



Safety Data Sheet dated 22/7/2020, version 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking 1.1. Product identifier

Mixture identification: Trade name:

Trade code:

ZEUS ORO N736190

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

Coating material

1.3. Details of the supplier of the safety data sheet

Company:

NOVACOLOR S.R.L Via U. Aldrovandi, 10 47122 Forlì (FC) - Italy -Tel. +39 0543 401840 Fax. +39 0543 414585

Competent person responsible for the safety data sheet: reach@novacolor.biz 1.4. Emergency telephone number Technical information: NOVACOLOR SRL +39 0543 401840 (Monday – Friday 8.00-12.00 ; 13.30-17.30)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Warning, Aquatic Acute 1, Very toxic to aquatic life.

Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

- No other hazards
- 2.2. Label elements

Hazard pictograms:



Warning Hazard statements:

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

P273 Avoid release to the environment.

P501 Dispose of contents / container in accordance with national regulations.

Special Provisions:

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH208 Contains reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

Special provisions according to Annex XVII of REACH and subsequent amendments: None

2.3. Other hazards

vPvB Substances: None - PBT Substances: None

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Other Hazards: No other hazards

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
>= 10% - < 12.5%	Copper	CAS: EC: REACH No.:	7440-50-8 231-159-6 01- 2119480154 -42-XXXX	
>= 3% - < 5%	zinc powder - zinc dust (stabilized)	Index number: CAS: EC: REACH No.:	7440-66-6 231-175-3	 ♦ 4.1/A1 Aquatic Acute 1 H400 ♦ 4.1/C1 Aquatic Chronic 1 H410
	1,2-benzisothiazol- 3(2H)-one	Index number: CAS: EC:	613-088-00-6 2634-33-5 220-120-9	 3.1/2/Inhal Acute Tox. 2 H330 3.2/2 Skin Irrit. 2 H315 3.3/1 Eye Dam. 1 H318 3.4.2/1 Skin Sens. 1 H317 3.1/4/Oral Acute Tox. 4 H302 4.1/A1 Aquatic Acute 1 H400 M=1. 4.1/C2 Aquatic Chronic 2 H411 M=1.
>= 0.01% - < 0.05%	pyrithione zinc	CAS: EC:	13463-41-7 236-671-3	 ♦ 3.1/3/Oral Acute Tox. 3 H301 ♦ 3.1/2/Inhal Acute Tox. 2 H330 ♦ 3.3/1 Eye Dam. 1 H318 ♦ 4.1/A1 Aquatic Acute 1 H400 M=100. ♦ 4.1/C1 Aquatic Chronic 1 H410 M=10.
>= 0. 00015% - < 0. 0015%	reaction mass of 5- chloro-2-methyl-4- isothiazolin-3-one [EC no. 247-500-7] and 2- methyl-2H-isothiazol-3- one [EC no. 220-239-6] (3:1)	Index number: CAS:	613-167-00-5 55965-84-9	 ♦ 3.1/2/Inhal Acute Tox. 2 H330 ♦ 3.1/2/Dermal Acute Tox. 2 H310 ♦ 3.1/3/Oral Acute Tox. 3 H301 ♦ 3.2/1C Skin Corr. 1C H314 ♦ 3.3/1 Eye Dam. 1 H318 ♦ 3.4.2/1A Skin Sens. 1A H317 ♦ 4.1/A1 Aquatic Acute 1 H400 M=100. ♦ 4.1/C1 Aquatic Chronic 1 H410 M=100. EUH071



SECTION 4: First aid measures

- 4.1. Description of first aid measures
- In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

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

- 4.2. Most important symptoms and effects, both acute and delayed None
- 4.3. Indication of any immediate medical attention and special treatment needed Treatment: None

SECTION 5: Firefighting measures

- 5.1. Extinguishing media
 - Suitable extinguishing media: Water. Carbon dioxide (CO2). Extinguishing media which must not be used for safety reasons: None in particular.
- 5.2. Special hazards arising from the substance or mixture Do not inhale explosion and combustion gases. Burning produces heavy smoke.
- 5.3. Advice for firefighters
 - Use suitable breathing apparatus . Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

