



TRW Brake Grease

SECTION 1: Identification

Product identifier

Trade name

TRW Brake Grease

Article No.

PFG110

Recommended use of the chemical and restrictions on use

Product type

Mixture.

Use

Grease.

Not suitable for use in

Restricted to professional users.

Supplier's details

SDS created by

Global Division B Product Compliance Mgmt. System (BWC)

Supplier

ZF Services, LLC

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Contact person

Global Division B Product Compliance Mgmt. System (BWC)

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Emergency phone number

1-800-222-1222 (general poison US emergency number) (+49) 89 19 240

Available outside office hours

Yes

SECTION 2: Hazard identification

Classification of the substance or mixture and any national or regional information

Classification according to Regulation (US HCS) 29 CFR 1910.1200

Classification

Skin sensitisation, hazard category 1

Hazard statements

H317

Label elements, including precautionary statements

Labeling according to Regulation (US HCS) 29 CFR 1910.1200

Hazard pictograms



Signal word

Warning

Hazard statements

H317 May cause an allergic skin reaction.

Precautionary statements

P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 IF ON SKIN: Wash with plenty of water/.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container to an approved waste disposal plant..

Other hazards which do not result in classification

None known.



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SECTION 3: Composition/information on ingredients

Mixture

Chemical name	CAS No. EC No. REACH No. Index No.	Concentra- tion	Classification	H-phrases M factor acute M factor chronic	Specific concentra- tion limits ATE	Note
Dilithium azelate	38900-29-7 254-184-4 01-2120119814- 57-0000 -	≥1 - <5%	Acute Tox. 4 - oral	H302 - -		-
4-ethyl-2-(8-heptade- cenyl)-2-oxazoline-4- methanol	68140-98-7 268-820-3 - -	≥1 - <5%	Skin Sens. 1A	H317 - -		-

Product based on

The actual concentration or concentration range is withheld as a trade secret Actual concentration is withheld as a trade secret

SECTION 4: First-aid measures

Description of necessary first-aid measures

Inhalation

Remove victim to fresh air. If signs/symptoms persist, get medical attention. Keep victim warm and at rest. If breathing is irregular or stops, give artificial respiration. If unconscious, place in recovery position and seek medical advice.

Keep respiratory tract clear.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water.

Get medical attention immediately!

Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact

Immediately rinse with plenty of water for at least 10 minutes, also under the eyelids. If eye irritation persists, seek medical attention.



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Ingestion

Move the victim to fresh air.

Do not induce vomiting without medical advice. If unconscious, place in recovery position and seek medical advice.

Keep respiratory tract clear.

Rinse mouth with water.

Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

No symptoms known or expected.

Skin contact

May cause an allergic skin reaction.

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Water spray.

Unsuitable extinguishing media

Do not use water jet.

Specific hazards arising from the chemical (e.g. nature of any hazardous combustion products).

Carbon monoxide (CO).

Carbon dioxide (CO₂).

nitrogen oxides

Metal oxides.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters

In case of fire, wear self-contained breathing apparatus. Use personal protective equipment. Inhalation of decomposition products can be harmful to health.

Other

Standard procedure for chemical fires.



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SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Evacuate area.
Provide adequate ventilation.
Do not breathe vapors. Avoid inhalation of aerosols.
See section 7. & 8.

Environmental precautions

Try to prevent the material from entering drains or water courses.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Pick up and transfer to properly labelled containers.

Reference to other sections

For personal protection, see section 8.

SECTION 7: Handling and storage

Precautions for safe handling

Preventive handling precautions

Avoid contact with skin and eyes.
For personal protection, see section 8.
Wash hands and face before breaks and immediately after handling the product.
Do not get in eyes, on skin, or on clothing.
Do not repack.
These safety instructions also apply to empty packaging which may still contain product residues.
Keep container closed when not in use.

General hygiene

Wash face, hands and all exposed skin thoroughly after use.

Conditions for safe storage, including any incompatibilities

Store in original container. Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with the particular national regulations. Keep in properly labelled containers.

Specific end use(s)

Not required.



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SECTION 8: Exposure controls/personal protection

Control parameters

Exposure limits

Occupational exposure limits: See below OEL table.

Biological Limit Values (BLV): No exposure limit value known.

National occupational exposure limits

Ingredient	CAS No. EC No.	Exposure limit ppm / mg/m ³	Source	Remark	Year
Polypropylene glycol 2025	25322-69-4 -	- / 10	US WEEL (2011-10-13)	TWA (aerosol)	2011
lithium 12-hydroxystearate	7620-77-1 -	- / 10	ACGIH (2018- 03-20)	TWA (Inhalable particulate matter)	2018
lithium 12-hydroxystearate	7620-77-1 -	- / 3	ACGIH (2018- 03-20)	TWA (Respirable particulate matter)	2018

Appropriate engineering controls

Appropriate engineering controls

None.

protective measures: The type of protective equipment must be selected depending on the concentration and quantity of the hazardous substance in the workplace.

Personal Protective Equipment Symbols



Eye / face protection

Safety glasses.

Hand protection

Material: nitrile rubber.

Breakthrough time: > 10 min

Class: Protective index: 1

Wear protective gloves. For prolonged or repeated contact use protective gloves. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.

Other skin protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.



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Respiratory protection

Not required; except in case of aerosol formation.

Filter type: P

Environmental exposure controls

Air. : Not required.

Soil & Water. : The product should not be allowed to enter drains, water courses or the soil.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state

Solid. [Paste.]

Colour

Beige.

Odour

Characteristic.

Melting point / freezing point

No data available

Boiling point or initial boiling point and boiling range

No data available

Flammability

Flammability (solid, gas): Combustible solids.

