

# SAFETY DATA SHEET



according to Regulation (EC) No 1907/2006 (REACH) as amended

## Metal cleaner ZM

Creation date 10. January 2014  
Revision date 05. July 2018 Version 2.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1. Product identifier** Metal cleaner ZM  
Substance / mixture mixture
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**  
mixture's intended use Cleaning agent.  
Disapproved uses of mixture The product should not be used in ways other than those referred in Section 1.
- 1.3. Details of the supplier of the safety data sheet**
- Manufacturer**
- |                            |   |
|----------------------------|---|
| Name or trade name         | AG TermoPasty Grzegorz Gąsowski         |
| Address                    | Kolejowa 33 E, Sokoły, 18-218<br>Poland |
| Identification number (ID) | 200133730                               |
| VAT Reg No                 | 9661767714                              |
| Phone                      | 862741342                               |
| E-mail                     | biuro@termopasty.pl                     |
| Web address                | www.termopasty.pl                       |
- Competent person responsible for the safety data sheet**
- |        |                                 |
|--------|---------------------------------|
| Name   | AG TermoPasty Grzegorz Gąsowski |
| E-mail | biuro@termopasty.pl             |
- 1.4. Emergency telephone number**  
National Health Service (NHS) 111  
National poisoning information centre Scotland, NHS 24: 111

### SECTION 2: Hazards identification

- 2.1. Substance or mixture classification**  
**Classification of the mixture in accordance with Regulation (EC) No 1272/2008**  
The mixture is classified as dangerous.

Aerosol 1, H222, H229  
Asp. Tox. 1, H304  
Skin Irrit. 2, H315  
STOT SE 3, H336  
Repr. 2, H361  
STOT RE 2, H373  
Aquatic Chronic 2, H411

Full text of all classifications and hazard statements is given in the section 16.

#### Most serious adverse physico-chemical effects

Extremely flammable aerosol. Pressurised container: May burst if heated.

#### Most serious adverse effects on human health and the environment

Causes skin irritation. May be fatal if swallowed and enters airways. Suspected of damaging fertility or the unborn child. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

- 2.2. Label elements**  
**Hazard pictogram**



#### Signal word

Danger

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### Hazardous substances

[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .]  
C7-C-9, n-alkanes

### Hazard statements

H222 Extremely flammable aerosol.  
H229 Pressurised container: May burst if heated.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
H361 Suspected of damaging fertility or the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

### Precautionary statements

P201 Obtain special instructions before use.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P211 Do not spray on an open flame or other ignition source.  
P251 Do not pierce or burn, even after use.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 IF SWALLOWED: Immediately call a doctor.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P314 Get medical advice/attention if you feel unwell.  
P331 Do NOT induce vomiting.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

### 2.3. Other hazards

Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Mixture of substances and additives specified below.

#### Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note.
Index: 601-003-00-5 CAS: 74-98-6 EC: 200-827-9	propane	26,25	Flam. Gas 1, H220	3
Index: 649-328-00-1 CAS: 64742-49-0 EC: 265-151-9	[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .]	<25	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Repr. 2, H361 STOT RE 2, H373 Aquatic Chronic 2, H411	2, 4, 5
EC: 920-750-0	C7-C-9, n-alkanes	<25	Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411	
Index: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7	butane	24,94	Flam. Gas 1, H220	1, 3, 4

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### Notes

- Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- Note P: The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 (Table 3.1) or the S-phrases (2-)23-24-62 (Table 3.2) shall apply. This note applies only to certain complex oil-derived substances in Part 3.
- When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:

Press. Gas (Comp.)  
Press. Gas (Liq.)  
Press. Gas (Ref. Liq.)  
Press. Gas (Diss.)

Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

- The use of the substance is restricted by Annex XVII of REACH Regulation.
- Fulfilled Note P

Full text of all classifications and hazard statements is given in the section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

#### Inhalation

Terminate the exposure immediately; move the affected person to fresh air. Take care of your own safety, do not let the affected person walk! Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

#### Skin contact

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible.

