Safety Data Sheet

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

1.1. Product identifier

ASTRON DSG Fluid

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

Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Pictograms:

Hazard statements

H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P103	Read carefully and follow all instructions.
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/container to ....

Special labelling of certain mixtures

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

2.3. Other hazards

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			
	Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic)			1 - 2,49 %
	701-204-9		01-2119960832-33	
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
	Alkyl phosphites			0,1 - 0,5 %
	424-820-7		01-0000017126-75	
	Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1; H312 H314 H400 H410			
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate			0,1 - 0,25 %
	299-434-3		01-2120735527-50	
	Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H319 H317 H411			
	N,N-bis(2-hydroxyethyl)-3-[(C16-18)alkoxy]-1-propanamine			0,1 - 0,25 %
	930-859-5		01-0000015551-76	
	Skin Corr. 1C, Aquatic Acute 1, Aquatic Chronic 2; H314 H400 H411			

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		
	701-204-9	Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic)	1 - 2,49 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg		
	424-820-7	Alkyl phosphites	0,1 - 0,5 %
	dermal: LD50 = > 500 mg/kg; oral: LD50 = > 2000 mg/kg Aquatic Acute 1; H400: M=10 Aquatic Chronic 1; H410: M=10		
93882-40-7	299-434-3	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate	0,1 - 0,25 %
	dermal: LD50 = > 3160 mg/kg; oral: LD50 = > 10000 mg/kg		
	930-859-5	N,N-bis(2-hydroxyethyl)-3-[(C16-18)alkoxy]-1-propanamine	0,1 - 0,25 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg		

Further Information

This mixture contains no substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH.

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. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary. 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 immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. After contact with skin, wash immediately with plenty of water and soap.

In case of skin irritation, consult a physician.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. 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 immediately and drink 1 glass of of water. 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

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

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

Unsuitable extinguishing media

High power 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

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. 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

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 container tightly closed. Keep only in the original container in a cool, well-ventilated place.

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
	Alkyl phosphites			
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
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
	N,N-bis(2-hydroxyethyl)-3-[(C16-18)alkoxy]-1-propanamine			
Worker DNEL, long-term		inhalation	systemic	2,93 mg/m³
Worker DNEL, long-term		dermal	systemic	0,83 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,72 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,42 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,42 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
	Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic)	
Freshwater		0,46 mg/l
Freshwater (intermittent releases)		0,94 mg/l
Marine water		0,046 mg/l
Freshwater sediment		38100 mg/kg
Marine sediment		3810 mg/kg
Secondary poisoning		33,3 mg/kg
Micro-organisms in sewage treatment plants (STP)		1000 mg/l
Soil		10 mg/kg
	Alkyl phosphites	
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
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
	N,N-bis(2-hydroxyethyl)-3-[(C16-18)alkoxy]-1-propanamine	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,008 mg/l
Marine water		0 mg/l
Freshwater sediment		0,004 mg/kg
Marine sediment		0 mg/kg
Secondary poisoning		16,67 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		0,002 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. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. 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

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

Skin protection

Use of protective clothing. Wear suitable protective clothing.

Respiratory protection

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

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

		Test method
pH-Value:	not determined	
Changes in the physical state		
Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	not determined	
Flash point:	> 180 °C	ASTM D 92

Flammability

Solid/liquid: not determined

Explosive properties

The product is not: Explosive. 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
Decomposition temperature:	not determined

Oxidizing properties

The product is not: oxidising.

