CHEREY-NAGE MA



according to Regulations REACh 1907/2006/EC

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

1.1	Product identifier		
	REF	740750.500	
	Product name	NucleoProtect VE	ET (500 mL)
	0		ION 3.1/3.2 or ecause the annual tonnage does not require registration or
	1 x 500 mL Nucle	Ū	
	1 X 500 ML NUCIE	OProtect VEI	UFI: 06YW-X3JY-620N-0H5Y
1.2	Relevant identified use	s of the substance or	mixture and uses advised against
	Relevant identified uses		Ũ
	Product for analytical use.		
		ssification according REACh is integrated into sections 1-	, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0 16.
	Uses advised against	g	
	not described		
1.3	Details of the supplier of	of the safety data she	et
	Manufactured by:	-	
	MACHEREY-NAGEL Gmb		
	Valencienner Str. 11, 5235	5 Düren, Germany	
	Phone: +49 2421 969 0		E-mail: sds@mn-net.com (msds@mn-net.com)
1.4	Emergency telephone r	lumber	
	DE: Gemeinsames Giftinfo		ormation Service or call local Life Saving Service.
	You find our current versions of S	DS in Internet:	<http: sds="" www.mn-net.com=""></http:>

SECTION 2: Hazard identification

2.0 Classification of the complete product according to Regulation (EC) 1272/2008

 \land

	GHS05 GHS07
Signal word	DANGER
Hazard identification	Hazard classes/categories
H302	Acute Tox. 4 oral
H314	Skin Corr. 1 B
H412	Aquatic Chronic 3

2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008

500 mL NucleoProtect VET



Signal word



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H302

H314

H315 H319

H412

according to Regulations REACh 1907/2006/EC

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Hazard identification	Hazard classes/categories
-----------------------	---------------------------

Acute Tox. 4 oral Skin Corr. 1 B Skin Irrit. 2 Eye Irrit. 2 Aquatic Chronic 3

List of H phrases: see section 16.2

2.2 Label elements according regulation (EC) 1272/2008

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identificator(s) (EU 1272/2008 Annex I - 1.5.1.2). Harmful chemicals/mixtures with signal word: **WARNING** must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2).

500 mL NucleoProtect VET



Signal word: DANGER

H302, H314, H412

Harmful if swallowed.Causes severe skin burns and eye damage.Harmful to aquatic life with long lasting effects. P260sh, P264W, P270, P273, P280sh, P301+330+331, P303+361+353, P305+351+338, P310, P405, P501 Do not breathe dust/vapours.Wash with water thoroughly after handling.Do not eat, drink or smoke when using this product.Avoid release to the environment.Wear protective gloves/eye protection.IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.Immediately call a POISON CENTER/doctor.Store locked up.Dispose of contents/container to regulated waste treatment.

Label elements of the complete product



Signal word: DANGER

H302, H314, H412

Harmful if swallowed.Causes severe skin burns and eye damage.Harmful to aquatic life with long lasting effects. P260sh, P264W, P270, P273, P280sh, P301+330+331, P303+361+353, P305+351+338, P310, P405, P501 Do not breathe dust/vapours.Wash with water thoroughly after handling.Do not eat, drink or smoke when using this product.Avoid release to the environment.Wear protective gloves/eye protection.IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.Immediately call a POISON CENTER/doctor.Store locked up.Dispose of contents/container to regulated waste treatment.

2.3 Other hazards

Possible hazards from physicochemical properties

Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive. For guanidine thiocyanate CAS 593-84-0: The properties H314, H332 "Causes severe skin burns and eye damage. Harmful if inhaled." are not relevant, because the mixture solution is buffered to pH 4-9 (see GHS Directive 1272/2008/EC Annex I, chapter 3.2.3.1.2.).

Information pertaining to particular risks to human and possible symptoms

Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapours especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs. Cause after oral intake, impairments of health when ingested in small quantities.

