

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Rhenofol-Paste

Print date: 01.09.2016

Product code: RCSO-FDT-016

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

### 1.1. Product identifier

Rhenofol-Paste

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

#### Use of the substance/mixture

chemical sealing

#### Uses advised against

Only use for the intended purpose.

The product is intended for professional use.

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

Company name:	FDT Flachdach Technologie GmbH & Co. KG	
Street:	Eisenbahnstraße 6-8	
Place:	D-68199 Mannheim	
Telephone:	+49 (621) 8504100	Telefax: +49 (621) 8504200
e-mail:	kundenservice@fdt.de	
Contact person:	Marco Anderer	Telephone: +49 (621) 8504563
e-mail:	marco.anderer@fdt.de	
Internet:	<a href="http://www.fdt.de">http://www.fdt.de</a>	
Responsible Department:	Arbeitssicherheit und Umweltschutz	

### 1.4. Emergency telephone

#### number:

Poison Control Center (Mayence, GER): +49 (0)6131 - 19240 (24h - de, en)  
Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department or the NHS enquiry service.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No. 1272/2008

Hazard categories:

Flammable liquid: Flam. Liq. 2

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

Harmful if swallowed.

Causes serious eye irritation.

Suspected of causing cancer.

May cause respiratory irritation.

May cause drowsiness or dizziness.

### 2.2. Label elements

#### Regulation (EC) No. 1272/2008

#### Hazard components for labelling

tetrahydrofuran

**Signal word:** Danger

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#### Pictograms:



#### Hazard statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

#### Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
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.
P405	Store locked up.

#### Special labelling of certain mixtures

EUH019	May form explosive peroxides.
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#### 2.3. Other hazards

The components in this mixture do not meet the criteria for classification as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Mixture of substances listed below with harmless additions.

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
109-99-9	tetrahydrofuran			70-100 %
	203-726-8	603-025-00-0	01-2119444314-46	
	Flam. Liq. 2, Carc. 2, Acute Tox. 4, Eye Irrit. 2, STOT SE 3, STOT SE 3; H225 H351 H302 H319 H335 H336 EUH019			

Full text of H and EUH statements: see section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In case of troubles or persistent symptoms, consult an doctor/physician.

Remove persons from danger area and lie them down. Never orally infuse something to an unconscious person. No special first aid measures necessary. A vomiting, supine person must be brought into recovery

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position.

#### After inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.  
In case of irregular breathing or respiratory arrest, perform artificial respiration.

#### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Change contaminated clothing. In case of skin irritation, consult a physician.

#### After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

#### After ingestion

Rinse mouth, spit liquid again. Do NOT induce vomiting. Have victim drink large quantities of water, with active charcoal if possible. Call a physician immediately.

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

Following eye contact: Causes serious eye irritation.  
Following inhalation: May cause respiratory irritation.  
After Ingestion: Harmful if swallowed.  
Headache. Drowsiness. Dizziness.  
Suspected of causing cancer.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### **5.1. Extinguishing media**

##### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>). Extinguishing powder. Water spray. Fight larger fires with water spray jet or alcohol-resistant foam.

##### Unsuitable extinguishing media

High power water jet.

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

Vapours may form explosive mixtures with air. Vapours are heavier than air and will spread at floor level. Possible ignition over greater distances. Thermal decomposition can lead to harmful gases and vapours. May form explosive peroxides.

#### **5.3. Advice for firefighters**

Co-ordinate fire-fighting measures to the fire surroundings. Wear a self-contained breathing apparatus and chemical protective clothing.

#### **Additional information**

Do not allow to enter into surface water or drains. Use water spray jet to protect personnel and to cool endangered containers.

### SECTION 6: Accidental release measures

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

Provide adequate ventilation. Keep away from sources of ignition - No smoking. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.  
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the

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recovered material as prescribed in the section on waste disposal.

#### 6.4. Reference to other sections

Safe handling: see section 7

Personal precautions: refer to section 8.

Disposal: see section 13

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

Provide adequate ventilation as well as local exhaust at critical locations. Handle and open container with care.

##### Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. Use explosion-proof machinery, apparatus, ventilation facilities, tools etc.

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

##### Requirements for storage rooms and vessels

Store only in original container. Keep container tightly closed in a cool, well-ventilated place. Protect against direct sunlight.

