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

1.1 Product identifier

febi 31942 grease

Article number: 31941, 31942

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

1.2.1 Relevant uses

Grease

1.2.2 Uses advised against

For all uses not specified in SECTION 1.2.1

1.3 Details of the supplier of the safety data sheet

Company Ferdinand Bilstein GmbH + Co. KG

Wilhelmstr. 47

58256 Ennepetal / GERMANY Phone +49 2333 911-0 Fax +49 2333 911-444 Homepage www.febi.com E-mail info@febi.com

Address enquiries to

Technical information info@febi.com
Safety Data Sheet info@febi.com

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

Company +49 2333 911-0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms none
Signal word none

Hazard statements H412 Harmful to aquatic life with long lasting effects.

Precautionary statements P273 Avoid release to the environment.

P501 Dispose of contents / container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of

disposal.

Special labelling Contains: 5,5'-Dithiodi-1,3,4-thiadiazole-2(3H)-thione, Zinc naphthenate. EUH208 May

produce an allergic reaction.

2.3 Other hazards

Physico-chemical hazards No particular hazards known.

Human health dangers Frequent persistent contact with the skin can cause skin irritation.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards none

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SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
5 - < 10	Dilithium azelate
	CAS: 38900-29-7, EINECS/ELINCS: 254-184-4, Reg-No.: 01-2120119814-57-XXXX
	GHS/CLP: Acute Tox. 4: H302
1 - < 2,5	Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)
	CAS: 4259-15-8, EINECS/ELINCS: 224-235-5, Reg-No.: 01-2119493635-27-XXXX
	GHS/CLP: Eye Dam. 1: H318 - Aquatic Chronic 2: H411
	SCL [%]: >50 - 100: Eye Dam. 1: H318
0,25 - < 1	2,6-di-tert-butyl-p-cresol
	CAS: 128-37-0, EINECS/ELINCS: 204-881-4, Reg-No.: 01-2119555270-46-XXXX
	GHS/CLP: Aquatic Chronic 1: H410 - Aquatic Acute 1: H400,
	M-Factor (acute): 1, M-Factor (chronic): 1
0,1 - < 1	5,5'-Dithiodi-1,3,4-thiadiazole-2(3H)-thione
	CAS: 72676-55-2, EINECS/ELINCS: 276-763-0
	GHS/CLP: Skin Sens. 1: H317 - Aquatic Chronic 2: H411
0,1 - < 1	Hexanoic acid, 2-ethyl-, zinc salt, basic
	CAS: 85203-81-2, EINECS/ELINCS: 286-272-3, Reg-No.: 01-2119979093-30-XXXX
	GHS/CLP: Repr. 2: H361d - Eye Irrit. 2: H319 - Aquatic Chronic 3: H412
0,1 - < 1	Zinc naphthenate
	CAS: 84418-50-8, EINECS/ELINCS: 282-762-6, Reg-No.: 01-2119988500-34-XXXX
	GHS/CLP: Skin Sens. 1: H317 - Aquatic Chronic 3: H412

Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.

For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

Eye contact

4.1 Description of first aid measures

General information Change soaked clothing.

Inhalation Ensure supply of fresh air.

In the event of symptoms seek medical treatment.

Skin contactWhen in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Ingestion Seek medical advice immediately.

Do not induce vomiting.

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.

Forward this sheet to your doctor.

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SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not

be used

Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

Carbon monoxide (CO)

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within

the local regulations.

Cool containers at risk with water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.

Forms slippery surfaces with water.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.

Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures necessary if used correctly.

Do not eat, drink or smoke when using this product.

Use barrier skin cream.

Wash hands before breaks and after work.

Cloths contaminated with product should not be kept in trouser pockets.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Prevent penetration into the ground.

Do not store together with food and animal food/diet.

Keep in a well-ventilated place. Keep container tightly closed.

