Safety Data Sheet

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

1.1. Product identifier

ASTRON ATF Multi + ATF T-IV

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

Use of the substance/mixture

gear oil

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Company name:	Duran Lubricants & Chemicals GmbH	
Street:	Rodderheide 3-7	
Place:	D-33824 Werther	
Telephone:	+49 (0)5203-901510	Fax: +49 (0)5203-901515
e-mail:	info@duran-oil.com	
Internet:	www.fosser.de	
Responsible Department:	Produktsicherheit / Product Safety info@duran-oil.com	

1.4. Emergency telephone number:

Giftinformationszentrum Nord
(Göttingen)+49 (0)551/19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

This mixture is not classified as hazardous in accordance with GB CLP Regulation.

2.2. Label elements

GB CLP Regulation

Special labelling of certain mixtures

EUH208 Contains 4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate. May produce an allergic reaction.

2.3. Other hazards

The mixture contains the following substances fulfilling the PBT criteria according to UK REACH:
Decamethylcyclopentasiloxane.
No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Preparation of base oils and additives.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified			6 - < = 10 %
	265-157-1	649-467-00-8	01-2119484627-25	
	Asp. Tox. 1; H304			
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified			0 - < 1,2 %
	265-159-2	649-469-00-9	01-2119480132-48	
	Asp. Tox. 1; H304			
72623-87-1	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based; Baseoil - unspecified			0 - < 1,2 %
	276-738-4	649-483-00-5	01-2119474889-13	
125643-61-0	reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate			0 - < 1,2 %
	406-040-9	607-530-00-7	01-0000015551-76	
	Aquatic Chronic 4; H413			
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified			0 - < 1,2 %
	276-737-9	649-482-00-X	01-2119474878-16	
	Asp. Tox. 1; H304			
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate			0 - < 0,12 %
	299-434-3		01-2120735527-50	
	Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H319 H317 H411			
	Reaction product of alkylthioalcohol and substituted phosphorus compound			0 - < 0,3 %
	424-820-7		01-0000017126-75	
	Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1; H312 H314 H400 H410			
541-02-6	Decamethylcyclopentasiloxane			0 - < 0,0005 %
	208-764-9		01-2119511367-43	

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
64742-54-7	265-157-1	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified	6 - < = 10 %
	inhalation: LC50 = 5,53 mg/l (dusts or mists); dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg		
64742-56-9	265-159-2	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified	0 - < 1,2 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg		
72623-87-1	276-738-4	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based; Baseoil - unspecified	0 - < 1,2 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg		
125643-61-0	406-040-9	reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	0 - < 1,2 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg		
72623-86-0	276-737-9	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified	0 - < 1,2 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg		
93882-40-7	299-434-3	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate	0 - < 0,12 %
	dermal: LD50 = > 3160 mg/kg; oral: LD50 = > 10000 mg/kg		
	424-820-7	Reaction product of alkylthioalcohol and substituted phosphorus compound	0 - < 0,3 %
	dermal: LD50 = > 500 mg/kg; oral: LD50 = > 2000 mg/kg Aquatic Acute 1; H400: M=10 Aquatic Chronic 1; H410: M=10		
541-02-6	208-764-9	Decamethylcyclopentasiloxane	0 - < 0,0005 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove affected person from the danger area and lay down.
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Provide fresh air. Call a doctor if you feel unwell.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.
Take off contaminated clothing and wash it before reuse.
In case of skin irritation, consult a physician.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth thoroughly with water.
Let water be drunken in little sips (dilution effect).
Do NOT induce vomiting.
In all cases of doubt, or when symptoms persist, seek medical advice.

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

No information available.

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

Use water spray jet to protect personnel and to cool endangered containers.
Co-ordinate fire-fighting measures to the fire surroundings.

- Water spray jet
- Foam
- Carbon dioxide (CO2).
- Extinguishing powder

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Non-flammable. Formation of toxic gases is possible during heating or in case of fire.
In case of fire may be liberated:

- Nitrogen oxides (NOx)
- Carbon monoxide (CO)
- Carbon dioxide (CO2).
- Pyrolysis products, toxic

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Use of protective clothing.
In case of fire and/or explosion do not breathe fumes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Keep people at a distance and stay on the windward side.
Special danger of slipping by leaking/spilling product.

