



SAFETY DATA SHEET

DSP GERMANY GMBH

Safety Data Sheet according to Reg. (EU) No 2015/830

Product name: MOLYKOTE™ Int CU-7439 Plus

Revision Date: 02.02.2019

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DSP GERMANY GMBH encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: MOLYKOTE™ Int CU-7439 Plus

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

Identified uses: Lubricants and lubricant additives

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

DSP GERMANY GMBH
HUGENOTTENALLEE 175
63263 NEU-ISENBURG
GERMANY

Customer Information Number:

800-3876-6838

SDSQuestion-EU@dupont.com

1.4 EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: +(49)- 69643508409

Local Emergency Contact: +(49)- 69643508409

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:

Short-term (acute) aquatic hazard - Category 1 - H400

Long-term (chronic) aquatic hazard - Category 1 - H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms



Signal word: WARNING

Hazard statements

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Inorganic and organic compounds, in mineral oil

3.2 Mixtures

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 64742-62-7 EC-No. 265-166-0 Index-No. 649-471-00-X	—	>= 70,0 - < 80,0 %	Residual oils (petroleum), solvent-dewaxed	Not classified
CASRN 7440-50-8 EC-No. 231-159-6 Index-No. 029-019-01-X	—	>= 10,0 - < 20,0 %	copper flakes (coated with aliphatic acid)	Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410
CASRN 28984-69-2 EC-No. 249-355-5 Index-No. —	—	>= 2,5 - < 10,0 %	2-Heptadecenyl- 4,4(5H)- oxazoledimethanol	Aquatic Chronic - 3 - H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary.

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

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water spray Alcohol-resistant foam Carbon dioxide (CO₂) Dry chemical

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Metal oxides Carbon oxides Nitrogen oxides (NO_x)

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health.

5.3 Advice for firefighters

Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing

water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions: Do not release the product to the aquatic environment above defined regulatory levels. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up: Wipe up or scrape up and contain for salvage or disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections:

See sections: 7, 8, 11, 12 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling: Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

7.2 Conditions for safe storage, including any incompatibilities: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.

Unsuitable materials for containers: None known.

Storage class according to TRGS 510: Combustible Solids

7.3 Specific end use(s): See the technical data sheet on this product for further information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
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Residual oils (petroleum), solvent-dewaxed	ACGIH	TWA Inhalable fraction	5 mg/m3
copper flakes (coated with aliphatic acid)	ACGIH	TWA	1 mg/m3 , Copper
	ACGIH	TWA	0,2 mg/m3 , Copper
	ACGIH	TWA Dust and mist	1 mg/m3 , Copper
	ACGIH	TWA Fumes	0,2 mg/m3 , Copper

Derived No Effect Level

copper flakes (coated with aliphatic acid)

Workers

<i>Acute systemic effects</i>		<i>Acute local effects</i>		<i>Long-term systemic effects</i>		<i>Long-term local effects</i>	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
273 mg/kg bw/day	20 mg/m3	n.a.	n.a.	137 mg/kg bw/day	n.a.	n.a.	n.a.

Consumers

<i>Acute systemic effects</i>			<i>Acute local effects</i>		<i>Long-term systemic effects</i>			<i>Long-term local effects</i>	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
137 mg/kg bw/day	20 mg/m3	n.a.	n.a.	n.a.	137 mg/kg bw/day	n.a.	0,041 mg/kg bw/day	n.a.	n.a.

Predicted No Effect Concentration

Residual oils (petroleum), solvent-dewaxed

Compartment	PNEC
Oral (Secondary Poisoning)	9,33 mg/kg food

copper flakes (coated with aliphatic acid)

Compartment	PNEC
Fresh water	7,8 µg/l
Marine water	5,2 µg/l
Sewage treatment plant	230 µg/l
Fresh water sediment	87 mg/kg
Marine sediment	676 mg/kg
Soil	65 mg/kg

8.2 Exposure controls

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin protection

Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C, meeting standard EN 14387).

Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Physical state	paste
Color	bronze
Odor	slight
Odor Threshold	No data available
pH	Not applicable

Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Tag closed cup >200 °C
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	0,99
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

9.2 Other information

Molecular weight	No data available
Particle size	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Not classified as a reactivity hazard.

10.2 Chemical stability: Stable under normal conditions.

10.3 Possibility of hazardous reactions: Can react with strong oxidizing agents.

10.4 Conditions to avoid: None known.

10.5 Incompatible materials: Oxidizing agents

10.6 Hazardous decomposition products: 1-Butene.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):

LD50, Rat, > 5 000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):

LD50, Rabbit, > 2 000 mg/kg Estimated.

Acute inhalation toxicity

Prolonged excessive exposure may cause adverse effects. Vapor may cause irritation of the upper respiratory tract (nose and throat).

As product: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Sensitization

For the major component(s):

Did not cause allergic skin reactions when tested in guinea pigs.

Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:

No relevant information found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Contains component(s) which have been reported to cause effects on the following organs in animals:
Liver.

Carcinogenicity

No relevant data found.

Teratogenicity

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies.

