

Safety Data Sheet dated 5/10/2022, version 1

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

1.1. Product identifier

Mixture identification:

Trade name: ATOMIC RH

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

Recommended use:

PC-TEC-11 (EuPCS)

1.3. Details of the supplier of the safety data sheet

Company: NILS S.p.A. Via Stazione, 30 39014 Postal (BZ)

e-mail: nils@nils.it

www.nils.eu

Tel. +39 0473 29 24 00 Fax +39 0473 29 12 44

Competent person responsible for the safety data sheet:

schedasicurezza@nils.it

1.4. Emergency telephone number

CAV "Ospedale Pediatrico Bambino Gesù" - Roma - Tel. +39 06 6859 37 26

CAV "Azienda Ospedaliera Università di Foggia" - Foggia - Tel. 800 183 459

CAV "Azienda Ospedaliera A. Cardarelli" - Napoli - Tel. +39 081 545 33 33

CAV Policlinico "Umberto I" - Roma - Tel. +39 06 4997 80 00

CAV Policlinico "A. Gemelli" - Roma - Tel. +39 06 305 43 43

CAV Aziedna Ospedaliera "Careggi" U.O. Tossicologia Medica - Firenze - Tel. +39 055 794 78

CAV Centro Nazionale di Informazione Tossicologica - Pavia - Tel. +39 0382 24 444

CAV Ospedale Niguarda - Milano - +39 02 66 10 10 29

CAV Azienda Ospedaliera Papa Giovanni XXIII - Bergamo - Tel. 800 88 33 00

CAV Centro Antiveleni Veneto - Verona - Tel. 800 011 858

Tel. +39 0473 29 24 00

Fax +39 0473 29 12 44

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

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None

Hazard statements:

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P273 Avoid release to the environment.

Special Provisions:

None

Special provisions according to Annex XVII of REACH and subsequent amendments:

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb	er	Classification
>= 2,5% - < 3%	Zinc bis[O,O-bis(2- ethylhexyl)] bis(dithiophosphate)	CAS: EC: REACH No.:	4259-15-8 224-235-5 01- 2119493635 -27	♦ 3.3/1 Eye Dam. 1 H318 ♦ 4.1/C2 Aquatic Chronic 2 H411 Specific Concentration Limits: C >= 50%: Eye Dam. 1 H318
	2,6-di-tert-butyl-p- cresol	CAS: EC: REACH No.:	128-37-0 204-881-4 01- 2119555270 -46	 ◆4.1/A1 Aquatic Acute 1 H400 M=1. ◆4.1/C1 Aquatic Chronic 1 H410 M=1.

Other information:

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

If skin irritation occurs: Get medical advice/attention.

Oils and fats injected under the skin by high-pressure instruments cause serious damage to health.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Take a copy of this Safety Data Sheet with you to the hospital for reference by medical staff.

In case of eyes contact:

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

Remove contact lenses, if present and easy to do. Continue rinsing.



Protect uninjured eye.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

In case of Ingestion:

If swallowed, rinse mouth with water (only if the person is conscious).

Do NOT induce vomiting.

If vomiting occurs, beware of the risk of suffocation.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

If breathing is irregular or stopped, administer artificial respiration.

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

Respiratory disorders

Headache

Dizziness

Nausea

Symptoms may appear up to several hours after exposure, so medical supervision is necessary.

If in doubt or if symptoms occur, consult a doctor.

Take off immediately all contaminated clothing.

If the person is unconscious, transport them in a stable position on their side.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment:

In the event of cardiac arrest immediately perform cardiopulmonary resuscitation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

In case of fire, use a foam fire extinguisher to extinguish.

In case of fire, use a dry powder fire extinguisher to extinguish.

Carbon dioxide (CO2).

Sand

Extinguishing media which must not be used for safety reasons:

Water.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products:

Carbon dioxide (CO2)

Nitrogen oxides (NOx)

Sulphur oxides (SOx)

Carbon monoxide

Aliphatic and aromatic products of pyrolysis

Phosphoric oxides

5.3. Advice for firefighters

Avoid inhaling the fumes.