#### 7.3. Specific end use(s)

chemical sealing

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
109-99-9	Tetrahydrofuran	50	150		TWA (8 h)	WEL
		100	300		STEL (15 min)	WEL

#### 8.2. Exposure controls

##### Protective and hygiene measures

Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

Avoid skin, eye and clothing contact. After contact with skin, wash immediately with plenty of water and soap or a suitable cleaning agent.

##### Eye/face protection

Tightly fitting safety glasses with side shields.

##### Hand protection

Protect skin by using skin protective cream. Wear suitable gloves.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Suitable material: Butyl rubber.

##### Skin protection

Full cover clothing covering arms and legs.

##### Respiratory protection

Use protective filter mask in case of short-term and low exposure; in case of intense or longer exposure, use respiratory protection device operating independently from circulating air.

Respirator with combination filter for vapour and particles. Filter type A-P2.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state: paste-like  
 Colour: various  
 Odour: like: Ether

#### Test method

pH-Value: not determined

#### Changes in the physical state

Melting point: \*-108,5 °C  
 Initial boiling point and boiling range: \*65,5 °C  
 Flash point: \*-20 °C

#### Flammability

Gas: not determined

#### Explosive properties

The product is not explosive, however, formation of explosive mixtures are possible.

Lower explosion limits: \*1,5 vol. %

Upper explosion limits: \*12,0 vol. %

Ignition temperature: \*212 °C DIN 51794

#### Auto-ignition temperature

Gas: not determined

Decomposition temperature: not determined

#### Oxidizing properties

not determined

Vapour pressure: \*217 hPa  
 (at 20 °C)

Density (at 20 °C): \*0,8892 g/cm<sup>3</sup>

Water solubility: \*completely miscible

Partition coefficient: not determined

Viscosity / dynamic: not determined  
 (at 20 °C)

Viscosity / kinematic: not determined

Vapour density: not determined

Solvent content: ca. 80 %

### 9.2. Other information

\*The data refer to "tetrahydrofuran"

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactivity under regular conditions.

### 10.2. Chemical stability

The product is stable under regular conditions.

### 10.3. Possibility of hazardous reactions

Avoid contact with oxidizing agents.

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In the presence of oxygen and light: May form explosive peroxides.

#### **10.4. Conditions to avoid**

No information available.

#### **10.5. Incompatible materials**

Oxygen. Oxidizing agents, strong.

#### **10.6. Hazardous decomposition products**

Thermal decomposition can lead to harmful gases and vapours.

In case of fire: It may produce hazardous fumes like carbon monoxide or carbon dioxide.

### SECTION 11: Toxicological information

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

##### **Acute toxicity**

Harmful if swallowed.

##### **ATEmix calculated**

ATE (oral) 561,8 mg/kg

CAS No	Chemical name			
	Exposure route	Dose	Species	Source
109-99-9	tetrahydrofuran			
	oral	LD50 3000 mg/kg	Rat	

##### **Irritation and corrosivity**

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

##### **Sensitising effects**

Based on available data, the classification criteria are not met.

##### **Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of causing cancer. (tetrahydrofuran)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

##### **STOT-single exposure**

May cause respiratory irritation. (tetrahydrofuran)

May cause drowsiness or dizziness. (tetrahydrofuran)

##### **STOT-repeated exposure**

Based on available data, the classification criteria are not met.

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

##### **Aspiration hazard**

Based on available data, the classification criteria are not met.

##### **Specific effects in experiment on an animal**

In a two-year study, the application of tetra hydrofuran in high doses led to tumors in the liver of female mice and the kidney of male rats. The significance of this findings for the human health is not clear.

##### **Further information**

The product is skin resorptive.

### SECTION 12: Ecological information

#### **12.1. Toxicity**

No data available.

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CAS No	Chemical name				
	Aquatic toxicity	Dose	[h]   [d]	Species	Source
109-99-9	tetrahydrofuran				
	Acute fish toxicity	LC50	2820 mg/l	96 h	Leuciscus idus (golden orfe)
	Acute crustacea toxicity	EC50	5930 mg/l	48 h	Daphnia magna

#### **12.2. Persistence and degradability**

No data available.

#### **12.3. Bioaccumulative potential**

No data available.

#### **12.4. Mobility in soil**

No data available.

#### **12.5. Results of PBT and vPvB assessment**

The components in this mixture do not meet the criteria for classification as PBT or vPvB.

#### **12.6. Other adverse effects**

No data available.

### SECTION 13: Disposal considerations

#### **13.1. Waste treatment methods**

##### **Advice on disposal**

Disposal according to official regulations. Do not dispose with household waste.