7.3 Specific end use(s)

See product use, SECTION 1.2

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SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance

2,6-di-tert-butyl-p-cresol

CAS: 128-37-0, EINECS/ELINCS: 204-881-4

Long-term exposure: 10 mg/m³

DNEL

Substance
Dilithium azelate, CAS: 38900-29-7
Industrial, dermal, Long-term - local effects, 172 μg/cm²
general population, dermal, Acute - systemic effects, 23 μg/cm²
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
Industrial, inhalative, Long-term - systemic effects, 6,6 mg/m³
Industrial, dermal, Long-term - systemic effects, 9,6 mg/kg bw/d
general population, inhalative, Long-term - systemic effects, 1,67 mg/m³
general population, dermal, Long-term - systemic effects, 4,8 mg/kg bw/d
general population, oral, Long-term - systemic effects, 0,19 mg/kg bw/d
Hexanoic acid, 2-ethyl-, zinc salt, basic, CAS: 85203-81-2
Industrial, dermal, Long-term - systemic effects, 6,41 mg/kg bw/d
Industrial, inhalative, Long-term - systemic effects, 20.83 mg/m³
general population, dermal, Long-term - systemic effects, 3,21 mg/kg bw/d
general population, oral, Long-term - systemic effects, 3,21 mg/kg bw/d
general population, inhalative, Long-term - systemic effects, 10,42 mg/m³
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
Industrial, inhalative, Long-term - systemic effects, 5,8 mg/m³
Industrial, dermal, Long-term - systemic effects, 8,3 mg/kg
general population, dermal, Long-term - systemic effects, 5 mg/kg
general population, inhalative, Long-term - systemic effects, 1,74 mg/m³

PNEC

Substance

Dilithium azelate, CAS: 38900-29-7		
seawater, 2,3 µg/L		
freshwater, 23 μg/L		
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8		
sewage treatment plants (STP), 3.8 mg/L (AF= 100)		
sediment (freshwater), 0.322 mg/kg dw		
sediment (seawater), 0.0322 mg/kg dw		
soil, 0.062 mg/kg dw		
seawater, 4.6 µg/L (AF= 10 000)		
freshwater, 4 µg/L (AF= 100)		
oral (food), 8.33 mg/kg food (AF=300)		
Hexanoic acid, 2-ethyl-, zinc salt, basic, CAS: 85203-81-2		
sediment (seawater), 0,637 mg/kg sediment dw		

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sewage treatment plants (STP), 71,7 mg/L		
freshwater, 0,36 mg/L		
seawater, 0,036 mg/L		
sediment (seawater), 6,37 mg/kg sediment dw		
soil, 1,06 mg/kg		
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0		
oral (food), 16,7 mg/kg		
sediment (freshwater), 1,29 mg/kg		
freshwater, 0,004 mg/l		
seawater, 0,0004 mg/l		
sewage treatment plants (STP), 100 mg/l		
soil, 1,04 mg/kg		
Zinc naphthenate, CAS: 84418-50-8		
soil, 6,38 mg/kg Boden dw		
freshwater, 6,39 µg/L		
seawater, 0,64 µg/L		
sewage treatment plants (STP), 147,73 μg/L		
sediment (freshwater), 31,93 mg/kg Sediment dw		
sediment (seawater), 3,19 mg/kg Sediment dw		

8.2 Exposure controls

Additional advice on system design

Ensure adequate ventilation on workstation.

Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of

hazardous substances.

Eye protection If there is a risk of splashing:

safety glasses

Hand protection The details concerned are recommendations. Please contact the glove supplier for further

information.

> 0,11 mm; Nitrile rubber, >480 min (EN 374-1/-2/-3).

Skin protection Protective clothing (EN 340)

Other Personal protective equipment should be selected specifically for the working place,

depending on concentration and quantity handled. The resistance of this equipment to

chemicals should be ascertained with the respective supplier.

Avoid contact with eyes and skin.

Respiratory protection Not required under normal conditions.

Thermal hazards none

Delimitation and monitoring of the environmental exposition

 $\label{lem:comply} \mbox{Comply with applicable environmental regulations limiting discharge to air, water and soil.}$

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical statepastyColorlight brownOdorcharacteristicOdour thresholdnot applicablepH-valuenot applicablepH-value [1%]not applicable

Boiling point [°C] No information available.

Flash point [°C] not applicable

Flammability (solid, gas) [°C] No information available.

Lower explosion limit No information available.

Upper explosion limit No information available.

Oxidising properties no

Vapour pressure/gas pressure [kPa] not applicable

Density [g/cm³] 1,15 (DIN 51757) (25°C / 77,0°F)

Relative density not determined

Bulk density [kg/m³] not applicable

Solubility in water immiscible

Solubility other solvents No information available.

Partition coefficient [n-octanol/water] No information available.