Information pertaining to particular risks to the environment



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Harmful to aquatic life with long lasting effects. Should not be released into the environment. **PBT:** not applicable **vPvB:** not applicable

Possible endocrine disrupting effects no data available

SECTION 3: Composition / information on ingredients

3.1 Substances or 3.2 Mixtures

500 mL NucleoProtect VET

 Substance name: CAS No.:	guanidine hydrochloride 50-01-1		
Substance rating: Formula: Pseudonym (de): REACH Reg. No.:	H302, Acute Tox. 4 oral, H315, Skin CH ₆ ClN ₃ Guanidiniumchlorid 01-2119977063-35-0005	Irrit. 2, H319, Eye Irrit	. 2
EC No.:	200-002-3	Indice No.:	607-148-00-0
Concentration:	18 - <24 %		
acc. CLP (GHS):	H302, Acute Tox. 4 oral, H315, Skin	Irrit. 2, H319, Eye Irrit	. 2
Substance name: CAS No.:	<i>guanidinium thiocyanate</i> 593-84-0		
Substance rating: H412, Aquatic Chroni		e Tox. 4 derm., H314,	Skin Corr. 1 B, H332, Acute Tox. 4 inh.,
Formula:	C ₂ H ₆ N ₄ S		
Pseudonym (de):	Guanidiniumrhodanid		
REACH Reg. No.: EC No.:	01-2120735072-65-0001 209-812-1	Indice No.:	615-004-00-3
Concentration:	25 - <30 %		
acc. CLP (GHS):	H302, Acute Tox. 4 oral, H314, Skin	Corr. 1 B, H412, Aqua	atic Chronic 3

3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.List of H and P phrases: see section 16.2.

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor.

4.1.1 After SKIN Contact

Remove contaminated clothing immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. (If possible) use soap. Avoid neutralisation. Then apply a loose bandage.

4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

4.1.3 After INHALATION of vapours

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. If vomiting and if insensible place patient in recovery position and keep airways free. ---

4.1.4 After ORAL Intake

After oral intake lots of water with activated charcoal supplement should be drunk after it has been ingested. Do not induce vomiting under any circumstances. Do not make any efforts to neutralise it. Contact medical advice for possible consequences.

4.2 Most important symptoms and effects, both acute and delayed

Rapid penetration and destruction of the skin. Especially in the heated form. Causes severe skin burns and eye damage.



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4.3 Indication of any immediate medical attention and special treatment needed

CORROSIVE DAMAGE: After SKIN CONTACT rinse with water for a long time. Efforts to neutralise the substance can frequently make matters worse. Apply glucocorticosteroides following inflammatory reactions. After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must to be carried out by an eye specialist. After INTAKE administer aluminium oxide drug suspensions. Administer a prophylaxis to counter pulmonary oedema following the INGESTION of corrosive aerosols. In the event of RESPIRATORY DISTREES ensure that the patient inhales oxygen. ---

SECTION 5: Firefighting measures

5.1 Extinguishing media

5.1.1 Suitable extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.1.2 Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible.

5.3 Advice for firefighters

No, for listed product.Product package burns like paper or plastic. Spray any vapours released with water. Retent fire water. Use only acid-resistant safety equipment.

For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

5.4 Additional information

Danger for environment only in the event of a large-scale leakage or formation of hazardous substances.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Wear suitable protective gloves (see 8.2.2). Wear eye protection, respectively face protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Environmental precautions

Harmful to aquatic life with long lasting effects. Should not be released into the environment. PBT: not applicable vPvB: not applicable

6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent. And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections

see information in section 5.4,7,8 and 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling in accordance with the test instruction, that comes with the product.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage is guaranteed in the original packaging from MACHEREY-NAGEL. Storage class (German chemical industry): see chapter 12 1 Storage class (VCI): 12 3

Water hazard class (DE):

Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage. Use inbreakable container for transport of glass bottles.

7.3 Specific end use(s)



7.2.1

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Product for analytical use.

