>), Foam, Water spray, Dry powder

Extinguishing media which must not be used for safety reasons High volume water jet

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

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases Hazardous decomposition products formed under fire conditions. Exposure to decomposition products may be a hazard to health.

### **5.3 Advice for firefighters**

Special protective equipment for firefighting In the event of fire, wear self-contained breathing apparatus.

Additional information on firefighting The product itself does not burn. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Do not allow run-off from fire fighting to enter drains or water courses.

## **SECTION 6: Accidental release measures**

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

Personal precautions Use personal protective equipment.

### **6.2 Environmental precautions**

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

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

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated surface thoroughly. Treat recovered material as described in the section "Disposal considerations".

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

Reference to other sections Disposal considerations See also section 13

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling

Handle and open container with care. Avoid contact with skin and eyes.

Precautions

Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Observe label precautions.

Advice on protection against fire and explosion

No special protective measures against fire required.

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

Storage space and container requirements

Keep in properly labelled containers. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage specifications

Protect from frost.

TRGS 510

12

Recommended storage temperature

5 – 25 °C

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### DIETHYLENE GLYCOL

##### DNEL

Value	Target group	Exposure route	Exposure frequency	Source
106 mg/kg	Workers	dermal	Long term effects systemic	100
60 mg/m <sup>3</sup>	Workers	inhale	Long term effects systemic	100

Source : 100 – Firmendaten

##### PNEC

Value	Target group	Exposure route	Source
199,5 mg/l	Environment	STP	100
10 mg/l	Environment	freshwater	100
1 mg/l	Environment	marine water	100
20,9 mg/kg	Environment	sediment	100
2,09 mg/l	Environment	marine sediment	100
1,53 mg/kg	Environment	Soil	100

Source : 100 – Firmendaten

#### 2,4,7,9-Tetramethyldec-5-in-4,7-diol

##### DNEL

Value	Target group	Exposure route	Exposure frequency	Source
1,5 mg/kg	Workers	Oral	Short-term effects systemic	100
0,5 mg/kg	Workers	Oral	Long term effects systemic	100
5,28 mg/m <sup>3</sup>	Workers	inhale	Short-term effects Local	100
1,76 mg/m <sup>3</sup>	Workers	inhale	Long term effects systemic	100

Source : 100 – Firmendaten

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## PNEC

Value	Target group	Exposure route	Source
0,04 mg/l	Environment	freshwater	100
0,004 mg/l	Environment	marine water	100
0,4 mg/l	Environment	Intermittent release.	100
7 mg/l	Environment	wastewater treatment plant	100
0,32 mg/kg	Environment	freshwater sediment	100
0,032 mg/kg	Environment	marine sediment	100
0,028 mg/kg	Environment	Soil	100

Source : 100 – Firmendaten

## 8.2 Exposure controls

### Respiratory protection

Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).

Note: Should no job-related limit values are indicated, the product, which a monitoring exposure limit is allocated, do not contains ingredients in relevant concentrations.

### Hand protection

Protective gloves complying with EN 374. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Unsuitable material :

woven fabric, Leather gloves

Suitable material :

Nitriles

### Eye protection

Tightly fitting safety goggles

### Skin and body protection

Wear suitable protective equipment. Long sleeved clothing

### General protective and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Avoid contact with the skin and the eyes.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	liquid
*Form	Liquid
Colour	milky
Odour	characteristic
pH	7 – 8
*Melting point [°C] / Freezing point [°C]	approx. 0 °C
*Boiling point [°C]	approx. 100 °C
Evaporation rate [kg/(s*m <sup>2</sup> )]	not determined
*Vapour pressure [kPa]	123 hPa
Temperature :	approx. 50 °C
Vapour density	not determined

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\*Density [g/cm<sup>3</sup>] approx. 1,05 – 1,25 g/cm<sup>3</sup>

Temperature : approx. 20 °C

Water solubility [g/l]

Remarks : miscible

Partition coefficient n-octanol /water (log P O/W) not determined

Autoignition temperature [°C] not determined

\*Viscosity, dynamic [kg/(m\*s)] approx. 40 – 50 dPa\*s

Temperature : 20 °C

Measuring method : Haake-Viscotester

Explosive properties Not relevant

Oxidising properties Not relevant

## **SECTION 10: Stability and reactivity**

### **10.4 Conditions to avoid**

Conditions to avoid None under normal processing.

## **SECTION 11: Toxicological information**

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

#### **Hazardous ingredients**

##### **DIETHYLENE GLYCOL**

Oral toxicity [mg/kg]	Test criterion	Test species	Source
19600 mg/kg	LD50	rat	100
19600	LD50	rat	100

Source : 100 – Firmendaten

Dermal toxicity [mg/kg]	Test criterion	Test species	Source
13300 mg/kg	LD50	rabbit	100
13300	LD50	rabbit	100

Source : 100 – Firmendaten

##### **2,4,7,9-Tetramethyldec-5-in-4,7-diol**

Oral toxicity [mg/kg]	Test criterion	Test species	Source
4600 mg/kg	LD50	rat	100

Source : 100 – Firmendaten

Dermal toxicity [mg/kg]	Test criterion	Test species	Duration	Source
>2001 mg/kg	LD50	rat	24h	100

Source : 100 – Firmendaten

Inhalative toxicity [mg/l]	Test criterion	Test species	Exposure duration	Source
>20 mg/l	LC50	rat	1 hour	100

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Irritant effect on skin	No skin irritation
Irritant effect on eyes	Causes serious eye irritation.
Sensitization	May cause sensitization by skin contact.
Carcinogenic effects	No known effect.
Mutagenicity	No known effect.
Reproduction toxicity	No known effect.

