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Commercial Name:
Art. No.**Antispread E2/30, E2/50, E2/100, E2/200, E2/400 FE 60**
TE1403, TE1405, TE1410, TE1420, TE1440**1. Substance / Preparation and Company Name**

- 1.1 Commercial Name: Antispread E2/30, E2/50, E2/100, E2/200, E2/400 FE60
- 1.2 Usage: Industrial Use.
- 1.2 Company: Dr. Tillwich GmbH Phone: +49-7451-5386-0
Werner Stehr
Murber Steige 26 Fax: +49-7451-5386-70
D-72160 Horb E-Mail: info@tillwich-stehr.com
Germany
- 1.3 Emergency Call: +49-7451-5386-20 8.00 am until 5.00 pm UTC + 1h
+49-7451-3766 5.00 pm until 8.00 am UTC + 1h

2. Possibilities of Risk

- 2.1 Physical and chemical dangers: Not classified as a dangerous product.
- 2.2 Health dangers: Not classified as a dangerous product.
- 2.3 Dangers for the environment: R 53;
May cause long-term adverse effects in the aquatic environment.

3. Composition / Components3.1 Substance: Preparation:

3.2 Chemical Characterization:

Components	Percentage	CAS-Nr.	Einecs	R-sentences	Symbols
Partially fluorinated ether C3 – C5 isomer mixture	max. 99,9 %	-	-	R 53	-
Partially fluorinated Polymer	0,01 – 0,2 %	Trade secret	-	R 53	-
Additives	< 0,1 %	Trade secret	-	-	-

These preparations contain materials which are not completely examined in accordance with Reach.

Classification according to the material guideline RL 67/548/EG, preparing guideline RL 1999/45/EG, and national german right ChemG, GefstoffV., TRGS, latest version.

4. Precautions for First Aid

- 4.1 Contact with Skin: Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap.
- 4.2 Contact with Eyes: In case of contact with eyes, rinse immediately with plenty of water. If irritations occur seek medical advice.

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- 4.3 Inhalation: If symptoms occur, remove person to fresh air. If symptoms continue, seek medical advice.
- 4.4 Ingestion: If swallowed, do not induce vomiting: If irritations occur seek medical advice.
- 4.5 Other Information:

5. Fire Fighting Procedures

- 5.1 Suitable Extinguisher: This product is not combustible. Cool container with spray of water.
- 5.2 Unsuitable Extinguisher:
- 5.3 Special Endangering:
Do not empty contaminated water into drains, ground and lakes or rivers.
Remove contaminated water and soil according to local regulations.
- 5.4 Special Protection Equipment:
Wear respiratory equipment and full encapsulated suit impervious to hydrogen fluoride (HF).

6. Precautions for Uncontrolled Release

- 6.1 Personal Precautions:
Avoid contact with eyes, skin and clothing.
- 6.2 Environmental Protection:
Do not empty the product into drains, ground and waters.
- 6.3 Spill Response:
Cover with inorganic absorbent material. Collect spilled material in a closed container.
The material must be disposed of as hazardous waste.
- 6.4 Other Information:

7. Handling and Storage

- 7.1 Handling:
Use only in well-ventilated areas. Keep container tightly closed when not in use. Keep away from heat and hot surfaces. Do not smoke. Take precautions against static discharges. Avoid contact with oxidizing agents.
- 7.2 Storage:
Keep only in the original container in a cool, well-ventilated place. Store separately from acids, bases and oxidizing agents.
- 7.3 Determined Use:
No special references.

8. Precautionary Information

- 8.1 Limiting Values:
- 8.2.1 AWG (threshold limit value): no data available
- 8.2.2 BWG (biological threshold limit value): no data available
- 8.2 Technical Precautions for the avoidance of the exposition on the job:
Remove gas/fumes/vapour or spray. Extract or filter foul air. Observe limiting values.

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8.3 Delimitation and monitoring of the exposition:

8.3.1 Breath Protection

In case of insufficient ventilation, wear suitable respiratory equipment.

8.3.2 Skin Protection

After work wash hands with water and soap.

Preventive skin protection required - Use protective hand lotion or wear suitable gloves from solvent resistant material. Avoid longer and intensive skin contact.

Suitable gloves:

Material: nitrile rubber

Category: III

Thickness: > 0,4 mm

Permeation time: Level 6 (> 4800 min.)

The data were determined on laboratory conditions. The conditions in practical application can deviate from these, the data can be only a guideline assistance with the selection of the suitable gloves. In each case the data of the manufacturer as well as the respective BG-rules are to be considered.

Contaminated gloves should be changed as fast as possible.

8.3.3 Eye Protection

Wear eye/face protection.

8.3.4 Body Protection

Wear suitable protective clothing.

8.4 Other Information:

Protective measures for chemicals must be noticed.

