

# Safety Data Sheet CMR-116/CMR-116.M Clear Coat for Digitalprint Films II (high-gloss/matt)

according to Regulation (EU) 2015/830

02.06.20

Version: V-2020-001 HR 1001

#### **SECTION 1**

# Identification of the substance/mixture and of the company

#### 1.1 Product identifier

CMR-116/CMR-116.M

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

Last Revision:

Relevant identified uses:

Protective film for digital prints on tarpaulins and foils

# 1.3 Details of the supplier of the safety data sheet

Manufacturer/Distributor CMR Coatings GmbH

 Address/POB
 Wilhelmstr. 8

 IVR/ZIP/Place
 D-32602 Vlotho

 E-Mail
 info@cmr-coatings.de

 Telephone
 +49 (0) 57 33 - 96 35 - 260

 Fax
 +49 (0) 57 33 - 96 35 - 263

 Department of MSDS
 info@cmr-coatings.de

#### 1.4 Emergency telephone number

+49 (0) 57 33 - 96 35 - 260 (Monday - Friday, 8:00 - 16:00)

#### **SECTION 2 Hazards identification**

#### 2.1 Classification of the substance or mixture

Skin irrit. 2, H315 (skin corrosion / irritation, category 2, H315) Eye Irrit. 2, H319 (serious eye damage / irritation, category 2, H319)

For the full text of the hazard statements listed in this section, see section 16.

#### 2.2 Label elements



Code: GHS07

Signal word: Warning



#### **Hazard statements**

H315 Causes skin irritation.

# **Precautionary statements**

P264: Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P362 + P364: Take off contaminated clothing and wash before reuse.

#### **Further hazard statements**

EUH208: Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and

2-methyl-2H-isothiazol-3-one (3:1). 1,2-benzisothiazol-3(2H)-one

May produce an allergic reaction.

# Additional information for labelling

EUH210 Safety data sheet available on request.

#### 2.3 Other hazards

The results of the PBT and vPvB assessment can be found in subsection 12.5.

# **SECTION 3 Composition/information on ingredients**

# 3.1 Substances

This product is a mixture.

### 3.2 Mixtures

Aqueous plastic dispersion with additives.

# Composition / information on ingredients

Composition / informatio	n on ingredients	
EC-No.	REACH-No.	
CAS-No.	Designation	Portion
INDEX-No.	Classification	
231-545-4	01-2119379499-16-0000	
112945-52-5, 231-545-4	Silicon dioxide; synthetic amorphous silicon dioxide	4-5%
205-788-1	01-2119489461-32	
151-21-3	Sodium dodecyl sulphate	1,24%
	Acute Tox. 4, H302; Skin Irrit.2, H315; Eye Dam. 1, H318;	
	STOT SE 3; H335	
67674-67-3	3-(Polyoxyethylene)propylheptamethyltrisiloxane	0,83%
	Acute Tox. 4 H332; Eye Dam. 1 H318; Aquatic Chronic 2; H411	
203-542-8	01-2119492298-24-XXXX	
108-01-0	2-dimethylaminoethanol	0,50%
603-047-00-0	Flam. Liq. 3, H226; Acute Tox. 4, H302; Acute Tox. 4, H312;	
	Acute Tox. 3, H331; Skin Corr. 1B, H314	

SDB-CMR-116-V-2020-001 2 / 14 Version: 02.06.2020 Druck/Print: 11.08.2020



220-120-9		
2634-33-5	1,2-benzisothiazol-3(2H)-one	<0,01%
613-088-00-6	Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318;	
	Skin Sens. 1, H317; Aquatic Acute 1, H400 (M=1)	
	Aquatic Chronic 2; H411	
	Specific concentration limit (SCL):	
	Skin Sens. 1; H317 >= 0,05%	
55965-84-9	Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and	<0,0015%
613-167-00-5	2-methyl-2H-isothiazol-3-one (3:1)	
	Acute Tox. 3, H301; Acute Tox. 2, H310; Acute Tox. 2, H330	
	Skin Corr. 1B; H314, Skin Irrit.2, H315; Eye Dam. 1, H318	
	Eye Irrit. 2, H319; Skin Sens. 1, H317;	
	Aquatic Acute 1, H400 (M=100); Aquatic Chronic 1, H410 (M=10)	
	Specific concentration limit (SCL):	
	Skin Corr. 1B; H314 >= 0,6% / Skin Irrit.2; H315	
	0,06% < C < 0,6% / Eye Irrit. 2, H319 0,06% < C < 0,6%	
	Skin Sens. 1; H317 >= 0,0015%	

The wording of the classification codes is in section 16.