Kinematic viscosity NGLI 2

Relative vapour density

Evaporation speed

Melting point [°C]

Auto-ignition temperature

Decomposition temperature [°C]

Particle characteristics

No information available.

No information available.

No information available.

No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with acids, alkalies and oxidizing agents.

10.4 Conditions to avoid

Strong heating.

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10.5 Incompatible materials

Oxidizing agent Acids

10.6 Hazardous decomposition products

No hazardous decomposition products known.

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SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 Acute oral toxicity

Product

ATE-mix, oral, > 2000 mg/kg bw

Substance

Dilithium azelate, CAS: 38900-29-7

LD50, oral, Rat, 300 mg/kg bw

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

LD50, oral, Rat, 3100 mg/kg bw

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

LD50, oral, Rat, > 5000 mg/kg bw (OECD 401)

NOEL, oral, Rat, 25 mg/kg/28d

Zinc naphthenate, CAS: 84418-50-8

LD50, oral, Rat, > 2000 mg/kg bw

Acute dermal toxicity

Product

dermal, Based on the available information, the classification criteria are not fulfilled.

Substance

Dilithium azelate, CAS: 38900-29-7

LD50, dermal, Rat, 2000 mg/kg bw

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

LD50, dermal, Rabbit, 5000 mg/kg bw

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

LD50, dermal, Rat, > 5000 mg/kg bw (OECD 402)

Zinc naphthenate, CAS: 84418-50-8

LD50, dermal, Rat, > 2000 mg/kg bw

Acute inhalational toxicity

Product

inhalative, Based on the available information, the classification criteria are not fulfilled.

Substance

Zinc naphthenate, CAS: 84418-50-8

LC50, inhalative, Rat, > 0.42 mg/l/4h

Serious eye damage/irritation

CAS 4259-15-8 (< 50%) Slight irritant effect - does not require labelling. Based on the available information, the classification criteria are not fulfilled.

Substance

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

Eye, Rabbit, OECD 405, corrosive

Zinc naphthenate, CAS: 84418-50-8

Eye, Rabbit, OECD 405, non-irritating

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Skin corrosion/irritation

Based on the available information, the classification criteria are not fulfilled.

Substance

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

dermal, Rabbit, OECD 404, non-irritating

Zinc naphthenate, CAS: 84418-50-8

dermal, Rabbit, OECD 404, non-irritating

Respiratory or skin sensitisation

Toxicological data of complete product are not available.

May produce an allergic reaction.

Calculation method

Substance

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

dermal, Guinea pig, OECD 406, non-sensitizing

Zinc naphthenate, CAS: 84418-50-8

dermal, Guinea pig, OECD 406, sensitising

Specific target organ toxicity — single exposure

Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure

Based on the available information, the classification criteria are not fulfilled.

Substance

Dilithium azelate, CAS: 38900-29-7

NOAEL, dermal, Rat, 230 µg/cm² (local effects), adverse effect observed

NOAEL, dermal, Rat, 298 mg/kg bw/day (systemic effects), no adverse effect observed

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

NOAEL, oral, Rat, 125 mg/kg bw/day

Zinc naphthenate, CAS: 84418-50-8

NOAEL, oral, Rat, 50 mg/kg bw/day

Mutagenicity

Based on the available information, the classification criteria are not fulfilled.

Substance

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

InVivo, OECD 474, negativ

InVitro, OECD 471, negativ

Zinc naphthenate, CAS: 84418-50-8

InVivo, OECD 474, negativ

InVitro, OECD 471, negativ

Reproduction toxicity

Based on the available information, the classification criteria are not fulfilled.

Substance

Dilithium azelate, CAS: 38900-29-7

NOAEL, Rat, 298,5 mg/kg bw/d (Effect on developmental toxicity, no adverse effect observed

NOAEL, Rat, 298,5 mg/kg bw/d (Effect on fertility), no adverse effect observed

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

NOAEL, Rat, 30 mg/kg bw/day, OECD 421

Zinc naphthenate, CAS: 84418-50-8

NOAEL, oral, Rat, 188 mg/kg bw/day

NOAEL, oral, Rat, 250 mg/kg bw/day

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CarcinogenicityBased on the available information, the classification criteria are not fulfilled.Aspiration hazardBased on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

11.2 Information on other hazards

Endocrine disrupting properties No information available.