Vapour pressure:	not determined
Density (at 15 °C):	0,849 g/cm³
Water solubility:	Immiscible

Solubility in other solvents

not determined

Partition coefficient n-octanol/water:	not determined	
Viscosity / dynamic:	not determined	
Viscosity / kinematic: (at 40 °C)	33,6 mm²/s	ASTM D 445
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
Reaction with: Oxidising agent, strong

10.4. Conditions to avoid

Avoid: Thermal decomposition

10.5. Incompatible materials

Materials to avoid:

- Oxidising agent, strong

10.6. Hazardous decomposition products

Hazardous combustion products:

- Nitrogen oxides (NOx)
- Carbon monoxide (CO)

- Carbon dioxide (CO_2).
- 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.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic)				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1985)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1985)	OECD Guideline 402
	Alkyl phosphites				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1996)	OECD Guideline 401
	dermal	LD50 > 500 mg/kg	Rabbit	Study report (1996)	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
	N,N-bis(2-hydroxyethyl)-3-[(C16-18)alkoxy]-1-propanamine				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1995)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	Study report (1993)	OECD Guideline 402

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.
Contains 4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: 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

Toxic to aquatic life with long lasting effects. The product spreads out on the surface of the water. A small fraction of the constituents will be dissolved.It prevents the solution of oxygen and can cause the death of water organismn.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
	Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic)						
	Acute fish toxicity	LC50	> 1000 mg/l	96 h	Oncorhynchus mykiss	REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50	44 mg/l	96 h	Raphidocelis subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50	> 1000 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202
	Fish toxicity	NOEC	ca. 0,004 mg/l	32 d	Pimephales promelas	REACh Registration Dossier	OECD Guideline 210
	Crustacea toxicity	NOEC	32 mg/l	14 d	Daphnia magna	REACh Registration Dossier	OECD Guideline 211
	Acute bacteria toxicity	EC50	> 1000 mg/l ( )	3 h	activated sludge of a predominantly domestic sewag	REACh Registration Dossier	OECD Guideline 209
	Alkyl phosphites						
	Acute fish toxicity	LC50	1,5 mg/l	96 h			
	Acute algae toxicity	ErC50	0,31 mg/l	72 h	Raphidocelis subcapitata	Study report (1996)	EU Method C.3
	Acute crustacea toxicity	EL50	0,09 mg/l	48 h	Daphnia magna	Study report (1996)	EU Method C.2
	Crustacea toxicity	NOEC	0,14 mg/l	21 d	Daphnia magna	Study report (2001)	OECD Guideline 211
	Acute bacteria toxicity	EC50	> 50 mg/l ( )	3 h	Activated sludge	Study report (1996)	OECD Guideline 209
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
	N,N-bis(2-hydroxyethyl)-3-[(C16-18)alkoxy]-1-propanamine						
	Acute fish toxicity	LC50	690 mg/l	96 h	Cyprinodon variegatus	REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50	0,79 mg/l	72 h	Raphidocelis subcapitata	REACh Registration Dossier	OECD Guideline 201

	Acute crustacea toxicity	EL50	> 4 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202
	Acute bacteria toxicity	EC50 mg/l ( )	> 1000	3 h	activated sludge of a predominantly domestic sewag	REACh Registration Dossier	OECD Guideline 209

12.2. Persistence and degradability

Not readily biodegradable (according to OECD criteria)

12.3. Bioaccumulative potential

Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
	Reaction products of fatty acids, C14-C18 (branched and linear) and C18 (unsaturated) with tetraethylenepentamine (linear, branched, cyclic)	> 6,5
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate	> 10
	N,N-bis(2-hydroxyethyl)-3-[(C16-18)alkoxy]-1-propanamine	5,2

BCF

CAS No	Chemical name	BCF	Species	Source
93882-40-7	4,4'-thiodiethylene hydrogen -2-octadecenylsuccinate	ca. 0	Oryzias latipes	REACh Registration D

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
The product has not been tested.

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.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to Directive 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): 1 - slightly hazardous to water

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

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): 2,4,5,6,7,8,9,12,15,16.

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
EC/EEC: European Community/European Economic Community
EU: European Union
M-factor: Multiplying factor
IATA: International Air Transport Association
DGR: Dangerous Goods Regulations
ICAO: International Civil Aviation Organization
TI: Technical Instructions
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
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.
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 relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)