Consult the local waste disposal expert about waste disposal. According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

##### **Waste disposal number of waste from residues/unused products**

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances  
Classified as hazardous waste.

##### **Waste disposal number of contaminated packaging**

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances  
Classified as hazardous waste.

##### **Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

#### **Land transport (ADR/RID)**

<b><u>14.1. UN number:</u></b>	UN 2056
<b><u>14.2. UN proper shipping name:</u></b>	TETRAHYDROFURAN
<b><u>14.3. Transport hazard class(es):</u></b>	3
<b><u>14.4. Packing group:</u></b>	II
Hazard label:	3

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Classification code:	F1
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

#### Inland waterways transport (ADN)

<b>14.1. UN number:</b>	UN 2056
<b>14.2. UN proper shipping name:</b>	TETRAHYDROFURAN
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3



Classification code:	F1
Limited quantity:	1 L
Excepted quantity:	E2

#### Marine transport (IMDG)

<b>14.1. UN number:</b>	UN 2056
<b>14.2. UN proper shipping name:</b>	TETRAHYDROFURAN
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3



Marine pollutant:	Nein
Special Provisions:	-
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-D

#### Air transport (ICAO)

<b>14.1. UN number:</b>	UN 2056
<b>14.2. UN proper shipping name:</b>	TETRAHYDROFURAN
<b>14.3. Transport hazard class(es):</b>	3
<b>14.4. Packing group:</b>	II
Hazard label:	3



Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2



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IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

#### 14.6. Special precautions for user

No special precautions known.

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

not applicable

### SECTION 15: Regulatory information

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

##### EU regulatory information

2004/42/EC (VOC): ca. 80%

##### Additional information

Regulation (EC) No. 1005/2009 on substances that lead to the depletion of the ozone layer: not applicable

Regulation (EC) No. 648/2004 (Detergents regulation): not applicable

REGULATION (EC) No 850/2004 on persistent organic pollutants: not applicable

REGULATION (EC) No 689/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the export and import of dangerous chemicals: This mix contains no chemicals that are subject to the export notification procedures (annex 1).

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none

This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: none

##### National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water contaminating class (D): 1 - slightly water contaminating

#### 15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out: tetrahydrofuran

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s): 2,3,5,6,7,8,10,11,13,15,16.

Version 1,00 - Creation - 04.06.2014

Version 1,01 - Classification/Labeling according Regulation No.1272/2008 (GHS/CLP) and general revision - 21.07.2015

Version 1,02 - General update - 26.08.2016

#### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

BlmSchV (Fed.Imm.Prot.Act): Directive on the Implementation of the Federal Immission Protection Act

CAS: Chemical Abstracts Service

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EC: Effective Concentration  
EG: European Community (Europäische Gemeinschaft)  
EN: European Norm  
IATA: International Air Transport Association  
IBC Code: International Code for the Construction and Equipment of ships carrying Dangerous Chemicals in Bulk  
ICAO: International Civil Aviation Organization  
IMDG: International Maritime Code for Dangerous Goods  
CLP: Classification, Labeling, Packaging  
IUCLID: International Uniform Chemical Information Database  
LC: Lethal concentration  
LD: Lethal dose  
log Kow: Octanol/water partition coefficient  
MARPOL: Maritime Pollution Convention = Convention for the Prevention of Maritime Pollution from Ships  
OECD: Organisation for Economic Co-operation and Development  
PBT: Persistent, bio-cumulative, toxic  
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail  
TRGS: Technische Regeln für Gefahrstoffe  
VOC: Volatile Organic Compounds  
vPvB: very persistent and very bio-cumulative  
VwVwS: Administrative Regulation for Water Pollutants  
WGK: German Water Hazard Class  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
DNEL: Derived No Effect Level  
PNEC: Predicted No Effect Concentration  
TLV: Threshold Limiting Value  
STOT: Specific Target Organ Toxicity

#### Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
EUH019	May form explosive peroxides.

#### Further Information

The information given in this safety data sheet is to describe the product's safety regulations. It is not for guaranteeing certain characteristics and is based on today's knowledge. The safety data sheet was generated upon information of pre-suppliers by:

REACHECK Solutions GmbH, Frohsinnstraße 28, 63739 Aschaffenburg, Germany  
Phone: +49 (0)6021 - 1 50 86-0, Fax: +49 (0)6021 - 1 50 86-77, E-Mail: eu-sds@reacheck.eu,  
www.reacheck.eu

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*