SECTION 8: Exposure controls /personal protection

8.1 **Control parameters**

500 mL Nucle	oProtect VET	
DNEL:	<i>guanidinium thiocyanate</i> [inh] 1092 μg/m³ Derived No-Effect Level (for workers)	CAS No.: 593-84-0
PNEC (fresh wat PNEC = I	er): 42.4 µg/L Predicted No Effected Concentration	
NIOSH: [TWA] Tir	not listed ne-weighted average to a reference period of 8 hours, [STEL	_] Short-term exposure limit related to a 15-minute period
OSHA:	not listed	
DNEL:	guanidine hydrochloride [inh] 3.5 mg/m³ Derived No-Effect Level (for workers)	CAS No.: 50-01-1
PNEC (fresh wat PNEC = I	er) : Predicted No Effected Concentration	
NIOSH:	not listed	1 Chart term experience limit related to a 15 minute pariad
	ne-weighted average to a reference period of 8 hours, [STEL	_J Short-term exposure limit related to a 15-minute period

8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

8.2.1 **Respiratory protection**

No additional recommendations.

8.2.2 Skin protection / Hand protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC (f.ex. from Ansell or KCL).

8.2.3 Eye / Face Protection

Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection or face protection.

8.2.4 Skin protection

Recommended to avoid clothing damage, and to avoid contamination with these hazards.

8.2.5 Personal hygiene

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

8.2.6 Thermal hazards

no data available

8.3 Limitation and monitoring of environmental exposure

Do not release product into environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

500 mL NucleoProtect VET

a) State of aggregation:	liquid
b) Colour:	colourless
c) Odor:	odorless
d) Melting point:	no data available
e) Boiling point:	no data available
f) Flammability:	no data available
g) Explosive limits (lower / upper):	no data available
h) Flash point:	no data available
i) Flashing temperature:	no data available
j) Decomposition temperature:	no data available
k) pH value:	5-6
 Kinematic viscosity: 	no data available
m) Solubility in water:	no data available
n) Dispersion coefficient (K o/w):	no data available



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Safety Data Sheet

according to Regulations REACh 1907/2006/EC

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o) Vapour pressure (20°C):
p) Specific gravity:
q) Relative vapour density (air=1):
r) Particle size:

no data available 1,15 g/cm³ no data available no data available

9.2 Other information

9.2.1 Information on physical hazard classes no data available

9.2.2 Other safety-related parameters

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.

Substances are highly corrosive.

SECTION 10: Stability and reactivity

10.1 Reactivity

no further data available.

- 10.2 Chemical stability no known instability.
- 10.3 Possibility of hazardous reactions Can react violently with organic material. Note: Can form very reactive substances with oxidizing agents. Possible: &H:EUH031& No further data available.
 10.4 Conditions to avoid

No more required.

10.5 Incompatible materials

no additional data available

10.6 Hazardous decomposition products In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

SECTION 11: Toxicological information

11.1 Information on the hazard classes according regulation (EC) 1272/2008

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

0
-

Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.





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11.2 Other hazards

Possible endocrine disrupting effects no data available Other information

no additional data available

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

500 mL NucleoProtect VET guanidinium thiocyanate Substance name: CAS-Nr.: 593-84-0 Harmful to aquatic life with long lasting effects. Do not release into the environment. Environmentally hazardous substances/mixtures do not have to be labeled with P-phrases up to 125 mL (EU 1272/2008 Annex I Paragraph 1.5.2). PNEC (fresh water): 42.4 µg/L PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected LC50 fish/96h : [4d] 89.1 mg/L EC50 daphnia/48h : 42.4 mg/L 130 mg/L IC50 scenedesmus quadricauda/72h : EC10 pseudomonas putita/16h [10d] 200 mg/L Water hazard class (DE): 3 Storage class (VCI): 12 guanidine hydrochloride CAS-Nr : 50-01-1 Substance name: PNEC (fresh water) PNEC = Predicted No Effected Concentration = concentration at which no effect on the environment is expected LC50 leuciscus idus/96h : 1759 mg/L LC50 fish/96h : [4d] 690-1850; [48h] 1758-2420 mg/L EC50 daphnia/48h : 70.2 mg/L [72h] 11.8-33.5 mg/L EC10 pseudomonas putita/16h Water hazard class (DE): 1 WGK No.: 0788 Storage class (VCI): 12

12.2 Persistence and degradability

12.3 Bioaccumulative potential

500 mL NucleoProtect VET

Substance name: Dispersion coefficient (K _{o/w}): *guanidinium thiocyanate* -1,11 pH 5.1 CAS-Nr.: 593-84-0

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

no data available

12.7 Other adverse effects

no additional data available



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SECTION 13: Disposal considerations

Do not collect in acidic waste. May form toxic gases.