#### Eye contact

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible.

#### Ingestion

DO NOT INDUCE VOMITING! If the affected person vomits, make sure to prevent inhalation of the vomit (as there is a danger of lung damage after inhalation of these liquids in the airways also in infinitesimal amount). Ensure medical treatment considering the frequent need of further observation for at least 24 hours. Bring an original container with the label and the Safety Data Sheet of the given substance as appropriate.

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

#### Inhalation

Cough, headache. May cause drowsiness or dizziness.

#### Skin contact

Causes skin irritation.

#### Eye contact

When intruding eyes, it can evoke irritation.

#### Ingestion

Irritation, nausea.

### 4.3. Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

##### Unsuitable extinguishing media

Water - full jet.

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

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

#### 5.3. Advice for firefighters

Use a self-contained breathing apparatus and full-body protective clothing. Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation. Extremely flammable aerosol. Pressurised container: May burst if heated. Remove all ignition sources. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale gases and vapours. Prevent contact with skin and eyes.

#### 6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water. Do not allow to enter drains.

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

Ventilate the room. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water.

#### 6.4. Reference to other sections

See the Section 7, 8 and 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use non-sparking tools. Use of antistatic clothes and footwear is recommended. Do not inhale gases and vapours. Prevent contact with skin and eyes. No smoking. Protect against direct sunlight. Do not pierce or burn, even after use. Obtain special instructions before use. Wash hands and exposed parts of the body thoroughly after handling. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Avoid release to the environment.

#### 7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Store locked up. Protect from sunlight. Keep container tightly closed. Do not expose to temperatures exceeding 50 °C.

#### 7.3. Specific end use(s)

not available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

#### United Kingdom of Great Britain and Northern Ireland

Substance name (component)	Type	Time of exposure	Value	Note	Source
butane (CAS: 106-97-8)	WEL	8 hours	1450 mg/m <sup>3</sup>		GBR
	WEL	15 minutes	1810 mg/m <sup>3</sup>		
	WEL	8 hours	600 ppm		
	WEL	15 minutes	750 ppm		

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### DNEL

[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .]

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	13 mg/kg/24hour	Local chronic effects	
Workers	Inhalation	93 mg/m <sup>3</sup>	Local chronic effects	
Consumers	Dermal	7 mg/kg/24hour	Local chronic effects	
Consumers	Inhalation	20 mg/m <sup>3</sup>	Local chronic effects	
Consumers	Oral	6 mg/kg/24hour	Local chronic effects	

### C7-C-9, n-alkanes

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Dermal	773 mg/kg bw/day	Systemic chronic effects	
Workers	Inhalation	2035 mg/m <sup>3</sup>	Systemic chronic effects	
Consumers	Dermal	699 mg/kg bw/day	Systemic chronic effects	
Consumers	Inhalation	608 mg/m <sup>3</sup>	Systemic chronic effects	
Consumers	Oral	699 mg/kg bw/day	Systemic chronic effects	

### 8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

#### Eye/face protection

Protective goggles.

#### Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

#### Respiratory protection

Respirator.

#### Thermal hazard

Not available.

#### Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2. Collect spillage.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Appearance	spray
Physical state	gas at 20°C
color	data not available
Odour	data not available
Odour threshold	data not available
pH	data not available
Melting point/freezing point	data not available
Initial boiling point and boiling range	data not available
Flash point	data not available
Evaporation rate	non-applicable

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Flammability (solid, gas)		Extremely flammable aerosol.	
Upper/lower flammability or explosive limits			
flammability limits		data not available	
explosive limits		data not available	
Vapour pressure		data not available	
Vapour density		data not available	
Relative density		data not available	
Solubility(ies)			
solubility in water		not available	
solubility in fats		not available	
Partition coefficient: n-octanol/water		data not available	
Auto-ignition temperature		data not available	
Decomposition temperature		data not available	
Viscosity		data not available	
Explosive properties		data not available	
Oxidising properties		data not available	
<b>9.2. Other information</b>			
Density		0.7 g/cm <sup>3</sup>	
ignition temperature		data not available	

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

not available

#### 10.2. Chemical stability

The product is stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Unknown.

