

Safety Data Sheet

CMR-435/CMR-435.M 1C-Protection-Film (high-gloss/matt)

CMR-435.S 1C-Protection-Film "hand use"

according to Regulation (EU) 2015/830

Last Revision:

02.06.20



Version:

V-2020-001

HR 1015 [D]

SECTION 1

Identification of the substance/mixture and of the company

1.1 Product identifier

CMR-435/CMR-435.S/CMR-435.M

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

Relevant identified uses:

1C Protective film for 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

The mixture is not classified according to the CLP regulation.

2.2 Label elements

none

Code: -

Signal word: -

Hazard statements

none

Precautionary statements

none

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

EC-No. CAS-No. INDEX-No.	REACH-No. Designation Classification	Portion
200-664-3 67-68-5	01-2119431362-50-0001 Dimethyl sulfoxide	6,00%
67674-67-3	3-(Polyoxyethylene)propylheptamethyltrisiloxane Acute Tox. 4 H332; Eye Dam. 1 H318; Aquatic Chronic 2; H411	0,80%
204-469-4 121-44-8 612-004-00-5	01-2119475467-26-XXXX Triethylamine Flam. Liq. 2; H225 / Acute Tox. 4; H302 / Acute Tox. 3; H311 / Acute Tox. 3; H331 / Skin Corr. 1A; H314 / Eye Dam. 1; H318 / STOT SE 3; H335 Specific concentration limit (SCL): STOT SE 3 H335 >=1%	0,36%
55965-84-9 613-167-00-5	Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 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%	< 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 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.

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, sulfur oxides (SO_x), silicon oxides. Formaldehyde, acrylic monomers

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.

SECTION 8

Exposure controls/personal protection

8.1 Control parameters

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

Triethylamine		
EG-No. 204-469-4 / CAS-No. 121-44-8 / Index-No. 612-004-00-5		
TWA:	8,4 mg/m ³	2 ppm
STEL:	12,6 mg/m ³	3 ppm
Remark: Skin	Can be absorbed through the skin.	

Components with workplace control parameters (TRGS 900 Germany)

Dimethyl sulfoxide		
EG-No. 200-664-3 / CAS-No. 67-68-5		
AGW	160 mg/m ³	50 ml/m ³
Peak limit	2 (l)	
Remarks	DFG, Z, H	

Triethylamine		
EG-No. 204-469-4 / CAS-No. 121-44-8 / Index-No. 612-004-00-5		
AGW	4,2 mg/mg ³	1 ppm
Peak limit	2(l)	
Remarks	*1)	DFG, EU, H, (6)

* 1): Senate Commission for the Testing of Harmful Working Materials of the German Research Foundation (MAK Commission). European Union. (The EU has set an air limit: Deviations in value and peak limitation are possible.) Skin-resorptive. Reaction with nitrosating agents can lead to the formation of the corresponding carcinogenic N-nitrosoamines.

Components with biological limit values (TRGS 903 Germany)

none

DNEL:

Dimethyl sulfoxide	
EG-No. 200-664-3 / CAS-No. 67-68-5	
Worker - long term - dermal, systemic effect	200 mg/kg bw/d
Worker - long term - inhalative, local effect	265 mg/m ³
Consumer - long term - oral, systemic effect	60 mg/kg bw/d
Consumer - long term - dermal, systemic effect	100 mg/kg bw/d
Consumer - long term - inhalative, local effect	47 mg/m ³

Triethylamine	
EG-No. 204-469-4 / CAS-No. 121-44-8 / Index-No. 612-004-00-5	
Worker - long term - inhalative, systemic effect	8,4 mg/m ³
Worker - long term - inhalative, local effect	8,4 mg/m ³
Worker - acute - inhalative, systemic effect	12,6 mg/m ³
Worker - acute - inhalative, local effect	12,6 mg/m ³
Worker - long term - dermal, systemic effect	12,1 mg/kg bw/d

PNEC:

Dimethyl sulfoxide	
EG-No. 200-664-3 / CAS-No. 67-68-5	
Aquatic, freshwater	17 mg/L
Aquatic, marine water	1,7 mg/L
Sewage treatment plant (STP) (sporadic release)	11 mg/L
Sediment (based on dryweight)	16,4 mg/kg
Soil (based on dryweight)	3,02 mg/kg
Oral (Food)	7000 mg/kg

Triethylamine	
EG-No. 204-469-4 / CAS-No. 121-44-8 / Index-No. 612-004-00-5	
Aquatic, freshwater	0,11 mg/l
Aquatic, marine water	0,011 mg/l
Sediment, freshwater	1,575 mg/kg
Sediment, marine water	0,158 mg/kg
Sewage treatment plant (STP)	100 mg/l
Soil	0,25 mg/kg

8.2 Exposure controls

Appropriate engineering controls

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

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

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 rubber

Breakthrough time:

>= 480min

Glove thickness:

0,5mm

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:

yellowish

Odour:

slight individual odour

Melting point/freezing point:

Not available.

Initial boiling point/boiling range:

100 °C

Flash point:

> 100 °C

Flammability:

Not applicable.

Ignition temperature:

Not applicable.

Auto flammability:

Not applicable.

Oxidising properties:

Not applicable.

Explosive properties:

Not applicable.

Explosion limits:

lower

Not applicable.

upper

Not applicable.

Water solubility:

(T = 20 °C)

Dispersible in each ratio.

