

Safety Data Sheet

CMR-613.W Crosslinker

according to Regulation (EU) 2015/830

Last Revision: 02.06.20  Version: V-2020-001
HR 1000

SECTION 1

Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

CMR-613.W

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

Relevant identified uses:

Crosslinker

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

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

This mixture is classified as hazardous according to regulation (EC) 1272/2008 [CLP].

STOT SE 3 / H335	Specific target organ toxicity (single exposure)	May cause respiratory irritation.
Skin Sens. 1 / H317	respiratory or skin sensitisation	May cause an allergic skin reaction.
Flam. Liq. 3 / H226	flammable liquids	Flammable liquid and vapour.

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

2.2 Label elements



Code: GHS02 GHS07

Signal word: **Warning**

Hazard components for labelling

Hexamethylene-1,6-diisocyanate homopolymer

Isophorone homopolymer

Hazard statements

H226 Flammable liquid and vapour.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P280 Wear protective gloves and eye/face protection.
 P370 + P378 In case of fire: Use Extinguishing powder or sand to extinguish.
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P403 + P235 Store in a well-ventilated place. Keep cool.

Further hazard statements

none

Additional information for labelling

EUH204 Contains isocyanates. May produce an allergic reaction.

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

Isocyanate hardener solution

Composition / information on ingredients

EC-No.	REACH-No.	Portion
CAS-No.	Designation	
INDEX-No.	Classification	
931-274-8	01-2119488934-20-0000	50-70%
28182-81-2	Hexamethylene-1,6-diisocyanate homopolymer Acute Tox. 4 H332 / STOT SE 3 H335 / Skin Sens. 1 H317	

203-933-3 112-07-2 607-038-00-2	01-2119475112-47 2-butoxyethyl acetate Acute Tox. 4 H332 / Acute Tox. 4 H312	25-35%
931-213-3 53880-05-0	01-2119488734-24 Isophorone homopolymer STOT SE 3 H335 / Skin Sens. 1 H317	12,5-15%
204-658-1 123-86-4 607-025-00-1	01-2119485493-29 n-butyl acetate Flam. Liq. 3 H226 / STOT SE 3 H336	5-7%

The wording of the classification codes is in section 16.

SECTION 4 First aid measures

4.1 Description of first aid measures

General advice	In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.
If inhaled	Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.
Skin contact	Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.
If swallowed	If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

In all cases of doubt, or when symptoms persist, seek medical advice.

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

Alcohol resistant foam, carbon dioxide, Powder, spray mist, (water).

Unsuitable extinguishing media

Strong water jet.

5.2 Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3 Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways. Treat runoff as hazardous.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours. See protective measures under point 7 and 8.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see chapter 13).

Use appropriate container to avoid environmental contamination. Fouled surfaces must be immediately cleaned with suitable solvents, Useable as such (flammable): water 45 vol.% ethanol or i-propanol 50 vol. % ammonia solution (density= 0.88) 5 vol.%

Alternative (non-flammable): sodium carbonate 5 vol.% water 95 vol.%.

Take up spilled residuals with the same agent and leave them for a few days in unclosed containers until there is no further reaction. Then, close the containers and dispose of them in accordance with the regulations for waste removal (refer to chapter 13).

6.4 Reference to other sections

Observe protective provisions (see chapter 7 and 8).

SECTION 7 Handling and storage

People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.

People who spray this preparation should have regular pulmonary function tests.

7.1 Precautions for safe handling

Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard.

Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Be careful when opening used containers (excess pressure). Precautionary measures should be taken in order to reduce strain from humidity or water: CO₂ is formed which may produce excess pressure in closed containers. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to chapter 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Precautions against fire and explosion:

Vapours are heavier than air. Vapours form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRBS 2153)".

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Keep away from amines, alcohols and water.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

Storage class

(VCI concept for the joint storage of chemicals):

3

7.3 Specific end uses

Observe technical data sheet. Observe instructions for use.

SECTION 8

Exposure controls/personal protection

People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation. People who spray this preparation should have regular pulmonary function tests.

