Dr. Tillwich GmbH
Werner Stehr

Safety Data Sheet according to RL 1907/2006 EU

Commercial Name: **Grease Clock 859-8 + PTFE**
Art. No. TF1850

1. Substance / Preparation and Company Name

1.1 Commercial Name: Clock 859-8 + PTFE

1.2 Identified uses: Industrial Use. Lubricant.

1.2.1 Uses advised against:

1.2 Company:

Dr. Tillwich GmbH
Werner Stehr
Murber Steige 26
D-72160 Horb
Germany

Phone: +49-7451-5386-0
Fax: +49-7451-5386-70
E-Mail: info@tillwich-stehr.com

1.3 Emergency Call:

+49-7451-5386-0 8.00 am until 5.00 pm UTC + 1h
+49-171-5477230 5.00 pm until 8.00 am UTC + 1h

2. Hazards Identification

2.1 Classification of the substance or mixture:

Hazard Statements:
None

Precautionary Statements:
None

2.1 Label Elements:

Hazard Pictograms
None.

Signal Word: No signal word.

The product is not a hazardous substance / mixture and therefore exempt from labeling.

The classification and identification referred to guideline (EG) Nr.1272/2008 with amendments and additions.
The product is classified and labeled according to GHS.

3. Composition / Components

3.1 Substance: ☐ Mixture: ☒

3.2 Chemical Characterization:

Components / REACH - Identifiers	Percentage	CAS-Nr.	Einecs	Hazard Statements	Hazard Pictograms
Synthetic esters				none	none
Different Additives				none	none
Metallic soap				none	none

Components / REACH - Identifiers	Percentage	CAS-Nr.	Einecs	Hazard Statements	Hazard Pictograms
Inorganic thickener - Silica		7631-86-9		none	none
PTFE		9002-84-0		none	none

Classification according to EU guidelines and national guidelines, latest version.

4. Precautions for First Aid

4.1 Contact with Skin: Remove contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. After work wash hands with water and soap.

4.2 Contact with Eyes: Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Immediately call a physician.

4.3 Inhalation: After inhalation of decomposition products in case of accidental - fresh air. Consult a doctor.

4.4 Ingestion: If swallowed, do not induce vomiting: seek medical advice.

4.5 Other Information: -

5. Fire Fighting Procedures

5.1 Suitable Extinguisher: CO_2 – foam or powder, water spray, alcohol resitant foam. Cool containers with water in case of fire.

5.2 Unsuitable Extinguisher: Jet of water. Water jet directed not directly on the burning product ; it could cause splattering and spread the fire .

5.3 Special Hazards / Endangering:
In the thermal decomposition of PTFE toxic gases may be create.
Carbon oxides
Acid fluorides
Hydrofluoric carbonyl
Exposure to decomposition products may cause a health hazard.
Do not empty contaminated water into drains, ground and lakes or rivers.

5.4 Special Protection Equipment:
Wear self-contained breathing apparatus and tightly closing protective suit.
Protect from hydrogen fluoride fumes which react with water to form hydrofluoric acid.

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. The material must be disposed of as hazardous waste.
Clean contaminated objects and the floor thoroughly, observing environmental regulations.

6.4 Other Information:
-

7. Handling and Storage

7.1 Handling:
Take precautionary measures against static discharge.
When using this product do not eat, drink or smoke. Keep away from food and drink.
Keep container tightly closed when not in use.

7.2 Storage:
Keep only in the original container and protected from light and heat.
Storing large quantities over type-approved drip pans with sufficient volume.
Avoid contact with oxidizing agent. Keep away from inflammable materials and fluids.

7.3 Determined Use:
No special references.

8. Precautionary Information

8.1 Control parameters

Occupational exposure limits.

AWG Threshold limit value (Germany) IOELV (European Union)	No data available.

BWG Biological threshold limit value (Germany)	No data available.

DNEL Derived-No-Effect-Level / Derived-Minimal- Effect-Level (DMEL)

Longterm – Systemic effects		
Dermal - Base Oil - Metallic Soap - Silica - PTFE	DNEL	 No data available. No data available. No data available. No data available.

Longterm – Systemic effects		
Inhalation - Base Oil - Metallic Soap - Silica - PTFE	DNEL	 No data available. No data available. No data available. No data available.
Longterm – Local effects		
Inhalation	DNEL	No data available.
Shortterm – Systemic effects		
Inhalation	DNEL	No data available.
Shortterm – Local effects		
Inhalation	DNEL	No data available.