Other information none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Dilithium azelate, CAS: 38900-29-7
LC50, (96h), fish, 100 mg/L
EC50, (72h), Algae, 23 mg/L
EC50, (48h), Crustacea, 100 mg/L
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate), CAS: 4259-15-8
EL50, (48h), Daphnia magna, 75 mg/l (OECD 202)
NOEC, (21d), Daphnia magna, 0,4 mg/l (OECD 211)
LL50, (96h), Rainbow trout, 4,4 mg/l (OECD 203)
ErL50, (72h), Scenedesmus subspicatus, 410 mg/l (OECD 201)
EbL50, (72h), Scenedesmus subspicatus, 240 mg/l (OECD 201)
2,6-di-tert-butyl-p-cresol, CAS: 128-37-0
LC50, (96h), Danio rerio, > 0,57 mg/l
EC50, (48h), Daphnia magna, > 0,17 mg/l
IC50, (72h), Desmodesmus subspicatus, > 0,42 mg/l
NOEC, (21d), Daphnia magna, > 0,39 mg/l
Zinc naphthenate, CAS: 84418-50-8
LC50, (4d), fish, 112 - 5620 μg/L
EC50, (4d), Algae, 18.1 - 80.5 mg/L
EC50, (48h), Invertebrates, 155 - 20 000 μg/L

12.2 Persistence and degradability

Behaviour in environment not determined

compartments

not determined

Biological degradability

12.3 Bioaccumulative potential

Behaviour in sewage plant

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

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12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

Ecological data of complete product are not available.

Do not discharge product unmonitored into the environment.

The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

In according to RoHS!

Coordinate disposal with the disposal contractor/authorities if necessary.

Waste no. (recommended)

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Packaging that cannot be cleaned should be disposed of as for product.

150110* packaging containing residues of or contaminated by hazardous substances Waste no. (recommended)

150102

150104

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to

ADR/RID

not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with

IMDG

not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to

ADR/RID

NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

IMDG

Marine transport in accordance with NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

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14.3 Transport hazard class(es)

Transport by land according to

ADR/RID

not applicable

Inland navigation (ADN)

not applicable

Marine transport in accordance with

IMDG

Air transport in accordance with IATA not applicable

14.4 Packing group

ADR/RID

Transport by land according to

not applicable

Inland navigation (ADN)

not applicable

Marine transport in accordance with not applicable

IMDG

Air transport in accordance with IATA not applicable

14.5 Environmental hazards

Transport by land according to

ADR/RID

nο

Inland navigation (ADN) no

Marine transport in accordance with no

IMDG

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS 2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006

(REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131;

(EU) 517/2014

TRANSPORT-REGULATIONS ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)

NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK

REACH; GB CLP.

- Observe employment restrictions

for people

- VOC (2010/75/CE) 0 %

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15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H319 Causes serious eye irritation.

H361d Suspected of damaging the unborn child.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

H318 Causes serious eye damage.

H302 Harmful if swallowed.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

ATE = acute toxicity estimate

CAS = Chemical Abstracts Service

CLP = Classification, Labelling and Packaging

DMEL = Derived Minimum Effect Level

DNEL = Derived No Effect Level

EC50 = Median effective concentration

ECB = European Chemicals Bureau

EEC = European Economic Community

EINECS = European Inventory of Existing Commercial Chemical Substances

EL50 = Median effective loading

ELINCS = European List of Notified Chemical Substances

EmS = Emergency Schedules

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC-Code = International Code for the Construction and Equipment of Ships carrying

Dangerous Chemicals in Bulk IC50 = Inhibition concentration, 50%

IMDG = International Maritime Code for Dangerous Goods

IUCLID = International Uniform ChemicaL Information Database

IVIS = In vitro irritation score

LC50 = Lethal concentration, 50%

LD50 = Median lethal dose

LC0 = lethal concentration, 0%

LOAEL = lowest-observed-adverse-effect level

LL50 = Median lethal loading

LQ = Limited Quantities

MARPOL = International Convention for the Prevention of Marine Pollution from Ships

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

PBT = Persistent, Bioaccumulative and Toxic substance

PNEC = Predicted No-Effect Concentration

REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals

STP = Sewage Treatment Plant

TLV®/TWA = Threshold limit value – time-weighted average TLV®STEL = Threshold limit value – short-time exposure limit

VOC = Volatile Organic Compounds

vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)

Modified position none

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