# **SECTION 4 First aid measures**

# 4.1 Description of first aid measures

General advice Consult a physician. Show this safety data sheet to the doctor

in attendance.

**If inhaled** Remove the person to fresh air, in case of indisposition obtain

medical advice.

Skin contact Take off contaminated clothing. Wash off affected skin with plenty of

water using soap in case of indisposition obtain medical advice.

**Eye contact** Spreading the eyelids, rinse thoroughly under running water, see an

eye specialist.

**If swallowed** Never fuse anything through the mouth of an unconscious person.

Do not induce vomiting if swallowed - see a physician.

Rinse out mouth with water.

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

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SDB-CMR-116-V-2020-001 3 / 14 Version: 02.06.2020 Druck/Print: 11.08.2020



# **SECTION 5 Firefighting measures**

# 5.1 Extinguishing media

#### Suitable extinguishing media

Water spray, CO2, dry chemical, foam.

#### Unsuitable extinguishing media

Water jet.

#### 5.2 Special hazards arising from the substance or mixture

Thermal decomposition to carbon monoxide, carbon dioxide, silicon oxides, hydrogen cyanide (hydrocyanic acid) and organic fission products (e.g. formaldehyde).

#### 5.3 Advice for firefighters

Tightly closing fireproof clothing and oxygen apparatus.

#### **SECTION 6** Accidental release measures

# 6.1 Personal precautions, protective equipment and emergency procedures

See section 8 "Exposures controls/personal protection".

# 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow the product to enter waters. Discharge into the environment must be avoided.

### 6.3 Methods and material for containment and cleaning up

Pick up with an inert absorbable material and dispose according to local regulations, unless otherwise usable.

# 6.4 Reference to other sections

For disposal, see section 13.

# **SECTION 7 Handling and storage**

#### 7.1 Precautions for safe handling

Keep container cool and tightly closed, take care of sufficient ventilation.

# 7.2 Conditions for safe storage, including any incompatibilities

Keep away container from strong oxidising agents. Cool endangered containers with sprinkling water. Keep away from frost.

#### 7.3 Specific end uses

No data available.

SDB-CMR-116-V-2020-001 4 / 14 Version: 02.06.2020 Druck/Print: 11.08.2020



#### **SECTION 8**

# **Exposure controls/personal protection**

# 8.1 Control parameters

Components with workplace control parameters (2000/39/EC)

none

# Components with workplace control parameters (TRGS 900 Germany)

Silicon dioxide; synthetic amorphous silicon dioxide

CAS-No.: 112945-52-5, 7631-86-9 / EC-No.: 231-545-4

AGW

(Inhalable fraction): 4 mg/m³

Remarks

DFG, 2, Y

Polyethylene glycol		
CAS-No.: 25322-68-3		
AGW		
(Inhalable fraction):	1.000 mg/m <sup>3</sup>	
Peak limit	8 (II)	
Remarks	*2)	DFG, Y

<sup>\*2):</sup> Senate Commission for the Examination of Harmful Working Materials of the DFG (MAK Commission), There is no need to fear a risk of teratogenic damage if the workplace limit value

#### DNFI:

2-dimethylaminoethanol	
EC-No. 203-542-8 / CAS-No. 108-01-0 / INDEX-No. 60	3-047-00-0
Worker - long term - dermal, systemic effect 1,04 mg/kg	
Worker - long term - inhalative, systemic effect	7,4 mg/m³

# PNEC:

2-dimethylaminoethanol		
EC-No. 203-542-8 / CAS-No. 108-01-0 / INDEX-No. 603-047-00-0		
Aquatic, freshwater	0,0661 mg/L	
Aquatic, marine water	0,00661 mg/L	
Periodic release	0,0661 mg/L	
Sediment, freshwater	0,0529 mg/kg	
Soil	0,0177 mg/kg	
Sewage treatment plant (STI	10 mg/L	

# 8.2 Exposure controls

# **Appropriate engineering controls**

Ensure good ventilation. Avoid contact with the skin and the eyes. When using do not eat, drink or smoke; preventive skin protection.