Use Self-Contained Breathing Apparatus (SCBA) with gas-tight suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures For non emergency personnel:



Extremely slippery when spilled.

Provide adequate ventilation.

Do not get in eyes, on skin, or on clothing.

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

See protective measures under point 7 and 8.

For emergency responders:

Suitable material:

NBR (nitrile rubber).

Not suitable material:

Butyl caoutchouc (butyl rubber).

NR (natural rubber, natural latex).

CR (polychloroprene, chloroprene rubber).

6.2. Environmental precautions

Ensure that any leaks can be contained, e.g. by means of drip pans or lowered areas.

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

6.3. Methods and material for containment and cleaning up

For containment:

Stop leak if safe to do so.

Covering of drainage systems.

For cleaning up:

Collect mechanically and dispose of in adequate containers.

Treat the displaced material according to indications in Section 13 - "Information for disposal".

Never place spilled product for re-use back into the original container.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

Hazardous combustion products: see Sect. 5

Precautions for safe handling: see Sect. 7

Individual protection measures: see Sect. 8

Incompatible materials: see Sect. 10

Enviornmental precautions: see Sect. 12

Disposal considerations: see Sect. 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

No hazardous reaction if properly handled and used.

Avoid contact with skin and eyes, inhalation of vapours and mists.

Use only outdoors or in a well-ventilated area.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Advice on general occupational hygiene:

Avoid contact with skin and eyes.

Take off immediately all contaminated clothing.

Wash hands before breaks and at the end of work.

Keep away from food, drink and feed.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

Oxidizing agents.

Instructions as regards storage premises:

Floors should be impermeable, waterproof, and easy to clean.

Ensure that any leaks can be contained, e.g. by means of drip pans or lowered areas.



Keep only in the original container. Protect containers from damage.

Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

PC-TEC-11 (EuPCS)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,6-di-tert-butyl-p-cresol - CAS: 128-37-0

- OEL Type: ACGIH - TWA(8h): 2 mg/m3 - Notes: (IFV), A4 - URT irr

DNEL Exposure Limit Values

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) - CAS: 4259-15-8

Consumer: 0.19 SDS8.1_8 - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Industry: 9.6 mg/kg bw/day - Consumer: 4.8 mg/kg bw/day - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 6.6 mg/m3 - Consumer: 1.67 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

2,6-di-tert-butyl-p-cresol - CAS: 128-37-0

Worker Industry: 1.76 mg/m3 - Consumer: 0.86 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 0.5 mg/kg bw/day - Consumer: 0.25 SDS8.1_8 - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) - CAS: 4259-15-8

Target: Freshwater - Value: 4 µg/l - Type of hazard: Short term (isolated case)

Target: Marine water - Value: 4.6 µg/l - Type of hazard: Short term (isolated case)

Target: Freshwater sediments - Value: 322 µg/kg sediment dw - Type of hazard: Short term (isolated case)

Target: Marine water sediments - Value: 32.2 µg/kg sediment dw - Type of hazard: Short term (isolated case)

Target: Microorganisms in sewage treatments - Value: 3.8 mg/l - Type of hazard: Short term (isolated case)

Target: Soil (agricultural) - Value: 0.062 mg/kg soil dw - Type of hazard: Short term (isolated case)

2,6-di-tert-butyl-p-cresol - CAS: 128-37-0

Target: Freshwater - Value: 0.199 µg/l - Type of hazard: Short term (isolated case)

Target: Marine water - Value: 0.02 µg/l - Type of hazard: Short term (isolated case)

Target: Microorganisms in sewage treatments - Value: 0.017 mg/l - Type of hazard: Short term (isolated case)

Target: Freshwater sediments - Value: 0.458 mg/kg - Type of hazard: Short term (isolated case)

Target: Marine water sediments - Value: 0.046 mg/kg - Type of hazard: Short term (isolated case)

Target: Soil (agricultural) - Value: 0.054 mg/kg soil dw - Type of hazard: Short term (isolated case)

8.2. Exposure controls

Eye protection:

Wear eye/face protection.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Only CE-marked protective gloves tested according to EN 374 may be worn when working with



chemicals. Protective gloves must be selected for each workplace depending on the concentration and type of harmful substances after consultation with the supplier. Establish a healing period for skin regeneration. Preventive protection of the skin is recommended (protective creams/pomades). Wash hands thoroughly after use.