Vapour pressure:	(T = 20 °C)	Not available.	
Vapour density (air = 1):		Not available.	
Partition coefficient (n-octanol/water):		Not available.	
Solids content		36 - 40 %	
Density:	(T = 20 °C)	1.05 g/cm ³	
pH value:	(T = 20 °C)	7.0 - 8.0	
Viscosity - kin. (4 mm DIN flow cup):	(T = 20 °C)	40 - 50 s	CMR-435
Viscosity - kin. (4 mm DIN flow cup):	(T = 20 °C)	15 - 20 s	CMR-435.S
Viscosity - kin. (4 mm DIN flow cup):	(T = 20 °C)	20 - 25 s	CMR-435.M
Separation of solvent:		Not applicable.	
Volatiles/VOC:		approx. 6.5 %	
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

Dimethyl sulfoxide and triethylamine are 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

Dimethyl sulfoxide	
EG-No. 200-664-3 / CAS-No. 67-68-5	
oral, rat, LD50	28300 mg/kg
dermal, rat, LD50	40000 mg/kg
inhalativ, LC50 (vapour, 4h)	> 5330 mg/l

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

Triethylamine	
EG-No. 204-469-4 / CAS-No. 121-44-8 / Index-No. 612-004-00-5	
oral, rat, LD50	730 mg/kg
dermal, rabbit, LD50	580 mg/kg
inhalative, rat, LC50 (vapour, 4h)	7,22 mg/l

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 (dust and mist, 4h)	0,17 mg/l

Skin corrosion/irritation

No data available.

Serious eye damage/irritation

Mixture

No data available.

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

Triethylamine

Triethylamine 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

Relevant components:

Triethylamine
EG-No. 204-469-4 / CAS-No. 121-44-8 / Index-No. 612-004-00-5
Classification of the substance: Category 3
SCL: Category 3: 1%

Specific Target Organ Toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Other information

No data available.

11.2 Additional information

Triethylamine

Causes liver and kidney damage in experimental animals.

SECTION 12 Ecological information

12.1 Toxicity

Dimethyl sulfoxide

Fish toxicity, LC50, Danio rerio (Zebrafish): > 25000 mg/l (96h)
 Daphnia toxicity, Daphnia magna; EC50: 24600 mg/l (48h)
 Bacteria toxicity, activated sludge, EC50: 10 - 100 mg/l (0,5h)

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

Triethylamine

Fish toxicity, LC50, Oryzias latipes (Japanese rice fish): 24 mg/l (96h)
 Daphnia toxicity, LC50, Ceriodaphnia spec: 17 mg/l (48h)
 Algae toxicity, EC50, Desmodus Desmodesmus subspicatus: 24,8 mg/l (96h)
 NOEC (Fish), Oncorhynchus mykiss (Rainbow trout): 3,2 mg/l (60d)
 NOEC (Daphnia), Daphnia magna (Big water flea): 11 mg/l (21d)
 Bacteria toxicity, EC50, Pseudomonas putida: 95 mg/l (17h)

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

Dimethyl sulfoxide

Result: 31% (exposure duration: 28 d) (OECD 301 D)
not readily biodegradable

Triethylamine

readily biodegradable (according to OECD criteria)

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

Readily biodegradable

12.3 Bioaccumulative potential

Dimethyl sulfoxide

Result: 3.16 BCF (QSAR)
Due to the distribution coefficient n-octanol / water, an accumulation in organisms is not expected.

12.4 Mobility in soil

Dimethyl sulfoxide

Result: 0,64 Log Koc

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.

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; H311	Acute toxicity (dermal)	Toxic in contact with skin
Acute Tox. 3; H331	Acute toxicity (inhalative)	Toxic if inhaled.
Acute Tox. 4; H302	Acute toxicity (oral)	Harmful if swallowed.
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/ Eye irritation	Causes serious eye damage.
Eye Irrit. 2; H319	Serious eye damage/ Eye irritation	Causes serious eye irritation.
Flam. Liq. 2; H225	Flammable liquid	Highly flammable liquid and vapour
Skin Corr. 1A; H314	Skin corrosion/ irritation	Causes severe skin burns and eye damage.
Skin Corr. 1B; H314	Skin corrosion/ irritation	Causes severe skin burns and eye damage.
Skin Irrit. 2; H315	Skin corrosion/ irritation	Causes skin irritation.

Skin Sens. 1; H317	Skin sensitisation	May cause an allergic skin reaction.
STOT SE 3; H335	Specific target organ toxicity (single exposure)	May cause respiratory irritation.

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

(6)	Reaction with nitrosating agents can lead to the formation of the corresponding carcinogenic N-nitrosoamines.
(I)	Substances for which the local effect determines the limit value or substances that sensitize the respiratory tract
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AGW	Occupational exposure limit value.
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging of substances and mixtures
DFG	German Research Council (Committee on Occupational Exposure Limits).
DNEL	Derived no-effect level
EC50	Half maximal effective concentration
EC	European Community
EC-No.	Registration number of the "European Inventory of Existing Chemical Substances" (EINECS)
EU	European Union.
EWG	European Economic Community
H	Risk of absorption through the 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
LC50	Lethal concentration for 50% of a test population
LD50	Lethal dose for 50% of a test population (mean lethal dose)
LGK	Storage class.
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
P-Satz	
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.
Z	A risk of foetal damage cannot be ruled out even if the AGW and BGW are observed

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.

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