SDB-CMR-116-V-2020-001 5 / 14 Version: 02.06.2020 Druck/Print: 11.08.2020



#### Personal protective equipment

Respiratory protection In case of exceeding the permitted exposure limit in closed rooms

use a self-contained breathing apparatus.

Recommended filter type: A, K

**Eye protection** Tightly sealed goggles recommended.

Wear face protection if there is a risk of splashing.

**Skin protection** Wear suitable protective gloves. Observe the information provided by the

manufacturer in regard to permeability and breakthrough time as well as the special conditions at the workplace (mechanical stress, contact duration). Protective gloves

should be replaced at the first signs of wear.

Material:Butyl rubberBreakthrough time:>= 480minGlove thickness:0,5mm

Material: NBR (nitrile rubber)

Breakthrough time: >= 480min
Glove thickness: 0.4mm

**Body Protection** Solvent-resistant protective clothing made of rubber or plastic is recommended.

Wear a rubber apron if there is a risk of splashing.

# 8.3 Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Do not allow the product to enter waters.

Discharge into the environment must be avoided.

# **SECTION 9 Physical and chemical properties**

# 9.1 Information on basic physical and chemical properties

Appearance:

Aggregate state: liquid
Colour: milky white

Odour: slight individual odour

Melting point/freezing point: Not available.

Initial boiling point/boiling range:  $100 \, ^{\circ}\text{C}$ Flash point:  $> 100 \, ^{\circ}\text{C}$ 

Flammability:
Ignition temperature:
Auto flammability:
Oxidising properties:
Explosive properties:
Not applicable.

upper Not applicable.

SDB-CMR-116-V-2020-001 6 / 14 Version: 02.06.2020 Druck/Print: 11.08.2020



Water solubility:  $(T = 20 \, ^{\circ}C)$  Dispersible in each ratio.

Vapour pressure:  $(T = 20 \, ^{\circ}C)$  Not available. Vapour density (air = 1): Not available.

Partition coefficient (n-octanol/water):

Not available.

Not available.

Solids content 35 - 40 %

Density:  $(T = 20 \, ^{\circ}\text{C})$  1.05 g/cm³ pH value:  $(T = 20 \, ^{\circ}\text{C})$  7,5 - 8,5

Viscosity - kin. (4 mm DIN flow cup):  $(T = 20 \, ^{\circ}\text{C})$  12 - 18 s CMR-116 Viscosity - kin. (4 mm DIN flow cup):  $(T = 20 \, ^{\circ}\text{C})$  15 - 20 s CMR-116.M

Separation of solvent: Not applicable.

Volatiles/VOC: < 1 %

Evaporation rate: Not available.

#### 9.2 Other information

No data available.

# **SECTION 10 Stability and reactivity**

#### 10.1 Reactivity

No data available.

# 10.2 Chemical stability

2-dimethylaminoethanol is released during application and drying.

# 10.3 Possibility of hazardous reactions

No data available.

#### 10.4 Conditions to avoid

Frost, heat

# 10.5 Incompatible materials

Strong oxidizing agents, strong acids, strong reducing agents

# 10.6 Hazardous decomposition products

In case of fire only, see section 5.2.

# **SECTION 11 Toxicological information**

# 11.1 Information on toxicological effects

# **Acute toxicity**

**Mixture** 

No data available.

# Components

Sodium	dodecy	l sulp	hate
--------	--------	--------	------

EC-No. 205-788-1 / CAS-No	. 151-21-3
inhalative, rat, LC0	>0,975 mg/l
(dust/ mist 4h)	

SDB-CMR-116-V-2020-001 7 / 14 Version: 02.06.2020 Druck/Print: 11.08.2020



3-(Polyoxyethylene)propylheptamethyltrisiloxane			
CAS-No. 67674-67-3			
oral, rat, LD50 > 5050 mg/kg			
dermal, rabbit, LD50	> 2000 - 5000 mg/kg		
inhalative, rabbit, LC50	2,3 mg/l		
(dust/ mist 4h)			