NBR (nitrile rubber).

Breakthrough time:

4h

Thickness of glove material:

0.4 mm

Not suitable material:

Butyl caoutchouc (butyl rubber).

NR (natural rubber, natural latex).

CR (polychloroprene, chloroprene rubber).

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

No measures other than those contained in Section 7 are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Liquid		Paste
Colour:	Red		
Odour:	Characteristic		
Melting point/freezing point:	N.A.		
Pour point	N.A.		
Drop point	> 150 °C	ISO 3016	
Boiling point or initial boiling point and boiling range:	>250 ° C		
Flammability:	N.A.		
Lower and upper explosion limit:	N.A.		
Flash point:	>200 ° C		
Auto-ignition temperature:	N.A.		
Decomposition temperature:	N.A.		
pH:	N.A.		
Kinematic viscosity:	N.A.		
Solubility in water:	almost insoluble		
Solubility in oil:	N.A.		
Partition coefficient n-octanol/	N.A.		



EXPERTS IN LUBRICANTS

water (log value):			
Vapour pressure:	N.A.		
Density and/or relative density:	0.93 kg/dm3	DIN 51757	25 °C
Relative vapour density:	N.A.		
Particle characteristics:			
Particle size:	N.A.		

9.2. Other information

Properties	Value	Method:	Notes
Oxidizing properties:	Non-oxidizing		

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Avoid heating the product, it could explode!

10.5. Incompatible materials

Oxidizing agents

Acids

10.6. Hazardous decomposition products

Hazardous combustion products:

See subsection 5.2

Aldehydes

Ketones

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 Toxicological information of the product:

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a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

b) skin corrosion/irritation

Not classified

Based on available data, the classification criteria are not met

c) serious eye damage/irritation

Not classified

Based on available data, the classification criteria are not met

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified



Based on available data, the classification criteria are not met f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met g) reproductive toxicity

Not classified

Based on available data, the classification criteria are not met h) STOT-single exposure

Not classified

Based on available data, the classification criteria are not met

i) STOT-repeated exposure

Not classified

Based on available data, the classification criteria are not met

j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met Toxicological information of the main substances found in the product:

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) - CAS: 4259-15-8 a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 5000 mg/kg

Test: NOAEL (subac) - Route: Oral - Species: Rat 1000 mg/kg/24h

Test: LD50 - Route: Skin - Species: Rat 5000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat 1.9 mg/l - Duration: 4h Test: NOAEL (subac) - Route: Inhalation - Species: Rat 49.5 mg/m3

2,6-di-tert-butyl-p-cresol - CAS: 128-37-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 2930-6000 mg/kg

Test: NOEC - Route: Oral - Species: Rat = 10 mg/kg/24h

Test: NOAEL (subac) - Route: Oral - Species: Rat 25-70 mg/kg/24h Test: LOAEL (subac) - Route: Oral - Species: Rat 15-1000 mg/kg/24h

Test: NOEC - Route: Oral - Species: Rat = 500 mg/kg/24h Test: LD50 - Route: Skin - Species: Rat = 2000 mg/kg

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment. ATOMIC RH

The product is classified: Aquatic Chronic 3 - H412

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) - CAS: 4259-15-8

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 46 mg/l - Duration h: 96 h

Endpoint: LL50 - Species: Fish 4.4 mg/l - Duration h: 96 h Endpoint: EL50 - Species: Daphnia 75 mg/l - Duration h: 48 h

