

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

1 Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** 8329TCM-A**Other Means of Identification:** Thermally Conductive Epoxy Adhesive**Related Part Number:**

8329TCM-A, 8329TCM-A-6ML, 8329TCM-A-50ML, 8329TCM-A-200ML

UFI: ATE0-C0S2-J00S-W38T**1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.**Application of the substance / the mixture**

Thermally conductive adhesive for bonding and thermal management

1.3 Details of the supplier of the safety data sheet M.G. Chemicals Ltd.**Manufacturer/Supplier:**

MG Chemicals Ltd. (Head Office)
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA
+(1) 800-340-0772

MG Chemicals
Heame House, 23 Bliston Street
Sedgely Dudley DY3 1JA.
UNITED KINGDOM
+(44) 1663 362888 sales@mgchemicals.com

MG Chemicalst Ltd.
Level 2, Vision Exchange, Building Territorials Street,
Zone 1, Central Business, District,
Birkirkara CBD 1070,
MALTA

Further information obtainable from: sds@mgchemicals.com**1.4 Emergency telephone number:**

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

Verisk 3E (Access code: 335388), +(44) 20 3514787

Other emergency telephone numbers: +(0) 800 680 0425

For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents)

USA or CANADA-Call Verisk 3E at +1-866-519-4752 or +1-760-476-3962 (Service access code: 335388)

For emergencies involving the transport of dangerous goods; 24/7 service

CANADA-Call CANUTEC collect at +1-613-996-6666 or *666 on cellular phones

GB

(Contd. on page 2)

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 1)

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

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

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

- **Hazard pictograms**



GHS07 GHS09

- **Signal word** Warning

- **Hazard-determining components of labelling:**

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

phenol, polymer with formaldehyde, glycidyl ether

1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane

oxirane, mono[(C12-14-alkyloxy)methyl] derivs

- **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

- **Precautionary statements**

P102 Keep out of reach of children.

P273 Avoid release to the environment.

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

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P333+P317 If skin irritation or rash occurs: Get medical help.

- **Additional information:**

EUH208: Contains reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700), 1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane, oxirane, mono[(C12-14-alkyloxy)methyl] derivs. May produce an allergic reaction.

(Contd. on page 3)

GB

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 2)


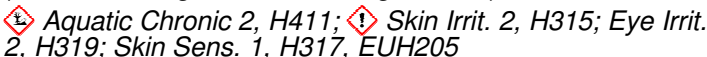

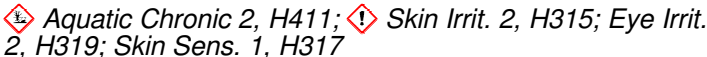


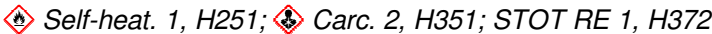


- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Determination of endocrine-disrupting properties**
Endocrine Disruptor substance $\geq 0.1\%$ = none

3 Composition/information on ingredients

3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 1344-28-1	aluminium oxide	35–45%
EINECS: 215-691-6 substance with a Community workplace exposure limit		
CAS: 1314-13-2	zinc oxide	≥ 25 – $\leq 30\%$
EINECS: 215-222-5  Aquatic Acute 1, H400; Aquatic Chronic 1, H410		
CAS: 25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin	17.0%
NLP: 500-033-5	(number average molecular weight ≤ 700)	
 Aquatic Chronic 2, H411;  Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317, EUH205		
Specific concentration limits: Eye Irrit. 2; H319: C $\geq 5\%$ Skin Irrit. 2; H315: C $\geq 5\%$		
CAS: 28064-14-4	phenol, polymer with formaldehyde, glycidyl ether	5.0%
 Aquatic Chronic 2, H411;  Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317		
CAS: 17557-23-2	1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane	3.0%
EINECS: 241-536-7  Skin Irrit. 2, H315; Skin Sens. 1, H317		
CAS: 1333-86-4	Carbon black	0.7%
EINECS: 215-609-9  Self-heat. 1, H251;  Carc. 2, H351; STOT RE 1, H372		
CAS: 68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs	0.5%
EINECS: 271-846-8  Skin Irrit. 2, H315; Skin Sens. 1, H317		

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· 4.1 Description of first aid measures

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

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

No further relevant information available.

· 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

GB

(Contd. on page 4)

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 3)

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
Vapors are heavier than air. Vapors may travel to sources of ignition near the ground. They can cause flash fire or ignite explosively.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Not required.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
- 1344-28-1 aluminium oxide**
WEL Long-term value: 10* 4** mg/m³
 *inhalable dust **respirable dust
- 1333-86-4 Carbon black**
WEL Short-term value: 7 mg/m³
 Long-term value: 3.5 mg/m³
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.