PNEC Predicted No Effect Concentration

Soil	No data available.
Sewage treatment plant	No data available.
Marine water	No data available.
Fresh water sediment	No data available.
Fresh water	No data available.
Sporadic release	No data available.

8.2 Technical Precautions for the avoidance of the exposition on the job:
Ensure adequate ventilation, especially in confined areas. Draw off vapors.

8.3 Delimitation and monitoring of the exposition:

General protective and hygiene measures:
When using do not eat, drink or smoke.
Keep away from food, drink and animal feedingstuffs.
Take off all contaminated clothing immediately.
Wash hands before breaks and at end of work.
Avoid contact with skin and eyes.
Regular cleaning of equipment and the work area.

Breath Protection
Not necessary at room temperature.

Skin Protection
After work wash hands with water and soap.
Preventive skin protection required - Use protective hand lotion or wear suitable gloves from oil resistant material. Avoid longer and intensive skin contact.

Suitable gloves:

Material:	Nitrile rubber
Category:	III
Thickness:	0,4 mm
Permeation time:	Level 6 (> 480 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.
Contaminated gloves should be changed as fast as possible.

Eye Protection
Wear eye / face protection, if product may be splashed.

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: pasty	Colour: light yellow	Odour: odourless
9.2	Change of Condition:		
	9.2.1 Boiling Point (base oil):	-	
	9.2.2 Pourpoint (base oil):	< - 30° C (< - 22° F)	ISO 3016
9.3	Flash Point (base oil):	270° C (518° F)	ISO 2592
9.4	Ignition Point (base oil):	> 300° C (> 572° F)	DIN 51794
9.5	Explosion Limits:		
	lower: not applicable	upper: not applicable	
9.6	Vapour Pressure at 20°C (68° F):	not applicable	
9.7	Density (base oil) at 20°C (68° F):	0,98 g/cm^3	DIN 51757
9.8	Solubility in H_2O at 20°C (68° F):	unsoluble	
9.9	pH value:	not applicable	
9.10	Viscosity of base oil: at 20°C (68° F)	150 mm^2/s	DIN 51562
9.11	Other Information:		

10. Stability and Reactivity Data

10.1 Stability:
No decomposition if used according to specifications. The base oil in this product is combustible. Thermal decomposition of PTFE at temperatures above 400° C (752°F) occurs.

10.2 Dangerous Chemical Reactions:
Avoid contact with oxidizing agent and inflammable materials.

10.3 Hazardous Decomposition Products:
Incomplete burn or thermal decomposition leads to the formation of smoke, carbon dioxide and carbon monoxide. In the thermal decomposition (> 400° C / 752°F) of PTFE toxic gases may be create.

10.4 Other Information:
The inhalation of thermal decomposition products of the polymer (e.g. when smoking contaminated tobacco) can cause polymer fever with flu-like symptoms. The Symtome arises generally not before two to three hours after the inhalation (smoke) and fades away normally within 36 to 48 hours again. No continuous or cumulative effect was observed.

11. Toxicological Data

Acute Oral Toxicity (Base oil):	LD_{50}: > 5000 mg/kg, rat.
Acute Oral Toxicity (Metallic Soap):	LD_{50}: > 5000 mg/kg, rat. OECD-Method 401 LD_{50}: > 2000 mg/kg, rat. OECD-Method 420 Based on available data , the classification criteria are not met.
Acute Oral Toxicity (Thickener PTFE):	LD_{50}: 11280 mg/kg, rat.
Acute Oral Toxicity (Thickener Silica):	LD_{50}: 3300 mg/kg, rat. Mortality did not occur.
Acute Dermal Toxicity (Base Oil):	No data available.
Acute Dermal Toxicity (Metallic Soap):	LD_{50}: > 2000 mg/kg, rat. OECD-Method 402 Based on available data , the classification criteria are not met.
Acute Dermal Toxicity (Thickener PTFE):	No data available.
Acute Dermal Toxicity (Thickener Silica):	LD_{50} (rabbit): > 5000 mg/kg.
Acute Inhalational Toxicity (Base Oil):	No data available.
Acute Inhalational Toxicity (Metallic Soap):	Based on available data, the classification criteria are not met.
Acute Inhalational Toxicity (Thickener PTFE):	No data available.
Acute Inhalational Toxicity (Thickener Silica):	No data available.