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains. Empty containers of corrosive reagents prior to disposal, rinse with water.

SECTION 14: Transport information

14.1 - 14.4 Not necessary

14.5 Environmental hazards

none, contains only small quantities of hazardous substances, contains only small amounts of these substances

14.6 Special precautions for user not necessary

14.7 Carriage in bulk by sea in accordance with IMO instruments Not applicable.

SECTION 15: Regulatory information

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

Dangerous Substances Protection Act (DE: Chemikaliengesetz - ChemG), Aug 2013, Stand: Okt 2020

Ordinance on protection against dangerous substances (E: Gefahrstoffverordnung - GefStoffV), Nov 2010, Stand: Mrz 2017

TRGS 201, Classification and labeling of activities involving hazardous substances, Feb 2017

TRGS 220, National aspects when preparing safety data sheets, Jan 2017

TRGS 400, Risk assessment for activities involving hazardous substances, Jul 2017

TRGS 401, Skin contact hazard - identification, assessment, action, Jun 2008, status: Feb 2011

BekGS 408, Application of the GefStoffV and the TRGS with the entry into force of the CLP regulation, December 2009, status: Jan 2012

TRGS 500, Protective measures, Mai 2008

TRGS 510, Storage of hazardous substances in portable containers from March 2013, status: Oct 2015 Wasserhaushaltsgesetz - WHG, Section 3 Handling substances hazardous to water, Jul 2009, status: Aug 2016 MN leaflet/instructions for use, also at www.mn-net.com

If necessary, observe other country-specific regulations.

15.2 Chemical safety assessment

not necessary for these small amounts

SECTION 16: Other information

16.1 Changes compared to the last version

Between versions 3.2.2.17 and 2.2.2.2 following changes were applied: -0 product data corrected - 15 substance data corrected

16.2 List of H and P phrases

16.2.1 List of relevant H phrases

- H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage.
 - H315 Causes skin irritation.
 - H319 Causes serious eye irritation.
 - H412 Harmful to aquatic life with long lasting effects.

16.2.2 List of relevant P phrases

P260sh	Do not breathe dust/vapours.
P264W	Wash with water thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280sh	Wear protective gloves/eye protection.
P301+330+331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].



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	P305+351+338 P310 P405 P501	IF IN EYES: Rinse cautiously with water for several minutes. Remove contac do. Continue rinsing. Immediately call a POISON CENTER/doctor. Store locked up. Dispose of contents/container to regulated waste treatment.	t lenses, if present and easy to
16.3	Only for professional Look about employee Look about employee	restriction on use user. restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)! restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or for DE §§ e of this product or test kit has a moderate hazardous potential.	11-13 MuSchG 2017)!
16.4	Directive 1999/92/EG atmospheres SUVA .CH, limit value Regulation 790/2009/ Regulation 453/2010/ Regulation 453/2013/ Regulation 1221/2015 Regulation 776/2017/ Regulation 669/2018/ Regulation 649/2018/ Regulation 521/2019/ TRGS 900, German r Regulation 217/2020/ Regulation 878/2020/ Regulation 643/2021/ Regulation 643/2021/	data Jets on hazardous materials, 2021 Minimum requirements to improve the safety and health protection of workers at rises as in the air at work 2009, revised on 01/2009 EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st EU, adaptation of the REACH regulation 1907/2006/EG EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th 5/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (1th EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (1th EU, adaptation of Regulation 1272/2008/EG to technical and scientific progress (1th EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (1th EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (1th EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (1th EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (1th EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (1th EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (12th EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (12th EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (12th EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (12th adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (12th adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (12th adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (12th adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (12th adaptation of Annex VI, Part 1, of Regulatio	t ATP) ATP) h ATP) h ATP) t (11th ATP) tth ATP) h ATP) cientific progress (14th ATP) scientific progress (15th ATP) cientific progress (16th ATP) cientific progress (17th ATP)
	revisions/updates Reason for revision:	2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, 2014-04 adjustment according Regulation 487/2013/EU 2016-03 adjustment according Regulation 1221/2015/EU 2017-11 adjustment according the ECHA registration dossier	if necessary
16.5	Further informed	2022-11 adjustment according Regulation 878/2020/EU	
6.01	revision time. This do person using this proc appropriateness for a	GmbH & Co. KG provides the information contained herein in good faith being up-to cument is intended only as a guide to the appropriate precautionary handling of the duct. Individuals receiving the information must exercise their independent judgement	material by a properly trained nt in determining its