(Contd. on page 5)

GB

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 4)

- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - Use suitable respiratory protective device in case of insufficient ventilation.
- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye/face protection**

Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Physical state**

Solid

- **Colour:**

According to product specification

- **Odour:**

Characteristic

- **Odour threshold:**

Not determined.

- **Melting point/freezing point:**

Undetermined.

- **Boiling point or initial boiling point and boiling range**

60 °C (1344-28-1 aluminium oxide)

- **Flammability**

Not determined.

- **Lower and upper explosion limit**

- **Lower:**

Not determined.

- **Upper:**

Not determined.

- **Flash point:**

149 °C

- **Decomposition temperature:**

Not determined.

- **pH**

Not applicable.

(Contd. on page 6)

GB

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 5)

· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water:	Soluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density	
· Density at 20 °C:	2.48 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· Particle characteristics	
See section 3.	
· 9.2 Other information	
· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Solids content:	100.0 %
· Change in condition	
· Evaporation rate	Not applicable.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.

(Contd. on page 7)

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 6)

- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
 - **Acute toxicity** Based on available data, the classification criteria are not met.
 - **LD/LC50 values relevant for classification:**
-
- 1314-13-2 zinc oxide**
Oral LD50 >5,000 mg/kg (rat)
- 1333-86-4 Carbon black**
Oral LD50 10,000 mg/kg (rat)
- **Skin corrosion/irritation** Causes skin irritation.
 - **Serious eye damage/irritation** Causes serious eye irritation.
 - **Respiratory or skin sensitisation** May cause an allergic skin reaction.
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
 - **STOT-single exposure** Based on available data, the classification criteria are not met.
 - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
 - **Endocrine disrupting properties**

None of the ingredients is listed.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms

GB

(Contd. on page 8)

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 7)

13 Disposal considerations· **13.1 Waste treatment methods**· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP4 Irritant - skin irritation and eye damage

HP13 Sensitising

HP14 Ecotoxic

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information· **14.1 UN number or ID number**

· **ADR, IMDG, IATA**

UN3077

· **14.2 UN proper shipping name**

· **ADR**

NOT REGULATED by Ground ADR Special Provision 375 for sizes 5kg or less.

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide, reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))

· **IMDG**

NOT IMDG-regulated for sea freight according to 2.10.2.7 for sizes up to 5 kg.

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide, reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)), MARINE POLLUTANT

· **IATA**

NOT REGULATED by Air IATA Special Provision A197 for sizes 5kg or less.

Environmentally hazardous substance, solid, n.o.s. (zinc oxide, reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))

· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**



· **Class**

9 Miscellaneous dangerous substances and articles.

· **Label**

9

· **14.4 Packing group**

· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**

· **Marine pollutant:**

Symbol (fish and tree)

(Contd. on page 9)

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 8)

· Special marking (ADR):	Symbol (fish and tree)
· Special marking (IATA):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
· Hazard identification number (Kemler code):	90
· EMS Number:	F-A,S-F
· Stowage Category	A
· Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	

· ADR	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category	3
· Tunnel restriction code	(-)

· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC OXIDE, REACTION PRODUCT: BISPHENOL-A-(EPICHLORHYDRIN) EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT ≤ 700)), 9, III

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors**
None of the ingredients is listed.
- **Regulated poisons**
None of the ingredients is listed.
- **Reportable explosives precursors**
None of the ingredients is listed.
- **Reportable poisons**
None of the ingredients is listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category E1** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t

(Contd. on page 10)

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 9)

- **Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t**
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
None of the ingredients is listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
None of the ingredients is listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**
None of the ingredients is listed.
- **Regulation (EC) No 273/2004 on drug precursors**
None of the ingredients is listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
None of the ingredients is listed.
- **15.2 Chemical safety assessment:**
A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H251 Self-heating: may catch fire.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H351 Suspected of causing cancer.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- EUH205 EUH205: Contains epoxy constituents. May produce an allergic reaction.

- **Department issuing SDS:** Product safety department.