For non-emergency personnel

Wear protective gloves/protective clothing and eye/face protection.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.
Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.
Remove from the water surface (e.g. skimming, sucking).

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid formation of oil dust.
Use personal protection equipment.
Do not put any product-impregnated cleaning rags into your trouser pockets.
Clear spills immediately.

Advice on protection against fire and explosion

No special fire protection measures are necessary.
Take precautionary measures against static discharges.
Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in the original container in a cool, well-ventilated place.
Keep container tightly closed.
Floors should be impervious, resistant to liquids and easy to clean.

Hints on joint storage

No special measures are necessary.

Further information on storage conditions

Note Regulation on facilities for the storage, filling and handling water-polluting substances. ..

7.3. Specific end use(s)

gear oil

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified			
Worker DNEL, long-term		inhalation	systemic	2,73 mg/m³
Worker DNEL, long-term		inhalation	local	5,58 mg/m³
Worker DNEL, long-term		dermal	systemic	0,97 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	1,19 mg/m³
Consumer DNEL, long-term		oral	systemic	0,74 mg/kg bw/day
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified			
Worker DNEL, long-term		dermal	systemic	0,97 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	1,19 mg/m³
Consumer DNEL, long-term		oral	systemic	0,74 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	2,73 mg/m³
Worker DNEL, long-term		inhalation	local	5,58 mg/m³
72623-87-1	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based; Baseoil - unspecified			
Worker DNEL, long-term		inhalation	systemic	2,73 mg/m³
Worker DNEL, long-term		inhalation	local	5,58 mg/m³
Worker DNEL, long-term		dermal	systemic	0,97 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	1,19 mg/m³
Consumer DNEL, long-term		oral	systemic	0,74 mg/kg bw/day
125643-61-0	reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate			
Worker DNEL, long-term		dermal	systemic	1,67 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,62 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,83 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,93 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	6,6 mg/m³
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified			
Worker DNEL, long-term		inhalation	systemic	2,73 mg/m³
Worker DNEL, long-term		inhalation	local	5,58 mg/m³
Worker DNEL, long-term		dermal	systemic	0,97 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	1,19 mg/m³
Consumer DNEL, long-term		oral	systemic	0,74 mg/kg bw/day
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate			

Worker DNEL, long-term	inhalation	systemic	3,526 mg/m³
Worker DNEL, long-term	dermal	systemic	2 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,5 mg/kg bw/day
	Reaction product of alkylthioalcohol and substituted phosphorus compound		
Worker DNEL, long-term	inhalation	systemic	1,76 mg/m³
Worker DNEL, long-term	dermal	systemic	0,5 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0,43 mg/m³
Consumer DNEL, long-term	dermal	systemic	0,25 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,25 mg/kg bw/day
541-02-6	Decamethylcyclopentasiloxane		
Worker DNEL, long-term	inhalation	systemic	97,3 mg/m³
Worker DNEL, long-term	inhalation	local	24,2 mg/m³
Consumer DNEL, long-term	inhalation	systemic	17,3 mg/m³
Consumer DNEL, long-term	inhalation	local	4,3 mg/m³
Consumer DNEL, long-term	oral	systemic	5 mg/kg bw/day

PNEC values

CAS No	Substance
Environmental compartment	Value
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified
Secondary poisoning	9,33 mg/kg
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified
Secondary poisoning	9,33 mg/kg
72623-87-1	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based; Baseoil - unspecified
Secondary poisoning	9,33 mg/kg
125643-61-0	reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate
Freshwater	0,018 mg/l
Freshwater (intermittent releases)	0,018 mg/l
Marine water	0,002 mg/l
Freshwater sediment	2 mg/kg
Marine sediment	0,2 mg/kg
Secondary poisoning	41,33 mg/kg
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	10 mg/kg
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified
Secondary poisoning	9,33 mg/kg
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate
Freshwater	0,009 mg/l
Freshwater (intermittent releases)	0,095 mg/l
Marine water	0,001 mg/l
Freshwater sediment	542229,75 mg/kg
Marine sediment	54222,98 mg/kg
Secondary poisoning	20 mg/kg
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	259870,48 mg/kg
	Reaction product of alkylthioalcohol and substituted phosphorus compound
Freshwater	0,0009 mg/l
Freshwater (intermittent releases)	0,0009 mg/l
Marine water	0,00009 mg/l
Freshwater sediment	0,73 mg/kg
Marine sediment	0,073 mg/kg
Secondary poisoning	10 mg/kg
Micro-organisms in sewage treatment plants (STP)	5 mg/l
Soil	0,086 mg/kg
541-02-6	Decamethylcyclopentasiloxane
Freshwater	0,0012 mg/l