8.1 Control parameters

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

2-butoxyethyl acetate		
INDEX-No. 607-038-00-2 / EG-No. 203-933-3 / CAS-No. 112-07-2		
TWA:	133 mg/m ³	20 ppm
STEL:	333 mg/m ³	50 ppm
Remark: Skin	May be absorbed through the skin.	

n-butyl acetate		
INDEX-No. 607-025-00-1 / EG-No. 204-658-1 / CAS-No. 123-86-4		
TWA:	241 mg/m ³	50 ppm
STEL:	723 mg/m ³	150 ppm
Remark: Skin	May be absorbed through the skin.	

Components with workplace control parameters (TRGS 900 Germany)

2-butoxyethyl acetate		
INDEX-No. 607-038-00-2 / EG-No. 203-933-3 / CAS-No. 112-07-2		
AGW	65 mg/m ²	10 ppm
Peak limit	2 (l)	
Remarks	EU, DFG, H, Y, 11	

n-butyl acetate		
INDEX-No. 607-025-00-1 / EG-No. 204-658-1 / CAS-No. 123-86-4		
AGW	300 mg/m ²	62 ppm
Peak limit	2 (l)	
Remarks	AGS, Y	

Components with biological limit values (TRGS 903 Germany)

2-butoxyethyl acetate	
INDEX-No. 607-038-00-2 / EG-No. 203-933-3 / CAS-No. 112-07-2	
Parameter:	Butoxyacetic acid (after hydrolysis)
BGW:	150 mg/g creatinine
Specimen:	U
Sampling time:	b, c
Definition of reasons:	11/2016 DFG

DNEL:

none

PNEC:

none

8.2 Exposure controls

Appropriate engineering controls

Provide good ventilation. This can be achieved with local or room suction. When spraying, wear self-contained breathing apparatus. For other tasks a suitable respiratory system must be used, if local and room suction is not sufficient for keeping aerosol and solvent vapour concentration below the exposure limit values. (refer to Personal protection equipment.)

Personal protective equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Eye protection

Wear closely fitting protective glasses in case of splashes.

Hand protection

For prolonged or repeated handling the following gloves must be used:

Material: impermeable material

Breakthrough time: ≥ 480 min

Glove thickness: $> 0,4$ mm

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles DIN EN 374.

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Body Protection

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

Protective Measures

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains. See chapter 7. No additional measures necessary.

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:		clear	
Odour:		characteristic	
Melting point/freezing point:		Not available.	
Initial boiling point/boiling range:		127 °C	n-butyl acetate
Flash point:		27 °C	DIN 53213
Flammability:		Not applicable	
Ignition temperature:		280 °C	2-butoxyethyl acetate
Auto flammability:		Not available.	
Oxidising properties:		Not available.	
Explosive properties:		Not available.	
Explosion limits:	lower	1,6 Vol-%	
	upper	8,4 Vol-%	
Water solubility:	(T = 20 °C)	insoluble	
Vapour pressure:	(T = 20 °C)	0,7 mbar	
Vapour density (air = 1):		Not available.	
Partition coefficient (n-octanol/water):		Not available.	
Solids content		65-70 weight-%	
Density:	(T = 20 °C)	1,07 g/cm ³	
pH value:	(T = 20 °C)	Not applicable	
Viscosity (Dynamic):	(T = 25 °C)	1400 mPas	
Separation of solvent:		< 3 %	ADR/ RID
Content of solvents:		Not available.	
Organic solvents:		30-35 weight-%	
Water:		0 weight-%	
Evaporation rate:		Not available.	

Method:

9.2 Other information

No data available.

SECTION 10 Stability and reactivity

10.1 Reactivity

Reacts with water, forming carbon dioxide, producing bursting hazard in closed containers due to build-up of pressure.

10.2 Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

10.3 Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.
 Reacts with water, forming carbon dioxide, producing bursting hazard in closed containers due to build-up of pressure.

10.4 Conditions to avoid

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5 Incompatible materials

No data available.

10.6 Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Mixture

No data available.

Components

No data available.

Skin corrosion/irritation

Mixture

No data available.

Components

No data available.

Serious eye damage/irritation

Mixture

No data available.

Components

No data available.

Respiratory or skin sensitisation

Mixture

No data available.

Components

No data available.

Germ cell mutagenicity

Mixture

No data available.

Components

No data available.

Carcinogenicity

Mixture

No data available.

Components

No data available.

Reproductive toxicity

Mixture

No data available.

Components

No data available.

Specific Target Organ Toxicity - single exposure

Mixture

Toxicological data are not available.

