

according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 5

Revision: 06.11.2023

**1 Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

- **Trade name:** 4223F
- **Other Means of Identification:** Premium Polyurethane Conformal Coating
- **Related Part Number:** 4223F-Liquid, 4223F-55ML, 4223F-1L, 4223F-4L, 4223F-20L
- **UFI:** 8NA0-N07D-700F-EFQE
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Not available
- **Application of the substance / the mixture** Conformal Coating
- **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:**  
Verisk 3E (Access code: 335388), +(44) 20 3514787  
Other emergency telephone numbers: +(0) 800 680 0425

**2 Hazards identification**

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



GHS02 flame

Flam. Liq. 2      H225 Highly flammable liquid and vapour.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

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GHS07

Skin Irrit. 2      H315 Causes skin irritation.  
 STOT SE 3      H336 May cause drowsiness or dizziness.

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 · **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**


GHS02 GHS07 GHS09

 · **Signal word** Danger

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

Distillates (petroleum), hydrotreated light

 · **Hazard statements**

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

 · **Precautionary statements**

P102      Keep out of reach of children.

P210      Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P271      Use only outdoors or in a well-ventilated area.

P332+P313 If skin irritation occurs: Get medical advice/attention.

 P370+P378 In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

P405      Store locked up.

P501      Dispose of contents/container in accordance with local/regional/national/international regulations.

 · **Additional information:**

Safety data sheet available on request.

 · **2.3 Other hazards**

 · **Results of PBT and vPvB assessment**

 · **PBT:** Not applicable.

 · **vPvB:** Not applicable.

 · **Determination of endocrine-disrupting properties**

78-93-3 butanone: List II

### 3 Composition/information on ingredients

 · **3.2 Mixtures**

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

 · **Dangerous components:**

CAS: 64742-47-8      Distillates (petroleum), hydrotreated light      45.13%

EINECS: 265-149-8      ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; STOT SE 3, H336

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CAS: 78-93-3 butanone 9.5%  
 EINECS: 201-159-0  Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336,  
 EUH066

· **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:**

*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.*

· **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.*

#### 5 Firefighting measures

##### · 5.1 Extinguishing media

###### · **Suitable extinguishing agents:**

*CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.*

· **For safety reasons unsuitable extinguishing agents:** *Water with full jet*

##### · 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:

*Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).*

*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** *No special precautions are necessary if used correctly.*

##### · **Information about fire - and explosion protection:**

*Keep ignition sources away - Do not smoke.*

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Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· **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:**

**78-93-3 butanone**

WEL Short-term value: 899 mg/m<sup>3</sup>, 300 ppm

Long-term value: 600 mg/m<sup>3</sup>, 200 ppm

Sk, BMGV

· **Ingredients with biological limit values:**

**78-93-3 butanone**

BMGV 70 µmol/L

Medium: urine

Sampling time: post shift

Parameter: butan-2-one

· **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.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Respiratory protection:** Not required.

· **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.

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- **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**



Tightly sealed goggles

## 9 Physical and chemical properties

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

- **General Information**

· <b>Physical state</b>	Fluid
· <b>Colour:</b>	Clear
· <b>Odour:</b>	Petroleum-like
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Boiling point or initial boiling point and boiling range</b>	80 °C
· <b>Flammability</b>	Highly flammable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	1.8 Vol %
· <b>Upper:</b>	11.5 Vol %
· <b>Flash point:</b>	-9 °C
· <b>Auto-ignition temperature:</b>	440 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Kinematic viscosity at 40 °C</b>	>20.5 mm <sup>2</sup> /s
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure:</b>	Not determined.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	0.88 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.

- **9.2 Other information**

- **Appearance:**

- **Form:** Fluid

- **Important information on protection of health and environment, and on safety.**

- **Ignition temperature:**

Product is not selfigniting.

- **Explosive properties:**

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Solvent content:**

- **Organic solvents:**

9.5 %

- **VOC (EC)**

9.50 %

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- **Change in condition**
- **Evaporation rate** Not determined.
- **Information with regard to physical hazard classes**
- **Explosives** Void
- **Flammable gases** Void
- **Aerosols** Void
- **Oxidising gases** Void
- **Gases under pressure** Void
- **Flammable liquids** Highly flammable liquid and vapour.
- **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.
- **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:**
- 
- 78-93-3 butanone**
- Oral LD50 3,300 mg/kg (rat)
  - Dermal LD50 5,000 mg/kg (rabbit)
  - **Skin corrosion/irritation** Causes skin irritation.
  - **Serious eye damage/irritation**  
Based on available data, the classification criteria are not met.
  - **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** Based on available data, the classification criteria are not met.
  - **STOT-single exposure** May cause drowsiness or dizziness.
  - **STOT-repeated exposure** Based on available data, the classification criteria are not met.

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- **Aspiration hazard** Based on available data, the classification criteria are not met.
  - **11.2 Information on other hazards**
  - **Endocrine disrupting properties**
- 
- 78-93-3 butanone: List II

## 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**
  - For information on endocrine disrupting properties see section 11.
  - **12.7 Other adverse effects**
  - **Remark:** Toxic for fish
  - **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.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms

## 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**
- 
- HP3 Flammable  
HP4 Irritant - skin irritation and eye damage  
HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity  
HP14 Ecotoxic
- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN1263
- **14.2 UN proper shipping name**
- **ADR** 1263 PAINT, ENVIRONMENTALLY HAZARDOUS
- **IMDG** PAINT, MARINE POLLUTANT
- **IATA** Paint

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## · 14.3 Transport hazard class(es)

## · ADR, IMDG



· Class 3 Flammable liquids.  
 · Label 3

## · IATA



· Class 3 Flammable liquids.  
 · Label 3

## · 14.4 Packing group

## · ADR, IMDG, IATA

II

## · 14.5 Environmental hazards:

Product contains environmentally hazardous substances: Distillates (petroleum), hydrotreated light

## · Marine pollutant:

Symbol (fish and tree)

## · Special marking (ADR):

Symbol (fish and tree)

## · 14.6 Special precautions for user

Warning: Flammable liquids.

## · Hazard identification number (Kemler code):

33

## · EMS Number:

F-E, S-E

## · Stowage Category

B

## · 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

## · Transport/Additional information:

## · ADR

## · Limited quantities (LQ)

5L

## · Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

## · Transport category

2

## · Tunnel restriction code

D/E

## · IMDG

## · Limited quantities (LQ)

5L

## · Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

## · UN "Model Regulation":

UN 1263 PAINT, 3, II, ENVIRONMENTALLY HAZARDOUS

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**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**  
E2 Hazardous to the Aquatic Environment  
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **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**  
78-93-3 butanone: 3
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
78-93-3 butanone: 3
- **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**
- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.

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*EUH066 Repeated exposure may cause skin dryness or cracking.*· **Department issuing SDS:** Product safety department.· **Contact:** sds@mgchemicals.com· **Date of previous version:** 26.06.2023· **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)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 2: Flammable liquids – Category 2**Flam. Liq. 3: Flammable liquids – Category 3**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**Asp. Tox. 1: Aspiration hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*· \* **Data compared to the previous version altered.**

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