Marine water	0,00012 mg/l
Freshwater sediment	11 mg/kg
Marine sediment	1,1 mg/kg
Secondary poisoning	16 mg/kg
Micro-organisms in sewage treatment plants (STP)	10 mg/l
Soil	2,54 mg/kg

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls

Protective and hygiene measures

Take off contaminated clothing and wash it before reuse.
Wash hands before breaks and after work.
When using do not eat, drink, smoke, sniff.

Eye/face protection

During filling, metering, mixing and sampling must be used:
Wear eye/face protection. EN 166

Hand protection

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.
Recommended glove articles: EN ISO 374
Suitable material: NBR (Nitrile rubber)
Thickness of the glove material: 0,4 mm
Breakthrough times and swelling properties of the material must be taken into consideration. Breakthrough time: > 8h
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Wear suitable protective clothing.

Respiratory protection

Usually no personal respirative protection necessary.
In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:		
Odour:	characteristic	
Odour threshold:	not determined	
pH-Value:		not determined

Changes in the physical state

Melting point/freezing point:	-48 °C
Boiling point or initial boiling point and boiling range:	not determined
Pour point:	not determined
Flash point:	224 °C

Flammability

Solid/liquid:	not determined

Explosive properties

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	not determined

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined

Oxidizing properties

The product is not: oxidising.

Vapour pressure:	not determined
Density (at 15 °C):	0,850 g/cm³
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined
Viscosity / kinematic: (at 40 °C)	37,5 mm²/s
Relative vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

The formation of combustible vapours is possible at temperatures above: Flash point

10.4. Conditions to avoid

Avoid: Thermal decomposition

10.5. Incompatible materials

Materials to avoid:

- Acids
- Reducing agent
- Oxidising agent

10.6. Hazardous decomposition products

Hazardous combustion products:

- Carbon monoxide (CO)
- Carbon dioxide (CO_2)
- Nitrogen oxides (NOx)
- Pyrolysis products, toxic

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402
	inhalation (4 h) dust/mist	LC50 5,53 mg/l	Rat		OECD Guideline 403
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402
72623-87-1	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based; Baseoil - unspecified				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402
125643-61-0	reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate				
	oral	LD50 > 2000 mg/kg	Rat	Study report (2005)	OECD Guideline 423
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2000)	OECD Guideline 402
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate				
	oral	LD50 > 10000 mg/kg	Rat	Study report (1981)	OECD Guideline 401
	dermal	LD50 > 3160 mg/kg	Rabbit	Study report (1981)	OECD Guideline 402
	Reaction product of alkylthioalcohol and substituted phosphorus compound				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1996)	OECD Guideline 401
	dermal	LD50 > 500 mg/kg	Rabbit	Study report (1996)	OECD Guideline 402
541-02-6	Decamethylcyclopentasiloxane				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1990)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1977)	OECD Guideline 402

Irritation and corrosivity

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

Sensitising effects

Contains 4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
The product contains less than 3% DMSO extract (method IP346). A classification as a carcinogen with R45 is deleted. (Note L)

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.