Repeat-dose toxicity (Oral-Feed-Rat):

Acute Dermal Toxicity (Base Oil):	No data available.
Acute Dermal Toxicity (Metallic Soap):	No data available.
Acute Dermal Toxicity (Thickener PTFE):	There were no toxicologically significant effects.
Acute Dermal Toxicity (Thickener Silica):	No data available.

Effects after skin contact:

Base Oil:	Prolonged or repeated skin contact may cause irritation.
Thickener Metallic Soap	- EPISKIN-Test with artificial skin model, result: not irritating. OECD-Method 439, 15 min. - Reconstructed human epidermis, Result: non-irritant. OECD-Method 431, 4 h. Based on available data, the classification criteria are not met.
Thickener PTFE:	Rabbit. Not classified as irritant. Humans: Not classified as irritant.
Thickener Silica:	Rabbit. Non-irritating. Analog OECD Method.

Effects after eye contact:

Base Oil:	May cause slight transient irritation.
Thickener Metallic Soap:	Rabbit, result: non-irritant. OECD-Method 405. Based on available data, the classification criteria are not met.
Thickener PTFE:	No data available.
Thickener Silica:	Rabbit. Non-irritating. Analog OECD Method

Effects after resorption / inhalation / swallowing:

Base Oil:	Inhalation of high vapor concentrations may cause irritation of the nose, mouth, throat and respiratory tract. After swallowing irritation of mouth, throat and digestive tract possible.
Thickener Metallic Soap:	No data available.
Thickener PTFE:	No data available.
Thickener Silica:	No data available.

Sensitisation:

Base Oil:	No sensitizing effects known.
Thickener Metallic Soap:	LLNA, mouse, Result: not sensitizing, OECD-Method 429. Based on available data, the classification criteria are not met.
Thickener PTFE:	Does not cause skin sensitization. Sensitization did not occur, Patch test on human volunteers.
Thickener Silica:	No sensitization known.

Mutagenicity:

Base Oil:	No data available.
Thickener Metallic Soap:	- Mutagenicity (Salmonelle typhimurium-reverse mutation), bacteria, Result: negative, OECD-Method 471. - In vitro gene mutation in mammalian cells, mouse lymphoma, result: negative, OECD-Method 476.. - Mutagenicity (mammal cytogenetic in vitro test), human lymphocytes, Result: negative, OECD-Method 473. Based on available data, the classification criteria are not met.
Thickener PTFE:	Tests on bacterial or mammalian cell cultures did not show mutagenic effect.
Thickener Silica:	No evidence of mutagenic effect.

Carcinogenicity:

Base Oil:	No data available.
Thickener Metallic Soap:	Based on available data, the classification criteria are not met.
Thickener PTFE:	Not classified as carcinogenic for humans.
Thickener Silica:	No evidence of a carcinogenic effect.

Reproductive toxicity:

Base Oil:	No data available.
Thickener Metallic Soap:	Screening test for reproductive / developmental toxicity , rat, skin , NOAEL: 1000 mg/kg. OECD-Method 422. Based on available data , the classification criteria are not met.
Thickener PTFE:	No reproductive toxicity.
Thickener Silica:	No evidence of repro -toxic properties.

Aspiration hazard:

Base Oil:	No data available.
Thickener Metallic Soap:	No data available.
Thickener PTFE:	No data available.
Thickener Silica:	Not classified as presenting an aspiration hazard.

Specific target organ toxicity – single exposure:

Base Oil:	No data available.
Thickener Metallic Soap:	Based on available data, the classification criteria are not met.
Thickener PTFE:	No data available.
Thickener Silica:	No data available.

Specific target organ toxicity – repeated exposure:

Base Oil:	No data available.
Thickener Metallic Soap:	Rat, skin, NOAEL: 1000 mg/kg, OECD-Method: 422. Based on available data, the classification criteria are not met.
Thickener PTFE:	No data available.
Thickener Silica:	No data available.