Specific target organ toxicity (single exposure) [mg/kg]	Source
No known effect.	100

Source : 100 – Firmendaten

Specific target organ toxicity (repeated exposure) [mg/kg]	Source
No known effect.	100

Source : 100 – Firmendaten

## 1,2-BENZISOTHIAZOL-3(2H)-ONE

Oral toxicity [mg/kg]	Test criterion	Test species	Source
1193 mg/kg	LD50	rat	100

Source : 100 – Firmendaten

Dermal toxicity [mg/kg]	Test criterion	Test species	Source
4115 mg/kg	LD50	rat	100

Source : 100 – Firmendaten

Irritant effect on skin	Skin irritation
Irritant effect on eyes	Risk of serious damage to eyes.
Sensitization	May cause sensitization by skin contact.
Carcinogenic effects	no data available
Mutagenicity	no data available
Reproduction toxicity	no data available

## 11.2 Additional information

Other information (chapter 11.) No toxicology information is available.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Hazardous ingredients

##### DIETHYLENE GLYCOL

Toxicity to fish [mg/l]	Test criterion	Test species	Exposure duration	Source
75200 mg/l	LC50	Pimephales promelas (fathead minnow)	96 h	100

Source : 100 – Firmendaten

Toxicity to daphnia [mg/l]	Test criterion	Test species	Exposure duration	Source
>10000 mg/l	EC 50	Daphnia magna (Water flea)	24 h	100

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Source : 100 – Firmendaten

Toxicity to algae [mg/l]	Test criterion	Test species	Exposure duration	Source
6500 mg/l	EC 50	Pseudokirchneriella subcapitata	96 h	100

Source : 100 – Firmendaten

NOEC (algae) [mg/l]	Test species	Duration of dosage	Source
100 mg/l	Pseudokirchneriella subcapitata	72 h	100

Source : 100 – Firmendaten

**2,4,7,9-Tetramethyldec-5-in-4,7-diol**

Toxicity to fish [mg/l]	Test criterion	Test species	Exposure duration	Source
36 mg/l	LC50	Pimephales promelas (fathead minnow)	96 h	100
42 mg/l	LC50	Cyprinus carpio (Carp)	96 h	100

Source : 100 – Firmendaten

Toxicity to daphnia [mg/l]	Test criterion	Test species	Exposure duration	Source
91 mg/l	EC 50	Daphnia magna (Water flea)	48 h	100

Source : 100 – Firmendaten

Toxicity to algae [mg/l]	Test criterion	Test species	Exposure duration	Source
82 mg/l	EC 50	Selenastrum capricornutum (green algae)	72 h	100

Source : 100 – Firmendaten

Bioaccumulation 2,64 log Pow

Mobility

Mobility No information available.

**1,2-BENZISOTHIAZOL-3(2H)-ONE**

Toxicity to fish [mg/l]	Test criterion	Test species	Exposure duration	Source
2,18 mg/l	LC50	Oncorhynchus mykiss (rainbow trout)	96h	72

Source : 72 – Verordnung (EG) Nr. 1272/2008 des Europäischen Parlaments und des Rates vom 16. Dezember 2008 über die Einstufung Kennzeichnung und Verpackung von Stoffen und Gemischen (Tab. 3.1)

Toxicity to daphnia [mg/l]	Test criterion	Test species	Exposure duration	Source
2,94 mg/l	EC 50	Daphnia magna (Water flea)	48 h	100

Source : 100 – Firmendaten

Toxicity to algae [mg/l]	Test criterion	Test species	Exposure duration	Source
0,11 mg/l	ErC50	Pseudokirchneriella subcapitata	72 h	100

Source : 100 – Firmendaten

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## 12.5 Results of PBT and vPvB assessment

Results of PBT characteristics determination      This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

## 12.6 Other adverse effects

Further information on ecology      We have no quantitative data concerning the ecological effects of this product.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Disposal considerations      According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. The following Waste Codes are only suggestions:

Waste Code      08 01 12: waste paint and varnish other than those mentioned in 08 01 11  
08 03 13: waste ink other than those mentioned in 08 03 12

Uncleaned empty packaging      -  
-

## SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
14.1 UN-No	Not applicable.	Not applicable.	Not applicable.
14.2 Description of the goods	Non dangerous good	Non dangerous good	Non dangerous good IATA
14.2 UN proper shipping name		Non dangerous good	Non dangerous good
14.3 Transport hazard class(es)	Not applicable.	Not applicable.	Not applicable.
14.4 Packaging group	Not applicable.	Not applicable.	Not applicable.
14.5 Environmental hazards	Not applicable.	Not applicable.	Not applicable.

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code      Not relevant

## SECTION 15: Regulatory information

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

Additional regulations      Additionally, observe any national regulations!

## SECTION 16: Other information

Relevant H-phrases      EUH208: Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol; 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.  
EUH210: Safety data sheet available on request.  
H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H318: Causes serious eye damage.  
H373: May cause damage to organs through prolonged or repeated exposure .  
H400: Very toxic to aquatic life.  
H411: Toxic to aquatic life with long lasting effects.



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Wording of the hazard classes	H412: Harmful to aquatic life with long lasting effects. Acute Tox.: Acute toxicity STOT RE: Specific target organ toxicity – repeated exposure Eye Dam.: Serious eye damage Skin Sens.: Skin sensitization Aquatic Chronic: Hazardous to the aquatic environment Skin Irrit.: Skin irritation Aquatic Acute: Hazardous to the aquatic environment
Modifications since last version	Modifications of the previous version are denoted with an asterisk (*).
Department issuing safety data sheet	Environmental Department
Further information	Full text of R-phrases referred to under sections 2 and 3

This information is provided in accordance with the current status of our knowledge and experience. The Safety Data Sheet describes products with a view to relevant safety requirements. This information does not constitute a warranty of properties, features or qualities.