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties

See section: 12.6

SECTION 12: Ecological information

12.1. Toxicity

Test results raise the calculated contribution of reaction product from alkylthioalcohol and a substituted phosphorus compound (EG 424-820-7), as this substance is part of a tested Alkyl phosphite mixture “is. Acute and chronic water tests using the “alkyl phosphite mixture” were carried out lead to a classification of Acute Aquatic 3. The classification of the Product is then determined using the classification (Acute Aquatic 3) and the wt% of the “Alkyl phosphite mixture” as well as the classification and% by weight of the other substances with an im Product calculated according to existing aquatic classification.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified						
	Acute fish toxicity	LL50	> 100 mg/l	96 h	Pimephales promelas	Study report (1995)	OECD Guideline 203
	Fish toxicity	NOEC	>= 1000 mg/l	14 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a
64742-56-9	Distillates (petroleum), solvent-dewaxed light paraffinic; Baseoil - unspecified						
	Acute fish toxicity	LL50	> 100 mg/l	96 h	Pimephales promelas	Study report (1995)	OECD Guideline 203
	Fish toxicity	NOEC	>= 1000 mg/l	14 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a
72623-87-1	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based; Baseoil - unspecified						
	Acute fish toxicity	LL50	> 100 mg/l	96 h	Pimephales promelas	Study report (1995)	OECD Guideline 203
	Fish toxicity	NOEC	>= 1000 mg/l	14 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a
125643-61-0	reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate						
	Acute fish toxicity	LC50	> 0,001 mg/l	96 h	Oncorhynchus mykiss	Study report (2009)	OECD Guideline 203
	Acute algae toxicity	ErC50	> 0 mg/l	72 h	Desmodesmus subspicatus	Study report (2009)	OECD Guideline 201
	Acute crustacea toxicity	EL50	110 mg/l	48 h	Daphnia magna	Study report (2000)	OECD Guideline 202
	Fish toxicity	NOEC	0,36 mg/l	33 d	Pimephales promelas	Study report (2009)	OECD Guideline 210
	Crustacea toxicity	NOEC	3,2 mg/l	21 d	Daphnia magna	Study report (2010)	OECD Guideline 211
	Acute bacteria toxicity	(EC50	> 1000 mg/l)	3 h	activated sludge of a predominantly domestic sewag	Study report (2000)	OECD Guideline 209
72623-86-0	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based; Baseoil - unspecified						
	Acute fish toxicity	LL50	> 100 mg/l	96 h	Pimephales promelas	Study report (1995)	OECD Guideline 203
	Fish toxicity	NOEC	>= 1000 mg/l	14 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate						
	Acute fish toxicity	LC50	> 100 mg/l	96 h	Oryzias latipes	REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50	> 100 mg/l	72 h	Raphidocelis subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EL50	9,5 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202

	Reaction product of alkylthioalcohol and substituted phosphorus compound						
	Acute fish toxicity	LC50	1,5 mg/l	96 h			
	Acute algae toxicity	ErC50 mg/l	0,31	72 h	Pseudokirchneriella subcapitata	Study report (1996)	EU Method C.3
	Acute crustacea toxicity	EL50 mg/l	0,09	48 h	Daphnia magna	Study report (1996)	EU Method C.2
	Crustacea toxicity	NOEC mg/l	0,14	21 d	Daphnia magna	Study report (2001)	OECD Guideline 211
	Acute bacteria toxicity	(EC50 mg/l)	> 50	3 h	Activated sludge	Study report (1996)	OECD Guideline 209
541-02-6	Decamethylcyclopentasiloxane						
	Acute fish toxicity	LC50 mg/l	> 0,016	96 h	Oncorhynchus mykiss	Study report (2000)	OECD Guideline 204
	Acute algae toxicity	ErC50 mg/l	> 0,012	96 h	Raphidocelis subcapitata	Study report (2001)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 0,0029	48 h	Daphnia magna	Study report (2002)	OECD Guideline 202
	Fish toxicity	NOEC mg/l	>= 0,014	90 d	Oncorhynchus mykiss	Study report (2009)	OECD Guideline 210
	Crustacea toxicity	NOEC mg/l	>= 0,015	21 d	Daphnia magna	Study report (2003)	OECD Guideline 211
	Acute bacteria toxicity	(EC50 mg/l)	> 2000	3 h	activated sludge, domestic	Study report (1998)	EU Method C.11

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate	> 10
541-02-6	Decamethylcyclopentasiloxane	8,023

BCF

CAS No	Chemical name	BCF	Species	Source
125643-61-0	reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	38	Cyprinus carpio	Study report (2002)
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate	ca. 0	Oryzias latipes	REACh Registration D
541-02-6	Decamethylcyclopentasiloxane	7060	Pimephales promelas	Study report (2005)

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The mixture contains the following substances fulfilling the PBT criteria according to UK REACH:
Decamethylcyclopentasiloxane.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

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:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):
Decamethylcyclopentasiloxane

Restrictions on use (REACH, annex XVII):

Entry 28, Entry 70, Entry 75

Information according to 2012/18/EU (SEVESO III):	E2 Hazardous to the Aquatic Environment

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	3 - highly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,10,11,12,15,16.

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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at http://abbrev.esdscom.eu

Relevant H and EUH statements (number and full text)

H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH208	Contains 4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate. May produce an allergic reaction.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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