#### 10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost. Pressurised container: May burst if heated.

#### 10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

#### 10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

No toxicological data is available for the mixture.

#### Acute toxicity

Based on available data the classification criteria are not met.

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Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD <sub>50</sub>	>16750 mg/kg		Rat	
Inhalation	LC <sub>50</sub>	>259354 mg/m <sup>3</sup>	4 hour	Rat	
Skin	LD <sub>50</sub>	>3350 mg/kg		Rabbit	

#### C7-C-9, n-alkanes

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Oral	LD <sub>50</sub>	>5840 mg/kg		Rat	

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### C7-C-9, n-alkanes

Route of exposure	Parameter	Value	Time of exposure	Species	Sex
Skin	LD <sub>50</sub>	>2920 mg/kg		Rat	
Inhalation	LC <sub>50</sub>	>23.3 mg/l		Rat	
Oral	ATE	>2000 mg/kg			
Skin	ATE	>2000 mg/kg			
Inhalation (dust/mist)	ATE	>5 mg/l	4 hour		

### Skin corrosion/irritation

Causes skin irritation.

[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .]

Route of exposure	Result	Time of exposure	Species
	Irritating		

### C7-C-9, n-alkanes

Route of exposure	Result	Time of exposure	Species
	Irritating, Drying and cracking of the skin		

### Serious eye damage/irritation

Based on available data the classification criteria are not met.

### C7-C-9, n-alkanes

Route of exposure	Result	Time of exposure	Species
	Slightly irritating		

### Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

### 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.

[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .]

	Parameter	Value	Result	Species	Sex
			Toxic for reproduction		

### C7-C-9, n-alkanes

	Parameter	Value	Result	Species	Sex
			Toxic for reproduction		

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### Toxicity for specific target organ - single exposure

May cause drowsiness or dizziness.

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Route of exposure	Parameter	Value	Result	Species	Sex
			Slightly irritating, Drowsiness, Dizziness		

### Toxicity for specific target organ - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .]

Route of exposure	Parameter	Value	Result	Species	Sex
			Neurotoxic effects, Drying and cracking of the skin		

### Aspiration hazard

May be fatal if swallowed and enters airways. Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute toxicity

Toxic to aquatic life with long lasting effects.

[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .]

Parameter	Value	Time of exposure	Species	Environment
EC <sub>50</sub>	23.35 mg/l	48 hour	Invertebrates (Daphnia magna)	
NOEL	5.224 mg/l	21 day	Invertebrates (Daphnia magna)	
EC <sub>50</sub>	9.902 mg/l	72 hour	Algae (Pseudokirchneriella subcapitata)	
LC <sub>50</sub>	13.37 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	
NOEL	2.992 mg/l	28 day	Fishes (Oncorhynchus mykiss)	

#### C7-C-9, n-alkanes

Parameter	Value	Time of exposure	Species	Environment
LD <sub>50</sub>	3 mg/l	96 hour	Fishes (Oncorhynchus mykiss)	



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### C7-C-9, n-alkanes

Parameter	Value	Time of exposure	Species	Environment
EC <sub>50</sub>	4.5 mg/l	48 hour	Aquatic invertebrates (Daphnia magna)	
EL <sub>50</sub>	10 mg/l	72 hour	Algae (Pseudokirchneriella subcapitata)	

### Chronic toxicity

### C7-C-9, n-alkanes

Parameter	Value	Time of exposure	Species	Environment
NOEL	0.574 mg/l	28 day	Fishes (Oncorhynchus mykiss)	
NOEC	0.17 mg/l	21 hour	Aquatic invertebrates (Daphnia magna)	

## 12.2. Persistence and degradability

### Biodegradability

[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .]