Components

Toxicological data are not available.

Specific Target Organ Toxicity - repeated exposure

Mixture

Toxicological data are not available.

Components

Toxicological data are not available.

Aspiration hazard

Mixture

Toxicological data are not available.

Components

Toxicological data are not available.

Other information

No data available.

11.2 Additional information

Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are:

headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness.

Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

Because of the isocyanate components' properties of this and with consideration of similar preparations the following applies: Preparation may cause acute irritation and/or sensitization of airways which lead to tightness in thorax, short-breath and asthmatic complaints. After sensitization even concentrations below the exposure limit values may cause asthma. Repeated inhaling can lead to permanent illness of the respiratory tract.

Overall Assessment on CMR properties

The ingredients in this preparation do not meet the criteria for classification as CMR category 1 or 2 according to 67/548/EEC.

Remark

There is no information available on the preparation itself . The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified according to the toxicological dangers. See chapters 2 and 15 for details.

SECTION 12 Ecological information

Overall evaluation

There is no information available on the preparation itself .
Do not allow to enter into surface water or drains.

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

According to the available statements the criteria are not fulfilled for the classification

12.6 Other adverse effects

No data available.

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product

Recommendation

Do not allow to enter into surface water or drains. Handle contaminated packages in the same way as the substance itself. This material and its container must be disposed of in a safe way.

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

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

Land transport (ADR/RID): Paint

Sea transport (IMDG): Paint

Air transport (ICAO-TI / IATA-DGR): Paint

14.3 Transport hazard class(es)

3

14.4 Packing group

III

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

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Additional information

Land transport (ADR/RID)

tunnel restriction code D/E

Sea transport (IMDG)

EmS-No. F-E, S-E

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

EU legislation

Directive 2010/75/EU on industrial emissions

VOC-value (in g/L): 353

National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

15.2 Chemical safety assessment

For the following substances of this preparation a chemical safety assessment has been carried out:

EC-No. CAS-No. INDEX-No.	REACH-No. Designation
931-274-8 28182-81-2	01-2119488934-20-0000 Hexamethylene-1,6-diisocyanate homopolymer
203-933-3 112-07-2 607-038-00-2	01-2119475112-47 2-butoxyethyl acetate
204-658-1 123-86-4	01-2119485493-29 n-butyl acetate

SECTION 16 Other information

The wording of the classification codes of section 3

Acute Tox. 4; H312	Acute toxicity (dermal)	Harmful in contact with skin.
Acute Tox. 4; H332	Acute toxicity (inhalative)	Harmful if inhaled.
Flam. Liq. 3; H226	Flammable liquid	Flammable liquid and vapour.
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.
STOT SE 3; H336	Specific target organ toxicity (single exposure)	May cause drowsiness or dizziness.

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

(11)	Sum of vapor and aerosols.
(12)	Usually the Occupational exposure limit applies only for the monomers. For the evaluation of oligomers and polymers see TRGS 430 "Isocyanates"
(I)	Substances for which the local effect determines the limit value or substances that sensitize the respiratory tract
= =	Instantaneous value
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AGS	Committee for hazardous substances.
AGW	Occupational exposure limit value.
b	End of exposure or end of shift
c	Long-term exposure: at the end of the shift after several previous shifts
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging of substances and mixtures
CMR	Carcinogenic Mutagenic Reprotoxic
DFG	German Research Council (Committee on Occupational Exposure Limits).
DNEL	Derived no-effect level
EAKV	European Waste Catalogue Directive
EC	European Community
EC-No.	Registration number of the "European Inventory of Existing Chemical Substances" (EINECS)
EU	European Union.
EWG	European Economic Community
GHS	Globally Harmonized System of Classification, Labelling and Packaging of Chemicals
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
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
PBT	Persistent, bioaccumulative and toxic.
PNEC	predicted no effect concentration
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
Sa	In the case of substances marked with "Sa", the induction of an allergy (sensitization) and the triggering of an allergic reaction in the airways cannot be ruled out, even if the AGW (including the short-term value) is complied with - unless a limit value from the point of view of Freedom from symptoms has been established. The marking "(Sa)" must then be selected
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)
U	Urine
UN	United Nations
VCI	Association of the chemical industry
VOC	Volatile organic compounds
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.

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