Endpoint: EL50 - Species: Algae 240-410 mg/l - Duration h: 72 h

Endpoint: EL50 - Species: Algae 240-410 mg/l - Duration n: 72 n Endpoint: NOEC - Species: Daphnia 0.4-0.8 mg/l - Duration h: 21 d

Endpoint: NOELR - Species: Fish 3.2 mg/l - Duration h: 96 h

Endpoint: NOELR - Species: Daphnia 32 mg/l - Duration h: 48 h

2,6-di-tert-butyl-p-cresol - CAS: 128-37-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 0.199-0.57 mg/l - Duration h: 96 h

Endpoint: EC50 - Species: Aquatic invertebrates 0.48-061 ppm - Duration h: 48 h



Endpoint: EC50 - Species: Microorganisms = 10000 mg/l - Duration h: 3 h Endpoint: EC50 - Species: Microorganisms = 1.7 mg/l - Duration h: 24 h

Endpoint: EC50 - Species: Algae = 0.758 mg/l - Duration h: 96 h Endpoint: EC10 - Species: Algae = 0.4 mg/l - Duration h: 72 h

Endpoint: EC50 - Species: Aquatic invertebrates 0-0.39 mg/l - Duration h: 21 d

Endpoint: EL50 - Species: Algae 0.24-10 mg/l - Duration h: 72 h

Endpoint: NOEC - Species: Aquatic invertebrates 0.023-0.316 mg/l - Duration h: 21 d

Endpoint: NOEC - Species: Algae 0.24-1.7 mg/l - Duration h: 72 h

Endpoint: NOEC - Species: Aquatic invertebrates 0.15-0.23 mg/l - Duration h: 48 h

Endpoint: NOEC - Species: Fish = 0.053 mg/l - Duration h: 28 d

Endpoint: LOEC - Species: Aquatic invertebrates = 1 mg/l - Duration h: 72 h

Endpoint: LOEC - Species: Fish = 0.14 mg/l - Duration h: 30 d

12.2. Persistence and degradability

2,6-di-tert-butyl-p-cresol - CAS: 128-37-0

Duration h: 28d - %: 4.7%

12.3. Bioaccumulative potential

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) - CAS: 4259-15-8

Test: Log Kow 3.59 - Notes: pH: 5 (22°C)

2,6-di-tert-butyl-p-cresol - CAS: 128-37-0

Test: Kow - Partition coefficient 5.03-5.1

12.4. Mobility in soil

N A

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste Code: 120112 Packaging waste code: 150110

Dispose of according to Directive (EC) n. 2008/98 on waste and hazardous waste. Recycle in

compliance with official regulations.

SECTION 14: Transport information

14.1. UN number or ID number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

N.A.

14.6. Special precautions for user

Ν.Α.

14.7. Maritime transport in bulk according to IMO instruments

N.A.



SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 2020/878

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP) Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions:

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

National legislation

Limitations for workers: Respect the employment limits according to Directive 94/33/EC

on the protection of young people at work.

German Water Hazard Class: 1 - Slightly water pollutant.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

COV(%): < 3

Full text of phrases referred to in Section 3:

H318 Causes serious eye damage.

H411 Toxic to aquatic life with long lasting effects.

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H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.

Hazard class and hazard category	Code	Description
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008		Classification procedure	
	Aquatic Chronic 3, H412	Calculation method	

This document was prepared by a competent person who has received appropriate training. Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of

Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

CAS: Chemical Abstracts Service (division of the American Chemical

Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of

Chemicals.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport

Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization"

(ICAO).

IMDG: International Maritime Code for Dangerous Goods. INCI: International Nomenclature of Cosmetic Ingredients.

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KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

PNEC: Predicted No Effect Concentration.

RID: Regulation Concerning the International Transport of Dangerous Goods

by Rail.

STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWA: Time-weighted average
WGK: German Water Hazard Class.