Parameter	Value	Time of exposure	Environment	Result
	81 %	21 day		Easily biodegradable

### C7-C-9, n-alkanes

Parameter	Value	Time of exposure	Environment	Result
	>74 %	28 day		Biodegradable

Not available.

## 12.3. Bioaccumulative potential

Not available.

## 12.4. Mobility in soil

Not available.

## 12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

## 12.6. Other adverse effects

Not available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

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### Legislation of waste

Council Directive 75/442/EEC on waste, as amended. Decree No. 383/2001 Coll., on details regarding waste handling as amended. Decree No. 93/2016 Coll., (waste catalogue) as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

### Waste type code

16 05 04 gases in pressure containers (including halons) containing dangerous substances

### Packaging waste type code

15 01 11 metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers

## SECTION 14: Transport information

### 14.1. UN number

UN 1950

### 14.2. UN proper shipping name

AEROSOLS

### 14.3. Transport hazard class(es)

2 Gases

### 14.4. Packing group

not available

### 14.5. Environmental hazards

not available

### 14.6. Special precautions for user


Reference in the Sections 4 to 8.

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not available

### Additional information

Hazard identification No.

 (Kemler Code)

UN number

5F

Classification code

2.1+hazardous for the environment

Safety signs



### Air transport - ICAO/IATA

Packaging instructions passenger 203

Cargo packaging instructions 203

### Marine transport - IMDG

EmS (emergency plan) F-D, S-U

MFAG 620

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### SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended (the Chemical Act). Decree No. 80/2014 Coll., amending the Decree No. 194/2001 Coll., laying down technical requirements for aerosol sprays as amended. Decree No. 432/2003 Coll., laying down conditions for assigning categories to individual jobs, limit values of indices from biological exposure tests, conditions for the sampling of biological materials for biological exposure and the particulars of the reports on work with asbestos and biological agents as amended.

#### Restrictions pursuant to Annex XVII of Regulation (EC) No. 1907/2006 (REACH), as amended

[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .], butane

Restriction	Conditions of restriction
28	<p>Without prejudice to the other parts of this Annex the following shall apply to entries 28 to 30:</p> <p>1. Shall not be placed on the market, or used,</p> <ul style="list-style-type: none"><li>— as substances,</li><li>— as constituents of other substances, or,</li><li>— in mixtures, for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than:<ul style="list-style-type: none"><li>— either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or,</li><li>— the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008.</li></ul></li></ul> <p>Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows:</p> <p>“Restricted to professional users”.</p> <p>2. By way of derogation, paragraph 1 shall not apply to:</p> <ul style="list-style-type: none"><li>(a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC;</li><li>(b) cosmetic products as defined by Directive 76/768/EEC;</li><li>(c) the following fuels and oil products:<ul style="list-style-type: none"><li>— motor fuels which are covered by Directive 98/70/EC,</li><li>— mineral oil products intended for use as fuel in mobile or fixed combustion plants,</li><li>— fuels sold in closed systems (e.g. liquid gas bottles);</li></ul></li><li>(d) artists’ paints covered by Directive 1999/45/EC.</li><li>(e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.</li></ul>

# SAFETY DATA SHEET



according to Regulation (EC) No 1907/2006 (REACH) as amended

## Metal cleaner ZM

Creation date 10. January 2014  
Revision date 05. July 2018 Version 2.0

[A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20°C to 190°C (-4°F to 374°F) .], butane