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16.6 Legend / Abbreviations

acc:	according
ADR:	Convention concerning the International Carriage of Dangerous Goods by Road
Act:	acute
BAT:	biological workplace tolerance value
CAO:	Cargo Aircraft Only
Carc:	carcinogen
CAS:	Chemical Abstracts Service
CLP:	Classification, Labelling and Packaging regulation
CMR:	carcinogen, mutagen, reproduction toxic
Corr:	corrosive
COD:	chemical oxigen demand
CSCL:	Chemical Substance Control Law (Jp)
Dam:	damage
DNEL:	Derived No-Effect Level (for workers)
derm:	dermal
dog:	dog



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EC10:	Concentration causing a toxic effect in 10% of the test organisms	
ECIU. EC:	European Community	
EC-Nr:	Substance number of the EC substance inventory	
EmS:	Guide to accident management measures on ships	
EU:	European Union	
fish:	fish (not spezified)	
GHS:	Global Harmonized System of Classification and Labeling of Chemicals	
gpg:	guinea pig	
ĬĊĂO:	International Civil Aviation Organization	
ihl:	inhaled	
IMDG	International Maritime Dangerous Goods Code	

IMDG International Maritime Dangerous Goods Code intrav: intravenous ipt: intraperitonaeal ISHL: Industrial Safety and Health Law (Jp) LC50: letale concentration 50% LD50: letale dosis 50% leuciscus idus: fisch, ide, orfe MAK: maximum workplace concentration Met: Metall mouse mus: Muta: mutagen NIOSH: National Institute for Occupational Safety and Health (US) NRD: Non-rapidly degradable onchorhynchus mykiss: fish, rainbow trout orl: oral OSHA: Occupational Safety and Health Administration PAX: transport on passenger planes allowed PBT: persistent, bioaccumulating, toxic substance pH: pH value pimephales promelas: fish, fathead minnow PNEC: Predicted No Effected Concentration Process category 'for laboratory use' Law for PRTR and Promotion of Chemical Management (Jp) **PROC 15:** PRTR: PVC. polyvinyl chloride quail: bird, quail rat: rat rbt: rabbit RD: rapidly degradable RF repeated REACh: Registration, Evaluation, Authorisation and Restriction of Chemicals REF: item number, reference number Reg.No.: rRegistration number harmful to reproduction Repr: respiratory Resp: RIP: **REACH Implementations Projects** scu: sub cutan SDS: safety data sheet sensitisation Sens: short term exposure limit STFI · STOT: Specific Target Organ Toxicity SVHC: Substance of Very High Concern

Sens:sensitisationSTEL:short term exposure limitSTOT:Specific Target Organ ToxicitySVHC:Substance of Very High Concernt/a:tons per yearTCCA:Toxic Chemicals Control Act (S. Korea)Tox:toxicTSCA:The Toxic Substances Control Act (US)TWA:time weighted averageTRGS:technical regulations (DE)

vPvB: very persistent, very bioaccumulating substance

16.7 Training advice

Regular safety training. Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.



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