- 6.1. Personal precautions, protective equipment and emergency procedures Wear personal protection equipment. Remove persons to safety. See protective measures under point 7 and 8. 6.2. Environmental precautions
 - Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Retain contaminated washing water and dispose it. In case of gas escape or of entry into waterways, soil or drains, inform the responsible

authorities. Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

- Wash with plenty of water.
- 6.4. Reference to other sections See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhaltion of vapours and mists. Don't use empty container before they have been cleaned. Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

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Advice on general occupational hygiene: Contamined clothing should be changed before entering eating areas. Do not eat or drink while working. 7.2. Conditions for safe storage, including any incompatibilities Keep away from food, drink and feed. Incompatible materials: None in particular. Instructions as regards storage premises: Adequately ventilated premises. 7.3. Specific end use(s) None in particular **SECTION 8: Exposure controls/personal protection** 8.1. Control parameters Copper - CAS: 7440-50-8 - OEL Type: ACGIH - TWA(8h): 0.2 mg/m3 - Notes: Fume, as Cu. Irr, GI, metal fume fever - OEL Type: ACGIH - TWA(8h): 1 mg/m3 - Notes: Dusts and mists, as Cu. Irr, GI, metal fume fever **DNEL Exposure Limit Values** Copper - CAS: 7440-50-8 Worker Professional: 273 mg/kg - Consumer: 273 mg/kg - Exposure: Human Dermal -Frequency: Short Term, systemic effects Worker Professional: 20 mg/m3 - Consumer: 20 mg/m3 - Exposure: Human Inhalation -Frequency: Short Term, systemic effects Worker Professional: 137 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects zinc powder - zinc dust (stabilized) - CAS: 7440-66-6 Worker Professional: 5 mg/m3 - Consumer: 2.5 mg/m3 - Exposure: Human Inhalation -Frequency: Long Term, systemic effects Worker Professional: 83 mg/kg - Consumer: 83 mg/kg - Exposure: Human Dermal -Frequency: Long Term, systemic effects Consumer: 0.83 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects **PNEC Exposure Limit Values** Copper - CAS: 7440-50-8 Target: Soil (agricultural) - Value: 65.5 mg/kg Target: Fresh Water - Value: 0.0078 mg/l Target: Freshwater sediments - Value: 87 mg/kg Target: Marine water - Value: 0.0052 mg/l Target: Marine water sediments - Value: 676 mg/kg zinc powder - zinc dust (stabilized) - CAS: 7440-66-6 Target: Fresh Water - Value: 0.0206 mg/l Target: Freshwater sediments - Value: 117.8 mg/kg Target: Marine water - Value: 0.0061 mg/l Target: Marine water sediments - Value: 56.5 mg/kg Target: Soil (agricultural) - Value: 35.6 mg/kg Target: Microorganisms in sewage treatments - Value: 0.052 mg/l 8.2. Exposure controls Eye protection: Not needed for normal use. Anyway, operate according good working practices. Protection for skin: No special precaution must be adopted for normal use. Protection for hands: Not needed for normal use. Respiratory protection: Not needed for normal use.

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Thermal Hazards: None Environmental exposure controls: None Appropriate engineering controls: None

SECTION 9: Physical and chemical pr			
9.1. Information on basic physical and		properti	es
Appearance:	liquid		
Colour:	gold		
Odour:	characte	ristic	
Odour threshold:	N.A.		
pH:	N.A.		
Melting point / freezing point:	N.A.		
Initial boiling point and boiling ra	inge:	N.A.	
Solid/gas flammability:	Ň.A.		
Upper/lower flammability or exp	losive lim	its:	N.A.
Vapour density:	N.A.		
Flash point:	N.A.		
Evaporation rate:	N.A.		
Vapour pressure:	N.A.		
Relative density:	1.23 kg/l		
Solubility in oil:	N.A.		
Partition coefficient (n-octanol/w	(ater):	N.A.	
Auto-ignition temperature:	N.A.		
Decomposition temperature:	N.A.		
Viscosity:	N.A.		
Explosive properties:	N.A.		
Oxidizing properties:	N.A.		
9.2. Other information	11.7 \.		
Miscibility:	N.A.		
Fat Solubility:	N A		
Conductivity:	N.A.		
		N.A.	
Substance Groups relevant pro	ues lies	IN.A.	