- **Contact:** sds@mgchemicals.com

- **Date of previous version:** 16.01.2024

· **Abbreviations and acronyms:**

- ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Self-heat. 1: Self-heating substances and mixtures – Category 1
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- Carc. 2: Carcinogenicity – Category 2
- STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

(Contd. on page 11)

according to 1907/2006/EC, Article 31

Printing date 13.02.2024

Version number 5

Revision: 13.02.2024

Trade name: 8329TCM-A

(Contd. of page 10)

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

. * **Data compared to the previous version altered.**

GB

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 1)



GHS05 corrosion

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



GHS09 environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

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

· **2.2 Label elements**· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms**

GHS05



GHS07



GHS08



GHS09

· **Signal word** Danger· **Hazard-determining components of labelling:**

nonylphenol

4,4'-methylenebis(cyclohexylamine)

3,6-diazaoctanethylenediamin

· **Hazard statements**

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P102 Keep out of reach of children.

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

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

· **Additional information:**

Contains 3,6-diazaoctanethylenediamin. May produce an allergic reaction.

Safety data sheet available on request.

· **2.3 Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

(Contd. on page 3)

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 2)

· **Determination of endocrine-disrupting properties**

25154-52-3 nonylphenol: List I

3 Composition/information on ingredients· **3.2 Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 1344-28-1	aluminium oxide	35–45%
EINECS: 215-691-6	substance with a Community workplace exposure limit	
CAS: 1314-13-2	zinc oxide	30–40%
EINECS: 215-222-5	⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
CAS: 25154-52-3	nonylphenol	10.0%
EINECS: 246-672-0	⚠ Repr. 2, H361fd; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	
CAS: 1761-71-3	4,4'-methylenebis(cyclohexylamine)	2.0%
EINECS: 217-168-8	⚠ Repr. 2, H361; STOT SE 2, H371; STOT RE 2, H373; ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H302	
CAS: 112-24-3	3,6-diazaoctanethylenediamin	0.5%
EINECS: 203-950-6	⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	
CAS: 1333-86-4	Carbon black	0.4%
EINECS: 215-609-9	⚠ Self-heat. 1, H251; ⚠ Carc. 2, H351; STOT RE 1, H372	

· **SVHC**

25154-52-3 nonylphenol

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.**4 First aid measures**· **4.1 Description of first aid measures**· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.· **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

GB

(Contd. on page 4)

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 3)

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
Vapors are heavier than air. Vapors may travel to sources of ignition near the ground. They can cause flash fire or ignite explosively.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **7.1 Precautions for safe handling**
Thorough dedusting.
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
- 1344-28-1 aluminium oxide**
WEL Long-term value: 10* 4** mg/m³
*inhalable dust **respirable dust
- 1333-86-4 Carbon black**
WEL Short-term value: 7 mg/m³
Long-term value: 3.5 mg/m³

(Contd. on page 5)

GB

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 4)

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Store protective clothing separately.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye/face protection**
 - Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Solid
- **Colour:** According to product specification
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** Undetermined.
- **Boiling point or initial boiling point and boiling range** 60 °C (1344-28-1 aluminium oxide)
- **Flammability** Not determined.
- **Lower and upper explosion limit**
- **Lower:** Not determined.

(Contd. on page 6)

GB

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 5)

· Upper:	Not determined.
· Flash point:	222 °C
· Auto-ignition temperature:	370 °C (25154-52-3 nonylphenol)
· Decomposition temperature:	Not determined.
· pH	Not applicable.
· Viscosity:	
· Kinematic viscosity	Not applicable.
· Dynamic:	Not applicable.
· Solubility	
· water:	Soluble.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	>0 hPa (25154-52-3 nonylphenol)
· Density and/or relative density	
· Density at 20 °C:	2.38 g/cm ³
· Relative density	Not determined.
· Vapour density	Not applicable.
· Particle characteristics	
See section 3.	
· 9.2 Other information	
· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Solids content:	100.0 %
· Change in condition	
· Evaporation rate	Not applicable.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

GB

(Contd. on page 7)

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 6)

10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
 - **Acute toxicity** Based on available data, the classification criteria are not met.
 - **LD/LC50 values relevant for classification:**
-
- ATE (Acute Toxicity Estimates)**
- Oral LD50 9,830 mg/kg
- 1314-13-2 zinc oxide**
- Oral LD50 >5,000 mg/kg (rat)
- 25154-52-3 nonylphenol**
- Oral LD50 1,620 mg/kg (rat)
- 112-24-3 3,6-diazaoctanethylenediamin**
- Oral LD50 2,500 mg/kg (rat)
- Dermal LD50 805 mg/kg (rabbit)
- 1333-86-4 Carbon black**
- Oral LD50 10,000 mg/kg (rat)
- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
 - **Serious eye damage/irritation**
Based on available data, the classification criteria are not met.
 - **Respiratory or skin sensitisation** May cause an allergic skin reaction.
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Suspected of damaging fertility or the unborn child.
 - **STOT-single exposure** Based on available data, the classification criteria are not met.
 - **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
 - **Endocrine disrupting properties**
-
- 25154-52-3 nonylphenol: List I

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

(Contd. on page 8)

GB

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 7)

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Endocrine disrupting properties**

For information on endocrine disrupting properties see section 11.