Mutagenicity

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:**Residual oils (petroleum), solvent-dewaxed****Acute inhalation toxicity**

LC50, Rat, male and female, 4 Hour, dust/mist, > 5,53 mg/l No deaths occurred at this concentration.

copper flakes (coated with aliphatic acid)**Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, > 5,11 mg/l OECD Test Guideline 436 No deaths occurred at this concentration.

2-Heptadecenyl-4,4(5H)-oxazolidimethanol**Acute inhalation toxicity**

The LC50 has not been determined.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

12.1 Toxicity**Residual oils (petroleum), solvent-dewaxed****Acute toxicity to fish**

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LL50, Pimephales promelas (fathead minnow), Static, 96 Hour, > 100 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

LL50, scud Gammarus sp., semi-static test, 48 Hour, > 10 000 mg/l, OECD Test Guideline 202 or Equivalent

EL50, water flea Daphnia magna, Static, 48 Hour, > 10 000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

NOEC, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), Static, 72 Hour, Growth rate inhibition, > 100 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

Based on data from similar materials
NOEC, 10 min, > 1,93 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna, semi-static test, 21 d, number of offspring, 10 mg/l

copper flakes (coated with aliphatic acid)**Acute toxicity to fish**

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

LC50, 96 Hour, 8,1 µg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, 0,792 mg/l

Acute toxicity to algae/aquatic plants

EC50, Chlorella vulgaris (Fresh water algae), 72 Hour, 0,333 mg/l, OECD Test Guideline 201

Chronic toxicity to fish

NOEC, Oncorhynchus mykiss (rainbow trout), 1 µg/l

2-Heptadecenyl-4,4(5H)-oxazoledimethanol**Acute toxicity to fish**

Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species).

LC50, Leuciscus idus (Golden orfe), static test, 96 Hour, 2 100 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to algae/aquatic plants

ErC50, alga Scenedesmus sp., 72 Hour, Growth rate inhibition, 56 - 67 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

EC50, Bacteria, 0,5 Hour, Respiration rates., > 10 000 mg/l, OECD 209 Test

12.2 Persistence and degradability**Residual oils (petroleum), solvent-dewaxed**

Biodegradability: Based on information for a similar material: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

copper flakes (coated with aliphatic acid)

Biodegradability: Biodegradability is not applicable to inorganic substances.

2-Heptadecenyl-4,4(5H)-oxazoledimethanol

Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Fail

Biodegradation: 32 %

Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

12.3 Bioaccumulative potential

Residual oils (petroleum), solvent-dewaxed

Bioaccumulation: No relevant data found.

copper flakes (coated with aliphatic acid)

Bioaccumulation: No relevant data found.

2-Heptadecenyl-4,4(5H)-oxazolidimethanol

Bioaccumulation: The following information is based on limited data and/or screening studies. Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

Partition coefficient: n-octanol/water(log Pow): 7,46 Estimated.

Bioconcentration factor (BCF): 30 Fish

12.4 Mobility in soil

Residual oils (petroleum), solvent-dewaxed

No relevant data found.

copper flakes (coated with aliphatic acid)

No relevant data found.

2-Heptadecenyl-4,4(5H)-oxazolidimethanol

Potential for mobility in soil is low (Koc between 500 and 2000).

Partition coefficient (Koc): 1300 Estimated.

12.5 Results of PBT and vPvB assessment

Residual oils (petroleum), solvent-dewaxed

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

copper flakes (coated with aliphatic acid)

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

2-Heptadecenyl-4,4(5H)-oxazolidimethanol

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Other adverse effects

Residual oils (petroleum), solvent-dewaxed

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

copper flakes (coated with aliphatic acid)

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

2-Heptadecenyl-4,4(5H)-oxazolidimethanol

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not dump into any sewers, on the ground, or into any body of water. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

SECTION 14: TRANSPORT INFORMATION

Classification for ROAD and Rail transport (ADR/RID):

14.1	UN number	UN 3077
14.2	UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Copper metal powder)
14.3	Transport hazard class(es)	9
14.4	Packing group	III
14.5	Environmental hazards	Copper metal powder
14.6	Special precautions for user	Hazard Identification Number: 90

Classification for SEA transport (IMO-IMDG):

14.1	UN number	UN 3077
14.2	UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Copper metal powder)
14.3	Transport hazard class(es)	9
14.4	Packing group	III
14.5	Environmental hazards	Copper metal powder
14.6	Special precautions for user	EmS: F-A, S-F
14.7	Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

14.1	UN number	UN 3077
14.2	UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.(Copper metal powder)
14.3	Transport hazard class(es)	9
14.4	Packing group	III
14.5	Environmental hazards	Not applicable

14.6 Special precautions for user No data available.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**REACH Regulation (EC) No 1907/2006**

This product contains only components that have been either pre-registered, registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Listed in Regulation: ENVIRONMENTAL HAZARDS

Number in Regulation: E1

100 t

200 t

Wassergefährdungsklasse (Deutschland)

WGK 1: slightly hazardous to water

15.2 Chemical safety assessment

Not applicable

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008

Aquatic Acute - 1 - H400 - Calculation method
Aquatic Chronic - 1 - H410 - Calculation method

Revision

Identification Number: 2155397 / A752 / Issue Date: 02.02.2019 / Version: 2.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
TWA	8-hour, time-weighted average
Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DSP GERMANY GMBH urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

DE