2 dimath	ylaminoethanol
z-anneur	viaiiiiioeiliaiioi

EC-No. 203-542-8 / CAS-No. 108-01-0 / INDEX-No. 603-047-00-0		
oral, rat, LD50	1183 mg/kg	
dermal, rabbit, LD50	1219 mg/kg	
inhalative, rabbit, LC50	6,1 mg/L	
(vapour 4h)		

2-benzisothiazol-3(2H)-one
----------------------------

.,=		
EC-No. 220-120-9 / CAS-No. 2634-33-5 / Index-No. 613-088-00-6		
oral, rat, LD50	1193 mg/kg	
dermal, rat, LD50	4115 mg/kg	

# Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

CAS-No. 55965-84-9 / Index-No. 613-167-00-5		
oral, rat, LD50	66 mg/kg	
dermal, rat, LD50	141 mg/kg	
inhalativ, LC50	0,17 mg/l	
(dust and mist, 4h)		

# Skin corrosion/irritation

No data available.

# Serious eye damage/irritation

# **Mixture**

Causes serious eye irritation.

# Components

3-(Polyoxyethylene)propylheptamethyltrisiloxane	
---	--

CAS-No. 67674-67-3		
Species:	rabbit	
Result:	Irreversible damage to the eyes	

# Respiratory or skin sensitisation

# **Mixture**

May cause an allergic skin reaction

# Germ cell mutagenicity

No data available.

# Carcinogenicity

**Mixture** 

No data available.



#### Components

#### 2-dimethylaminoethanol

2-dimethylaminoethanol can form nitrosamines with nitrosating agents (e.g. nitrites, nitrogen oxides) under special conditions. Nitrosamines have been shown to be carcinogenic in animal experiments.

# Reproductive toxicity

No data available.

# **Specific Target Organ Toxicity - single exposure**

#### **Mixture**

No data available.

#### Components

#### Sodium dodecyl sulphate

EC-No. 205-788-1 / CAS-No. 151-21-3

Can irritate the respiratory tract.

#### **Specific Target Organ Toxicity - repeated exposure**

#### **Mixture**

No data available.

#### Components

#### Sodium dodecyl sulphate

EC-No. 205-788-1 / CAS-No. 151-21-3

May cause abdominal discomfort or diarrhea.

# **Aspiration hazard**

No data available.

# Other information

No data available.

# 11.2 Additional information

No data available.

# **SECTION 12 Ecological information**

# 12.1 Toxicity

# 2-dimethylaminoethanol

Fish toxicity, Leucisus idus (Ide), LC50:

146,6 mg/l (96h)

Daphnia toxicity, Daphnia magna (Big water flea); EC50:

Algae toxicity, Scenedesmus subspicatus, EC50:

Bacteria toxicity, activated sludge, municipal, EC20:

146,6 mg/l (96h)

98,4 mg/l (48h)

66,1 mg/l (72h)

>1000 mg/l (30min)

3-(Polyoxyethylene)propylheptamethyltrisiloxane

Fish toxicity, LC50: >1 - 10 mg/l (96h)

Remark: Based on test data from similar materials

Daphnia toxicity, EC50, Daphnia sp. (Water flea): >1 - 10 mg/l (48h)

Remark: Based on test data from similar materials

Toxic to aquatic life with long-lasting effects

# Sodium dodecyl sulphate

Fish toxicity, Oncorhynchus mykiss (rainbow trout), LC50: 4,6 mg/l (96h)
Fish toxicity, Pimephales promelas (fathead minnow), LC50: 29 mg/l (96h)

SDB-CMR-116-V-2020-001 9 / 14 Version: 02.06.2020 Druck/Print: 11.08.2020



Daphnia toxicity, Daphnia magna (Big water flea), EC50: 6,2-49,4 mg/l (48h) Daphnia toxicity, Mysidopsis bahia, LC50: 6,1 - 18,3 mg/l (96h) Algae toxicity, Pseudokirchneriella subcapitata (green algae), EC50:

117 mg/l (96h)

Bacteria toxicity, activated sludge, municipal, EC50: 130 -170 mg/l (30min)