Lower and upper explosion limit

No data available

Flash point

Not applicable.

Auto-ignition temperature

No data available

Decomposition temperature

No data available

pH

Not applicable. Product is non-soluble (in water).

Kinematic viscosity

Not applicable.



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Solubility

No data available

Water solubility

Insoluble in water.

Partition coefficient n-octanol/water

No data available

Vapour pressure

< 0.001 hPa (20 °C)

Density and/or relative density

0.97 g/cm³ (20 °C)

Relative density

0.97 (20 °C)

Reference substance: water

The value is calculated.

Relative vapour density

No data available

Explosive properties

Not explosive

Particle characteristics

Not applicable.

Other information

No data available

SECTION 10: Stability and reactivity

Reactivity

No specific recommendations.

Chemical stability

Stable under normal use conditions.

Possibility of hazardous reactions

No dangerous reactions known when used as directed.

Conditions to avoid

No specific recommendations.



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Incompatible materials

No materials to be especially mentioned.

Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11. Toxicological information

Information on the likely routes of exposure

Acute toxicity

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

Mixture (ATE - Oral): > 5,000 mg/kg [Method: Calculation method]

Mixture (Acute dermal toxicity) - Symptoms: Redness, Local irritation.

Product / Sub- stance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Test animals	Method / Guideline	Remarks
dilithium azelate -	LD50	> 300 mg/kg	oral	Rat	OECD Test Guideline 420	GLP: yes
dilithium azelate -	LD50	> 2,000 mg/kg	-	Rabbit	-	The substance or mixture has no acute dermal toxicity
4-ethyl-2-(8- heptadecenyl)-2- oxazoline-4- methanol -	LD50	> 2,000 mg/kg	oral	Rat	OECD Test Guideline 423	GLP: yes Assessment: The substance or mixture has no acute oral tox- icity.

Skin corrosion/irritation

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

Product / Substance name CAS / EC no.	Result	Species
Dilithium azelate -	Not irritating.	-
4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4- methanol -	Not irritating.	human skin



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Serious eye damage/irritation

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

Product / Substance name CAS / EC no.	Result	Species
Dilithium azelate -	Not irritating.	Rabbit
4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol -	Not irritating.	Rabbit

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Product / Substance name CAS / EC no.	Result
Dilithium azelate -	Not sensitizing.
4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol -	The product is a skin sensitiser, sub-category 1A.

Germ cell mutagenicity

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

Carcinogenicity

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

Repeated dose toxicity

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

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

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

STOT-single exposure

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

STOT-repeated exposure

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



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Aspiration hazard

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

Information on other hazards

Other information

Information given is based on data on the components and the toxicology of similar products.

SECTION 12: Ecological information

Toxicity

Acute toxicity

Very toxic to aquatic life with long lasting effects.

Acute fish toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
Dilithium azelate -	LC50	> 100 mg/l	96 hr	Oncorhynchus mykiss

Acute algae toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline	Remark
4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol -	EC50	65.6 mg/l	72 hr	Desmodesmus subspicatus	OECD Test Guideline 201	GLP: yes

Acute crustacean toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline	Remark
Dilithium azelate -	EC50	> 100 mg/l	48 hr	Daphnia magna	-	-



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Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline	Remark
4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol -	EC50	69.17 mg/l	48 hr	Daphnia magna	OECD Test Guideline 202	Test Type: static test

Chronical toxicity

Toxic to aquatic life with long lasting effects.

Persistence and degradability

No data available.

Product / Substance name CAS / EC no.	Result	Degradation	Method / Guideline
4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol -	Not rapidly biodegradable	34.73 %	OECD Test Guideline 301B

Bioaccumulative potential

Product / Substance name CAS / EC no.	LogKow / LogPow	Bioconcentration factor (BCF)
Dilithium azelate -	log Pow: -3.56	3
4-ethyl-2-(8-heptadecenyl)-2-oxazoline-4-methanol -	log Pow: 3.42 (68 °F / 20 °C)	-

Mobility in soil

Mobility

No data available.

Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

Non-classified vPvB substance Non-classified PBT substance.

Endocrine disrupting properties

No data available



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Other adverse effects

Ozone-Depletion Potential: Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances.

Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Other

No information on ecology is available.

SECTION 13: Disposal considerations

Disposal methods

Disposal considerations

The product should not be allowed to enter drains, water courses or the soil.

Do not dispose of with domestic refuse.

Dispose of as hazardous waste in compliance with local and national regulations.

Waste codes should be assigned by the user based on the application for which the product was used.

Packaging

Packaging that is not properly emptied must be disposed of as the unused product.

Dispose of waste product or used containers according to local regulations.

The following Waste Codes are only suggestions:

SECTION 14: Transport information

UN number

Not regulated.

UN proper shipping name

ADR / RID / ADN proper shipping name

Not regulated.

Transport hazard class(es)

Label

Not regulated.

ADR / RID Class

Not regulated.

IMDG Class

Not regulated.



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IATA Class

Not regulated.

ADN Class

Not regulated.

Packing group

Not regulated.

Environmental hazards

Not regulated.

IMDG Marine Pollutant

Not regulated.

Special precautions for user

Not regulated.

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

Other

49 CFR: Not regulated

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

EU regulations

Not Applicable.

National regulations

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity: This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: Respiratory or skin sensitisation

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA list No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.



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Chemical safety assessment

Not available.

SECTION 16: Other information

Phrase meaning

Skin Sens. 1 - Skin sensitisation, hazard category 1

Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4

Skin Sens. 1A - Skin sensitisation, hazard category 1, sub-category 1A

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

Other

Additional information

Disclaimer : The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.