12. Environmental Information

12.1 Ecological toxicity:

Acute Fish Toxicity:

Base Oil:	No data available.
Thickener Metallic Soap:	LL_{50} (Oncorhynchus mykiss): > 100 mg/l, 96 h, semi-static test. Method: OECD 203. Value refered to the water accumulated fraction (WAF).
Thickener PTFE:	The substance is a polymer and cause no adverse effect
Thickener Silica:	LC_{50} (Brachydanio reiro): > 10000 mg/l / 96 h. Method: OECD 203.

Acute Daphnia Toxicity:

Base Oil:	No data available.
Thickener Metallic Soap:	EL_{50} (Daphnia magna): > 100 mg/l, 48 h, static test. Method: OECD 202. Value refered to the water accumulated fraction (WAF).
Thickener PTFE:	No data available.
Thickener Silica:	EC_{50} (Daphnia magna): > 10000 mg/l / 24 h. Method: OECD 202.

Acute Alga Toxicity:

Base Oil:	No data available.
Thickener Metallic Soap:	EL50 (Pseudokirchneriella subcapitata): > 100 mg/l, 72 h, static test. Method: OECD 201.
Thickener PTFE:	No data available.
Thickener Silica:	No data available.

Acute Bacteria Toxicity:

Base Oil:	No data available.
Thickener metallic Soap:	NOEC: 13 mg/l, 28 d, Activated sludge, static test, OECD-Method.
Thickener PTFE:	No data available.
Thickener Silica:	No data available.

12.2 Mobility:

Mobility in Ground and Water:

Base Oil:	No data available.
Thickener metallic Soap:	No data available.
Thickener PTFE:	No data available.
Thickener Silica:	A significant mobility in soil is not expected.

Environmental Distribution Data:

Base Oil:	No data available.
Thickener metallic Soap:	No data available.
Thickener PTFE:	No data available.
Thickener Silica:	No data available.

12.3 Persistence and Degradableness

Base Oil:	The product is expected to be partially or slowly biodegradable. BOD28 = 11%, Method OECD 301 B.
Thickener metallic Soap:	Aerobic, 97 %, Result: readily biodegradable. Exposure time: 28 d, activated sludge, Method: OECD 301 C.
Thickener PTFE:	No data available.
Thickener Silica:	Inorganic substance. Test for biological degradability not feasible.

12.4 Biodegradability:

Base Oil:	The product is not expected to bioaccumulate.
Thickener metallic Soap:	This substance is not considered to be bioaccumulating.
Thickener PTFE:	No data available.
Thickener Silica:	Not to be expected.

12.5 Result of the determination of the PBT characteristics:

Base Oil:	No data available.
Thickener metallic Soap:	Based on available data, the classification criteria are not met.
Thickener PTFE:	No data available.
Thickener Silica:	According to the REACH Regulation no PBT , vPvB substance.

12.6 Additional ecological information:
Do not discharge product unmonitored into the environment.

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 06 07*.
waste resulting from production of greases.

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

13.3 Other Information:
-

14. Transport Information

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

14.2 UN proper shipping name:

ADR
IMDG
IATA

14.3 Transport hazard class

ADR		
unclassified		

IMDG		
unclassified		

IATA		
unclassified		

14.4 Environmental hazards :
-

14.5 Special precautions for user:
-

14.6 Other Information:

ADR
Limited Stock (LQ):
Transport category:
Tunnel registration:
UN „Model Regulation“

15. Regulations

15.1 Labelling according to EC Directives:
Classification and labeling according to EC No. 1272/2008.
The product is not subject to classification according to GHS.

15.2 National German Regulations:

Information about limitation of use:
Employment restrictions concerning juveniles: Not applicable.
Employment restrictions concerning pregnant and lactating women: Not applicable.

Classification according to TRBF:
Not applicable.

Waterhazard class:

Base Oil:	Hazardous for water; WGK 1
Thickener metallic Soap:	Hazardous for water; WGK 1
Thickener PTFE:	Not hazardous for water. Identification No .: 766. KBwS classification.
Thickener Silica:	Not hazardous for water. Identification No .: 849. KBwS classification.

Storage class according to TRGS 510:

Other Regulations:
-

Special Information:
-

15.3 Chemical Safety Assessment:
A Chemical Safety Assessment has not been carried out.
This product has no exposure and risk assessment.

15.4 Training advice:
Provide adequate information, instruction and training for operators.

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.

The product is intended for industrial transformation / use.