1,2-benzisothiazol-3(2H)-one

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 2,18 mg/l (96h) Daphnia toxicity, EC50, Daphnia magna: 2,94 mg/l (48h) Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 0,11 mg/l (72h) NOEC (Algae), Skeletonema costatum: 0,027 mg/l (72h)

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and

2-methyl-2H-isothiazol-3-one (3:1)

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 0,188 mg/l (96h) Daphnia toxicity, EC50, Daphnia magna: 0,126 mg/l (48h) Algae toxicity, EC50, Selenastrum capricornutum: 0,027 mg/l (72h) NOEC (Fish), Oncorhynchus mykiss (Rainbow trout): 0,098 mg/l (28d) NOEC (Fish), Daphnia magna(Big water flea): 0,004 mg/l (21d) NOEC (Algae), Pseudokirchneriella subcapitata: 0,0012 mg/l (72h) Bacteria toxicity, EC50: 7,92 mg/l (3h)

# 12.2 Persistence and degradability

#### Sodium dodecyl sulphate

Result: 85% (exposure duration: 14 d) (OECD 301 C)

Easily biodegradable.

Result: 95% (exposure duration: 28 d) (OECD 301 B)

Easily biodegradable.

Biological oxygen demand (BOD)

5 d Incubation period: Biochemical oxygen demand (BSB) 57 - 97%

# 2-dimethylaminoethanol

Easily biodegradable (according to OECD criteria)

# 1,2-benzisothiazol-3(2H)-one

Easily biodegradable

# Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and

2-methyl-2H-isothiazol-3-one (3:1)

Easily biodegradable

# 12.3 Bioaccumulative potential

# Sodium dodecyl sulphate

The bioconcentration potential is low (BCF <100 or log Pow <3). Partition coefficient: n-octanol / water (log Pow): 1.60 measured

Bioconcentration factor (BCF): 70 (estimated)

# 12.4 Mobility in soil

# Sodium dodecyl sulphate

The material is probably relatively immobile in the soil (pOC> 5000).

Due to the very low Henry constant, the volatility from natural waters or moist earth is very low and is not expected to be an important distribution route. Partition coefficient (Koc):> 5000 (estimated)

# 12.5 Results of PBT and vPvB assessment

According to the available statements the criteria are not fulfilled for the classification as a PBT or vPvB.

SDB-CMR-116-V-2020-001 10 / 14 Version: 02.06.2020 Druck/Print: 11.08.2020



#### 12.6 Other adverse effects

Spilling product harms waters by high consumption of oxygen and general pollution impact.

# **SECTION 13 Disposal considerations**

#### 13.1 Waste treatment methods

No dangerous waste according to the European waste catalogue (2008/98/EG). If recycling is not possible, wastes must be eliminated according to the provisions of the local authorities. Do not dispose by the sewage.

# List of proposed waste codes/waste designations in accordance with EWC

080111\* Waste paint and varnish containing organic solvents or other dangerous substances \*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

#### Appropriate disposal / Package

#### Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

# **SECTION 14 Transport information**

14.1 UN number

Not applicable.

14.2 Proper shipping name

ADR/RID / IMDG / IATA

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

# Labelling of environmentally dangerous substances

ADR/RID / IMDG / IATA Not applicable.

Marine Pollutant Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.



# **SECTION 15 Regulatory information**

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

#### Provisions of the EU

Denomination in Annex I of the Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

Not applicable.

Regulation (EU) No 528/2012 for the marketing of biocidal products

Not applicable.

Regulation (EC) No 648/2004 (Regulation concerning detergents)

Not applicable.

Directive 1999/13/EC for the limitation of emissions of volatile organic compounds Not applicable.

Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding Not applicable.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Not applicable.

Directive 94/33/EC on the protection of young people at work Not applicable.

# **German regulations**

Technical instructions on maintaining air purity

(TA Luft) Not applicable.

Water hazard class WGK 1 (low hazardous to waters)
Storage class according to TRGS 510 LGK 12 (non-combustible liquids)

# Other regulations, restrictions and prohibition ordinances

Not applicable.

### 15.2 Chemical safety assessment

This mixture was not subject to a safety assessment.