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 Stable under normal conditions.
- 10.5. Incompatible materials None in particular.
- 10.6. Hazardous decomposition products None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects Toxicological information of the product: ZEUS ORO a) acute toxicity Not classified

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No data available for the product b) skin corrosion/irritation Not classified No data available for the product c) serious eye damage/irritation Not classified No data available for the product d) respiratory or skin sensitisation Not classified No data available for the product e) germ cell mutagenicity Not classified No data available for the product f) carcinogenicity Not classified No data available for the product a) reproductive toxicity Not classified No data available for the product h) STOT-single exposure Not classified No data available for the product i) STOT-repeated exposure Not classified No data available for the product j) aspiration hazard Not classified No data available for the product Toxicological information of the main substances found in the product: Copper - CAS: 7440-50-8 a) acute toxicity: Route: Oral - Species: Rat > 2000 mg/kg Test: LC50 - Route: Inhalation Dust - Species: Rat 5.41 mg/kg - Duration: 4h zinc powder - zinc dust (stabilized) - CAS: 7440-66-6 a) acute toxicity: Test: LC50 - Route: Inhalation - Species: Rat 5.41 mg/l - Duration: 4h Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg

SECTION 12: Ecological information

12.1. Toxicity Adopt good working practices, so that the product is not released into the environment. **ZEUS ORO** The product is classified: Aquatic Acute 1 - H400; Aquatic Chronic 2 - H411 1,2-benzisothiazol-3(2H)-one - CAS: 2634-33-5 a) Aquatic acute toxicity: Endpoint: EC10 - Species: Algae 0.04 mg/l - Duration h: 72 - Notes: (Selenastrum capricornutum) (OECD 201) Endpoint: EC50 - Species: Algae 0.11 mg/l - Duration h: 72 - Notes: (Selenastrum capricornutum) (OECD 201) S2238 Endpoint: EC50 - Species: Daphnia 3.27 mg/l - Duration h: 48 - Notes: (OECD 202) S 2240 Endpoint: LC50 - Species: Fish 1.6 mg/l - Duration h: 96 - Notes: (Oncorhynchus mykiss) (OECD 203) S 2746 Endpoint: NOEC - Species: Daphnia 1.2 mg/l - Notes: 21 d (OECD 211) S 803 Endpoint: NOEC - Species: Fish 0.21 mg/l - Notes: 28 d (OECD 215) S 805 pyrithione zinc - CAS: 13463-41-7

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a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Algae 0.051 mg/l - Duration h: 72 - Notes: (Pseudokirchneriella
subcapitata) (OECD 201) S 3023 Endpoint: EC50 - Species: Algae 0.013 mg/l - Duration h: 72 - Notes: (Skeletonema
costatum) (ISO 10253) literature
Endpoint: EC50 - Species: Daphnia 0.051 mg/l - Duration h: 48 - Notes: (OECD 202) S 3024
Endpoint: LC50 - Species: Fish 0.0104 mg/l - Duration h: 96 - Notes: (Brachydanio rerio) (OECD 203) S 3026
Endpoint: NOEC - Species: Daphnia 0.0022 mg/l - Notes: 21 d (OECD 211) S 3025 Endpoint: NOEC - Species: Fish 0.00125 mg/l - Notes: 28 d (Brachydanio rerio) (OECD 215) S 3027
Endpoint: NOEC - Species: Algae 0.0149 mg/l - Duration h: 72 - Notes: (Pseudokirchneriella subcapitata) (OECD 201) S 3023
Endpoint: NOEC - Species: Algae 0.000146 mg/l - Duration h: 96 - Notes: (Skeletonema costatum) (ISO 10253) literature
reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and
2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) - CAS: 55965-84-9
a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia 0.1 mg/l - Duration h: 48 - Notes: daphnia magna Endpoint: EC50 - Species: Algae 0.048 mg/l - Duration h: 72 - Notes: pseudokirchneriella subcapitata
Endpoint: EC50 - Species: Fish 0.22 mg/l - Duration h: 96 - Notes: oncorhynchus mykiss Endpoint: NOEC - Species: Algae 0.00064 mg/l - Duration h: 48 - Notes: skeletonema costatum
Endpoint: NOEC - Species: Daphnia 0.004 mg/l - Duration h: 504 - Notes: daphnia magna Endpoint: NOEC - Species: Fish 0.098 mg/l - Duration h: 672 - Notes: oncorhynchus
mykiss Endpoint: NOEC - Species: Algae 0.0012 mg/l - Duration h: 72 - Notes: pseudokirchneriella subcapitata
12.2. Persistence and degradability N.A.
12.3. Bioaccumulative potential
1,2-benzisothiazol-3(2H)-one - CAS: 2634-33-5
Test: Kow - Partition coefficient 0.7 - Notes: (n-octanol/water) OECD 117 Log Kow (HPLC
method) Test: BCF - Bioconcentrantion factor 6.95 - Notes: (fish) OECD 305
12.4. Mobility in soil
N.A.
12.5. Results of PBT and vPvB assessment vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects None