- **12.7 Other adverse effects**

- **Additional ecological information:**

- **General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

13 Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

HP8 Corrosive

HP10 Toxic for reproduction

HP14 Ecotoxic

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- **14.1 UN number or ID number**

- **ADR, IMDG, IATA**

UN3263

- **14.2 UN proper shipping name**

- **ADR**

3263 CORROSIVE SOLID, BASIC, ORGANIC,
N. O. S. (nonylphenol, 4,4'-
methylenebis(cyclohexylamine)),
ENVIRONMENTALLY HAZARDOUS

- **IMDG**

CORROSIVE SOLID, BASIC, ORGANIC,
N. O. S. (nonylphenol, 4,4'-
methylenebis(cyclohexylamine))

- **IATA**

Corrosive solid, basic, organic, n.o.s.
(nonylphenol, 4,4'-
methylenebis(cyclohexylamine))

- **14.3 Transport hazard class(es)**

- **ADR**



- **Class**

8 Corrosive substances.

(Contd. on page 9)

according to 1907/2006/EC, Article 31


Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 8)

· Label	8
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· IMDG, IATA	
	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group	
· ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances: nonylphenol
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	(SGG18) Alkalis
· Stowage Category	B
· Segregation Code	SG35 Stow "separated from" SGG1-acids
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
<hr/>	
· ADR	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category	2
· Tunnel restriction code	E
<hr/>	
· IMDG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (NONYLPHENOL, 4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)), 8, II, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors**
None of the ingredients is listed.
- **Regulated poisons**
None of the ingredients is listed.

(Contd. on page 10)

GB

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 9)

· Reportable explosives precursors*None of the ingredients is listed.***· Reportable poisons***None of the ingredients is listed.***· Directive 2012/18/EU****· Named dangerous substances - ANNEX I** *None of the ingredients is listed.***· Seveso category E1** *Hazardous to the Aquatic Environment***· Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t**· Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t**· REGULATION (EC) No 1907/2006 ANNEX XVII** *Conditions of restriction: 46a***· Regulation (EU) No 649/2012***25154-52-3 nonylphenol: Annex I Part 1**Annex I Part 2***· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II***None of the ingredients is listed.***· REGULATION (EU) 2019/1148****· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))***None of the ingredients is listed.***· Annex II - REPORTABLE EXPLOSIVES PRECURSORS***None of the ingredients is listed.***· Regulation (EC) No 273/2004 on drug precursors***None of the ingredients is listed.***· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors***None of the ingredients is listed.***· National regulations:****· Substances of very high concern (SVHC) according to UK REACH***25154-52-3 nonylphenol***· 15.2 Chemical safety assessment:***A Chemical Safety Assessment has not been carried out.***16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases*H251 Self-heating: may catch fire.**H302 Harmful if swallowed.**H312 Harmful in contact with skin.**H314 Causes severe skin burns and eye damage.**H317 May cause an allergic skin reaction.**H318 Causes serious eye damage.**H351 Suspected of causing cancer.**H361 Suspected of damaging fertility or the unborn child.**H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.**H371 May cause damage to organs.**H372 Causes damage to organs through prolonged or repeated exposure.**H373 May cause damage to organs through prolonged or repeated exposure.*

(Contd. on page 11)

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 4

Revision: 06.11.2023

Trade name: 8329TCM-Part B

(Contd. of page 10)

*H400 Very toxic to aquatic life.**H410 Very toxic to aquatic life with long lasting effects.**H411 Toxic to aquatic life with long lasting effects.**H412 Harmful to aquatic life with long lasting effects.*· **Department issuing SDS:** Product safety department.· **Contact:** sds@mgchemicals.com· **Date of previous version:** 21.07.2023· **Abbreviations and acronyms:***ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Self-heat. 1: Self-heating substances and mixtures – Category 1**Acute Tox. 4: Acute toxicity – Category 4**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Skin Sens. 1: Skin sensitisation – Category 1**Carc. 2: Carcinogenicity – Category 2**Repr. 2: Reproductive toxicity – Category 2**Repr. 2: Reproductive toxicity – Category 2**STOT SE 2: Specific target organ toxicity (single exposure) – Category 2**STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*· *** Data compared to the previous version altered.**