#### **SECTION 16 Other information**

# The wording of the classification codes of section 3

Acute Tox. 2; H310	Acute toxicity (dermal)	Fatal in contact with skin
Acute Tox. 2; H330	Acute toxicity (inhalative)	Fatal if inhaled.
Acute Tox. 3; H301	Acute toxicity (oral)	Toxic if swallowed.
Acute Tox. 3; H331	Acute toxicity (inhalative)	Toxic if inhaled.



Acute Tox. 4; H302 Acute toxicity (oral) Harmful if swallowed.

Acute Tox. 4; H312 Acute toxicity (dermal) Harmful in contact with skin.

Acute Tox. 4; H332 Acute toxicity (inhalative) Harmful if inhaled.

Aquatic Acute 1; H400 Hazardous to the aquatic environment Very toxic to aquatic life.

Aquatic Chronic 1; H410 Hazardous to the aquatic environment Very toxic to aquatic life

with long-lasting effects

Aquatic Chronic 2; H411 Hazardous to the aquatic environment Toxic to aquatic life with

long-lasting effects.

Eye Dam. 1; H318 Serious eye damage/ Causes serious eye damage.

Eye irritation

Eye Irrit. 2; H319 Serious eye damage/ Causes serious eye irritation.

Eye irritation

Flam. Liq. 3; H226 Flammable liquid Flammable liquid and vapour.

Skin Corr. 1B; H314 Skin corrosion/ Causes severe skin burns and eye damage.

irritation

Skin Irrit. 2; H315 Skin corrosion/ Causes skin irritation.

irritation

Skin Sens. 1; H317 Skin sensitisation May cause an allergic skin reaction.

STOT SE 3; H335 Specific target organ toxicity May cause respiratory irritation.

(single exposure)

The classification codes only apply to the pure substances and do not declare necessarily the classification of the mixture. The classification and the labelling of the mixture are specified in section 2.

# Abbreviations

(II) Resorptive substances

ADR European Agreement concerning the International Carriage of Dangerous Goods by

Road

AGW Occupational exposure limit value.

BCF Bioconcentration factor

BGW Permitted biological limit value for work place.

BOD Biological oxygen demand
BSB Biochemical oxygen demand
CAS Chemical Abstracts Service

DFG German Research Council (Committee on Occupational Exposure Limits).

DNEL Derived no-effect level

EC50 Half maximal effective concentration

EC-No. Registration number of the "European Inventory of Existing Chemical Substances"

(EINECS)

ErC50 Average inhibitory concentration of the growth rate

EWG European Economic Community

EU European Union.

H Risk of resorption by skin.

IATA International Air Transport Association

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

Chemicals in Bulk

IMDG International Maritime Code for Dangerous Goods

LC0 Concentration of a substance up to which there is no lethal effect on a test

population

LC20 Lethal concentration for 20% of a test population

SDB-CMR-116-V-2020-001 13 / 14 Version: 02.06.2020 Druck/Print: 11.08.2020



LC50 Lethal concentration for 50% of a test population

LD50 Lethal dose for 50% of a test population (mean lethal dose)

LGK Storage class.

MAK Maximum workplace concentration

MARPOL International Convention for the Prevention of Marine Pollution from Ships

NO(A)EC No observed (adverse) effect concentration

OECD Organisation for Economic Co-operation and Development

PBT Persistent, bioaccumulative and toxic.
PNEC Predicted no effect concentration

QSAR Quantitative Structure-Activity Relationship

REACH Regulation (EC) No. 1907/2006 of the European Parliament and of the Council

regarding the registration, evaluation, authorisation and restriction of chemicals

RID Convention concerning International Carriage by Rail

SCL Specific concentration limit

STEL EU workplace limit values for a reference period of 15 minutes

(Short-term exposure limit)

TRGS Technical regulation for dangerous substances.

TWA EU workplace limit values for a reference period of 8 hours

(Time-weighted-average)

UN United Nations

vPvB Very persistent and very bioaccumulative.

WGK Water hazard class.

Y No harm to the unborn child, if values of AGW and BGW are kept.

# **Additional information**

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in chapter 1.

It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.

We exclude each liability for damages, that can appear in improper intercourse or contact with these chemicals.

This security data sheet replaces all previous editions. Validly from edition date.

Date of last revision / Version: 02.06.2020 V-2020-001