SECTION 13: Disposal considerations 13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information	
14.1. UN number	
ADR-UN number:	3082
IATA-Un number:	3082
IMDG-Un number:	3082
14.2. UN proper shipping name	
ADR-Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
	N.O.S.
IATA-Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
117004000	

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 14.3. Transport hazard class(es) ADR-Class: 9 ADR-Label: 9 ADR - Hazard identification number: 90 IATA-Class: 9 IATA-Label: 9 IMDG-Class: 9 14.4. Packing group ADR-Packing group: III IMDG-Packing group: III 14.5. Environmental hazards ADR-Enviromental Pollutant: Yes Marine pollutant: Most important toxic component: Copper 14.6. Special precautions for user ADR-Transport category (Tunnel restriction code): (E) IATA-Passenger Aircraft: 964 Imited quantity: 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code N.A. ADR: Special provision 375 IMDG: Special provision 37-14	N.O.S. IMDG-Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
ADR-Class: 9 ADR-Label: 9 ADR - Hazard identification number: 90 IATA-Class: 9 IATA-Class: 9 IMDG-Class: 9 14.4. Packing group III IATA-Packing group: III IATA-Packing group: III IMDG-Packing group: III 14.5. Environmental hazards ADR-Enviromental Pollutant: Yes Marine pollutant: Ves Marine pollutant: Copper 14.6. Special precautions for user ADR-Transport category (Tunnel restriction code): (E) IATA-Passenger Aircraft: 964 IATA-Cargo Aircraft: 964 Imited quantity: 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code N.A. ADR: Special provision 375 IMDG: Special provision 375	14.3. Transport hazard class(es)	
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IMDG: Special provision 37-14		
IMDG: Special provision 37-14	ADR: Special provision 375	
והדה. ספטומו פוטיוטוו הדשי	IATA: Special provision A197	

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) 2015/830 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) 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).

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Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III): Seveso III category according to Annex 1, part 1 Product belongs to category: E1, E2

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

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H302 Harmful if swallowed.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
H410 Very toxic to aquatic life with long lasting effects.
H310 Very toxic to aquatic life with long lasting effects.
H310 Very toxic to aquatic life with long lasting effects.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
EUH071 Corrosive to the respiratory tract.

Hazard class and hazard category	Code	Description
Acute Tox. 2	3.1/2/Dermal	Acute toxicity (dermal), Category 2
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1C	3.2/1C	Skin corrosion, Category 1C
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1
Skin Sens. 1A	3.4.2/1A	Skin Sensitisation, Category 1A
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

Paragraphs modified from the previous revision:

SECTION 1: Identification of the substance/mixture and of the company/undertaking SECTION 2: Hazards identification SECTION 3: Composition/information on ingredients SECTION 6: Accidental release measures

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SECTION 7: Handling and storage SECTION 8: Exposure controls/personal protection SECTION 9: Physical and chemical properties SECTION 11: Toxicological information SECTION 12: Ecological information SECTION 14: Transport information SECTION 15: Regulatory information SECTION 16: Other information

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 Acute 1, H400	Calculation method
Aquatic Chronic 2, H411	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: ATE: ATEmix:	European Agreement concerning the International Carriage of Dangerous Goods by Road. Acute Toxicity Estimate Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP: DNEL:	Classification, Labeling, Packaging. Derived No Effect Level.
EINECS: GefStoffVO:	European Inventory of Existing Commercial Chemical Substances. 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 Áviation 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.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC: RID:	Predicted No Effect Concentration. Regulation Concerning the International Transport of Dangerous Goods
	Regulation concerning the international transport of Dangelous Goods

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	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.

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