9. Physical and Chemical Data

- | | | | |
|------|---|---------------------------|------------------|
| 9.1 | Condition: liquid | Colour: colourless | Odour: odourless |
| 9.2 | Change of Condition: | | |
| | 9.2.1 Boiling Point: | 30° - 60° C (86 - 140° F) | |
| | 9.2.2 Pourpoint: | | |
| 9.3 | Flash Point: | not applicable | ISO 2592 |
| 9.4 | Ignition Point: | not applicable | DIN 51794 |
| 9.5 | Explosion Limits: | | |
| | lower: not applicable | upper: not applicable | |
| 9.6 | Vapour Pressure at 20°C (68° F): | no data available | |
| 9.7 | Density at 20°C (68° F): | 1,5 g/cm ³ | DIN 51757 |
| 9.8 | Solubility at 20°C (68° F) in H ₂ O: | insoluble | |
| 9.9 | pH value: | not applicable | |
| 9.10 | Viscosity at 20°C (68° F): | | |
| 9.11 | Other Information: | | |

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10. Stability and Reactivity Data

10.1 Stability:

Stably. A dangerous polymerization does not arise.

10.2 Dangerous Chemical Reactions:

Reactions with acids, bases and oxidizing agents are possible. Thermal decomposition at 300° C (572° F). If the product is stored according to this instructions, no dangerous reactions are to be expected.

10.3 Hazardous Decomposition Products:

Hydrogen fluoride (HF) and perfluoroisobutylene (PFIB)

10.4 Other Information:

The vapours of this product are heavier than air. At high concentration, i.e. in smaller rooms or closed containers respectively, danger of suffocation due to displacement of atmospheric oxygen.

11. Toxicological Data

Effects after eye contact:

Small eye irritation may occur. Symptoms: redness, flood of tears.

Effects after skin contact:

With intended use and occasional skin contact no skin provoking are to be expected.

Effects after inhalation:

Individual components of this preparation can be absorbed after inhalation and be caused unfavorable systemic health damage.

After inhalation of thermal decomposition products breath way effects can occur. Signs can be: cough, cold, asthma, breast printing, nose running, gasp.

Effects when swallowing:

By a component in this preparation provoking within the gastrointestinal range can occur. As symptoms can appear: pain, vomiting, sensitivity in the abdomen range, nausea, blood in the vomit and blood in the chair course.

Acute Oral Toxicity (LD₅₀):

> 5 g/kg (rat).

Practically not injurious to health.

Acute Dermal Toxicity:

No data available.

Acute Inhalational Toxicity:

No data available.

Sensitization:

No data available.

Embryo Toxicity:

No abnormen effects were observed.

Mutagenic:

No mutagenic effects were proven.

Carcinogenic:

No data available.

Acute toxicity, skin provoking, mucous membrane provoking and mutation potential of this preparation were evaluated on the basis of the data of the individual components. To the individual components partly still data gaps exist.

12. Environmental Information

12.1 Ecological toxicity:

No data available.

Atmospheric half-life:

5 Years

Global Warming Potential (GWP):

350

Ozone depletion potential:

0

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Acute Fish Toxicity:	No data available.
Acute Daphnia Toxicity:	No data available.
Alga Toxicity:	No data available.
Bacteria Toxicity:	No data available.

12.2 Mobility:

Mobility in Ground and Water:
No data available.

Environmental Distribution Data:
No data available.

12.3 Persistence and Degradableness
No data available.

12.4 Biodegradability:
No data available.

12.5 Result of the determination of the PBT characteristics:
No data available.

12.6 Other harmful effects:

13. Waste Disposal Information

The allocation of the waste keys is to be accomplished branch and process specifically by the waste producer separately. The indicated waste keys are only recommendations for the disposal of the unmachined product.

13.1 Product:
EWC - Code: (European waste category list)
07 01 03*, organic halogenated solvent.

13.2 Package:
EWC - Code: (European waste category list)
15 01 10*, contaminated package.

13.3 Other Information:
This product is to be delivered to a recycling or disposal after use. Any mixture of foreign matters or other kind of solvents is forbidden after use.

14. Transport Information

14.1 General Information:
U.N. No.:
Packing group:

14.2 Regulations for Transport by Truck or Train: ADR / GGVSE
Classification: Not classified

14.3 International Regulations for Transport by Ship: IMDG / IMO
Classification: Not classified

14.4 National Regulations for Transport by Ship: GGVSee
Classification: Not classified

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14.5 International Regulations for Transport by Plane: ICAO und IATA-DGR
Classification: Not classified

14.6 Other Information:
This product is no dangerous good.

15. Regulations

15.1 Identification:

Exposition-Scenario: Not applicable.

Material Safety Evaluation: Not applicable.

Characteristic: The preparation is classified and characterized according to European Union Guidelines.

Symbols: None.

R-sentences: 53 May cause long-term adverse effects in the aquatic environment.

S-sentences: 23 Do not breathe fumes and vapour.
24/25 Avoid contact with skin and eyes.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of water and soap.
51 Use only in well ventilated areas.

15.2 National German Regulations:

References to the restriction of occupation:

The restrictions of occupation § 4 and § 5 of the regulation to the protection of the mothers on the job and § 22 law for the protection of young workers are to be considered.

Regulations for inflammable products (TRBF):
Not applicable.

Regulations for hazardous products: (TRGS):
Not applicable.

Technical instructions on air quality control (TA-Luft):
Organic substances, section 5.2.5 air generally, 100 %.

Water Endangerment Class:
WGK 2, water-endangering.

Special Information:

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16. Additional Information

The information of this Data Sheet represents our best knowledge. This information is for security reasons only and does not contain any characteristic properties guaranteed for a special application. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other products or processes is the responsibility of the user.

Modification:
New product Antispread E2/400 FE 60.