

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Rhenofol-Verdüner D

Print date: 31.07.2015

Product code: RCSO-FDT-015

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

1.1. Product identifier

Rhenofol-Verdüner D

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

Use of the substance/mixture

Solvent

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: <http://www.fdt.de>
Responsible Department: Arbeitssicherheit und Umweltschutz

1.4. Emergency telephone number: Poison Control Center (Mayence, GER)
+49 (0)6131-19240 (24h - de, en)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Hazard categories:
Flammable liquid: Flam. Liq. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Specific target organ toxicity - single exposure: STOT SE 3
Hazard Statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

2.2. Label elements

Hazardous components which must be listed on the label
ethyl acetate

Signal word: Danger

Pictograms:



Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

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| | |
|----------------|--|
| P243 | smoking. |
| P280 | Take precautionary measures against static discharge. |
| P305+P351+P338 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P337+P313 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P501 | If eye irritation persists: Get medical advice/attention. Dispose of contents/container in accordance with national disposal regulations. |

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

The product is composed of the ingredients listed below and other non-hazardous additives.

Hazardous components

| CAS No | Chemical name | | | Quantity |
|----------|---|--------------|------------------|-----------|
| | EC No | Index No | REACH No | |
| | Classification according to Regulation (EC) No. 1272/2008 [CLP] | | | |
| 141-78-6 | ethyl acetate | | | 50-<100 % |
| | 205-500-4 | 607-022-00-5 | 01-2119475103-46 | |
| | Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066 | | | |

Full text of H and EUH phrases: 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 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. Call a physician immediately.

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 in any case!

After ingestion

Rinse mouth, spit liquid again. Do NOT induce vomiting. Let water be drunken in little sips (dilution effect). 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 drowsiness or dizziness.

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

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂). 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

Thermal decomposition can lead to harmful gases and vapours.

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.

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.

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 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. Avoid the formation of aerosol. 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.

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.

7.3. Specific end use(s)

Solvent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|----------|---------------|-----|-------------------|-----------|---------------|--------|
| 141-78-6 | Ethyl acetate | 200 | - | - | TWA (8 h) | WEL |
| | | 400 | - | - | STEL (15 min) | WEL |

DNEL/DMEL values

| CAS No | Substance | Exposure route | Effect | Value |
|--------------------------|---------------|----------------|--------|------------------------|
| 141-78-6 | ethyl acetate | | | |
| Consumer DNEL, long-term | | dermal | | 37 mg/kg bw/day |
| Worker DNEL, long-term | | dermal | | 63 mg/kg bw/day |
| Consumer DNEL, acute | | inhalation | | 734 mg/m ³ |
| Consumer DNEL, long-term | | inhalation | | 367 mg/m ³ |
| Worker DNEL, acute | | inhalation | | 1468 mg/m ³ |
| Worker DNEL, long-term | | inhalation | | 734 mg/m ³ |

PNEC values

| CAS No | Substance | Value |
|--|---------------|------------|
| 141-78-6 | ethyl acetate | |
| Freshwater | | 0,26 mg/l |
| Marine water | | 0,026 mg/l |
| Freshwater sediment | | 0,125 mg/l |
| Marine sediment | | 1,25 mg/l |
| Micro-organisms in sewage treatment plants (STP) | | 650 mg/l |

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.

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.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-----------------|----------------|
| Physical state: | liquid |
| Colour: | colourless |
| Odour: | characteristic |

Test method

pH-Value: not determined

Changes in the physical state

Melting point: not determined

Initial boiling point and boiling range: 77 °C

Flash point: -4 °C

Flammability

Gas: not determined

Explosive properties

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

Lower explosion limits: 2,1 vol. %

Upper explosion limits: 11,5 vol. %

Ignition temperature: 460 °C

Auto-ignition temperature

Gas: not determined

Decomposition temperature: not determined

Oxidizing properties

not determined

Vapour pressure: 98,7 hPa
(at 20 °C)

Density (at 20 °C): 0,87 g/cm³ ISO 2811

Water solubility: Not mixable and/or hard to mix.

Partition coefficient: not determined

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Vapour density: not determined

Solvent content: not determined

9.2. Other information

No further information available.

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

No known hazardous reactions.

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10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

| CAS No | Chemical name | | | | |
|----------|-----------------|--------|--------------|---------|--------|
| | Exposure routes | Method | Dose | Species | Source |
| 141-78-6 | ethyl acetate | | | | |
| | oral | LD50 | 5600 mg/kg | Rat | |
| | dermal | LD50 | >20000 mg/kg | Rabbit | |

Irritation and corrosivity

Irritating to eyes.

Sensitising effects

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

STOT-single exposure

Vapours may cause drowsiness and dizziness. (ethyl acetate)

Severe effects after repeated or prolonged exposure

Repeated exposure may cause skin dryness or cracking.

Carcinogenic/mutagenic/toxic effects for reproduction

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

Aspiration hazard

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

SECTION 12: Ecological information

12.1. Toxicity

No data available.

| CAS No | Chemical name | | | | | |
|----------|--------------------------|--------|-----------|-----------|--------------------------------------|--------|
| | Aquatic toxicity | Method | Dose | [h] [d] | Species | Source |
| 141-78-6 | ethyl acetate | | | | | |
| | Acute fish toxicity | LC50 | 230 mg/l | 96 h | Pimephales promelas (fathead minnow) | |
| | Acute algae toxicity | ErC50 | 3300 mg/l | | Scenedesmus subspicatus | |
| | Acute crustacea toxicity | EC50 | 717 mg/l | 48 h | Daphnia magna (Big water flea) | |

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

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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.

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

070104 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals; other organic solvents, washing liquids and mother liquors
Classified as hazardous waste.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous 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)

14.1. UN number: UN 1173
14.2. UN proper shipping name: ETHYL ACETATE
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



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)

14.1. UN number: UN 1173
14.2. UN proper shipping name: ETHYL ACETATE

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14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3



Classification code: F1

Limited quantity: 1 L

Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 1173

14.2. UN proper shipping name: ETHYL ACETATE

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3



Special Provisions: -

Limited quantity: 1 L

Excepted quantity: E2

EmS: F-E, S-D

Air transport (ICAO)

14.1. UN number: UN 1173

14.2. UN proper shipping name: ETHYL ACETATE

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3



Limited quantity Passenger: 1 L

Passenger LQ: Y341

Excepted quantity: E2

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 MARPOL73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

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

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:
ethyl acetate

SECTION 16: Other information

Changes

Version 1,00 - Creation - 10.04.2012

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

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)

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

CAS: Chemical Abstracts Service

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

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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-phrases (Number and full text)

| | |
|--------|---|
| H225 | Highly flammable liquid and vapour. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

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:

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www.reacheck.eu

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