Restriction	Conditions of restriction
29	<p>Without prejudice to the other parts of this Annex the following shall apply to entries 28 to 30:</p> <ol style="list-style-type: none"><li>Shall not be placed on the market, or used,<ul style="list-style-type: none"><li>as substances,</li><li>as constituents of other substances, or,</li><li>in mixtures, for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than:<ul style="list-style-type: none"><li>either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or,</li><li>the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008.</li></ul></li></ul></li></ol> <p>Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows:</p> <p>"Restricted to professional users".</p> <ol style="list-style-type: none"><li>By way of derogation, paragraph 1 shall not apply to:<ol style="list-style-type: none"><li>medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC;</li><li>cosmetic products as defined by Directive 76/768/EEC;</li><li>the following fuels and oil products:<ul style="list-style-type: none"><li>motor fuels which are covered by Directive 98/70/EC,</li><li>mineral oil products intended for use as fuel in mobile or fixed combustion plants,</li><li>fuels sold in closed systems (e.g. liquid gas bottles);</li></ul></li><li>artists' paints covered by Directive 1999/45/EC.</li><li>the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.</li></ol></li></ol>

### 15.2. Chemical safety assessment

not available

### SECTION 16: Other information

#### A list of standard risk phrases used in the safety data sheet

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

#### Guidelines for safe handling used in the safety data sheet

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P301+P310	IF SWALLOWED: Immediately call a doctor.
P331	Do NOT induce vomiting.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P201	Obtain special instructions before use.

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- P308+P313 IF exposed or concerned: Get medical advice/attention.  
P314 Get medical advice/attention if you feel unwell.  
P273 Avoid release to the environment.

### A list of additional standard phrases used in the safety data sheet

- EUH 066 Repeated exposure may cause skin dryness or cracking.

### Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

### Key to abbreviations and acronyms used in the safety data sheet

- ADR European agreement concerning the international carriage of dangerous goods by road  
BCF Bioconcentration Factor  
CAS Chemical Abstracts Service  
CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures  
  
DNEL Derived no-effect level  
EC Identification code for each substance listed in EINECS  
EC<sub>50</sub> Concentration of a substance when it is affected 50% of the population  
EINECS European Inventory of Existing Commercial Chemical Substances  
EmS Emergency plan  
EU European Union  
IATA International Air Transport Association  
IBC International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals  
  
IC<sub>50</sub> Concentration causing 50% blockade  
ICAO International Civil Aviation Organization  
IMDG International Maritime Dangerous Goods  
INCI International Nomenclature of Cosmetic Ingredients  
ISO International Organization for Standardization  
IUPAC International Union of Pure and Applied Chemistry  
LC<sub>50</sub> Lethal concentration of a substance in which it can be expected death of 50% of the population  
  
LD<sub>50</sub> Lethal dose of a substance in which it can be expected death of 50% of the population  
LOAEC Lowest observed adverse effect concentration  
LOAEL Lowest observed adverse effect level  
log Kow Octanol-water partition coefficient  
MARPOL International Convention for the Prevention of Pollution From Ships  
NOAEC No observed adverse effect concentration  
NOAEL No observed adverse effect level  
NOEC No observed effect concentration  
NOEL No observed effect level  
OEL Occupational Exposure Limits  
PBT Persistent, Bioaccumulative and Toxic  
PNEC Predicted no-effect concentration  
ppm Parts per million  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals  
RID Agreement on the transport of dangerous goods by rail  
UN Four-figure identification number of the substance or article taken from the UN Model Regulations  
  
UVCB Substances of unknown or variable composition, complex reaction products or biological materials  
  
VOC Volatile organic compounds  
vPvB Very Persistent and very Bioaccumulative  
  
Aerosol Flammable aerosol  
Aquatic Chronic Hazardous to the aquatic environment  
Asp. Tox. Aspiration hazard

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Flam. Gas	Flammable gas
Flam. Liq.	Flammable liquid
Repr.	Reproductive toxicity
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

### Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

### Recommended restrictions of use

not available

### Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. The Act No. 350/2011 Coll., on Chemical Substances and Chemical Preparations as amended. First aid principles after the exposure to the chemicals (Zásady pro poskytování první pomoci při expozici chemickým látkám, doc. MUDr. Daniela Pelclová, CSc., MUDr. Alexandr Fuchs, CSc., MUDr. Miroslava Hornychová, CSc., MUDr. Zdeňka Trávníčková, CSc., Jiřina Fridrichovská, prom. chem.). Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

### Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.