



Printing date 27.03.2024

Version number 5 (replaces version 4)

Revision: 27.03.2024

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

- · 1.1 Product identifier
- · Trade name: 422B
- · Other Means of Identification: Silicone Modified Conformal Coating
- · Related Part Number: 422B-Aerosol, 422B-340G, 422B-340GCA
- · UFI: TNP0-E0K6-E00T-359P
- · 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

Conformal coating for printed circuit boards and electronic components.

- · Uses advised against FOR INDUSTRIAL USE ONLY.
- · 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

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

(Contd. of page 1)

2 Hazards identification

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



GHS02 flame

Aerosol 2 H223-H229 Flammable aerosol. Pressurised container: May burst if heated.



GHS08 health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to the hearing organs through prolonged or

repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

- · 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 GHS08

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

xylene

acetone

ethylbenzene

· Hazard statements

H223-H229 Flammable aerosol. Pressurised container: May burst if heated.

H312+H332 Harmful in contact with skin or if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation. H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

(Contd. on page 3)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

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

H304 May be fatal if swallowed and enters airways.

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.

P211 Do not spray on an open flame or other ignition source.

P251 Do not pierce or burn, even after use.

P271 Use only outdoors or in a well-ventilated area.
P312 Call a POISON CENTER/doctor if you feel unwell.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 ℃/122 ℉.

- · 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: 115-10-6 dimethyl ether 36.0% EINECS: 204-065-8 🏇 Flam. Gas 1A, H220; Press. Gas (Comp.), H280 CAS: 67-64-1 21.0% acetone EINECS: 200-662-2 🚸 Flam. Liq. 2, H225; 🕩 Eye Irrit. 2, H319; STOT SE 3, H336, **EUH066** CAS: 1330-20-7 17.0% EINECS: 215-535-7 🏇 Flam. Liq. 3, H226; 🗘 Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315 CAS: 78-93-3 13.0% butanone EINECS: 201-159-0 🚯 Flam. Liq. 2, H225; 🕦 Eye Irrit. 2, H319; STOT SE 3, H336, ĚUH066 CAS: 100-41-4 ethylbenzene 4.0% EINECS: 202-849-4 6 Flam. Liq. 2, H225; 6 STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332 CAS: 108-88-3 <1.0%

CAS: 108-88-3 toluene

<1

EINECS: 203-625-9 Flam. Liq. 2, H225; Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336

· 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:

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

(Contd. on page 4)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

(Contd. of page 3)

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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.

5 Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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: Mouth respiratory protective device.

6 Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures

 Wear protective equipment. Keep unprotected persons away.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:

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 Ensure good ventilation/exhaustion at the workplace.
- Information about fire and explosion protection:

Do not spray onto a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding $50 \, ^{\circ}$ C, i.e. electric lights. Do not pierce or burn, even after use.

- · 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles:

Observe official regulations on storing packagings with pressurised containers.

- Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep container tightly sealed.

(Contd. on page 5)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

· 7.3 Specific end use(s) No further relevant information available.

(Contd. of page 4)

8 Exposure controls/personal protection

· 8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

115-10-6 dimethyl ether

WEL Short-term value: 958 mg/m³, 500 ppm Long-term value: 766 mg/m³, 400 ppm

67-64-1 acetone

WEL Short-term value: 3620 mg/m³, 1500 ppm Long-term value: 1210 mg/m³, 500 ppm

1330-20-7 xylene

WEL Short-term value: 441 mg/m³, 100 ppm Long-term value: 220 mg/m³, 50 ppm Sk; BMGV

78-93-3 butanone

WEL Short-term value: 899 mg/m³, 300 ppm Long-term value: 600 mg/m³, 200 ppm Sk, BMGV

100-41-4 ethylbenzene

WEL Short-term value: 552 mg/m³, 125 ppm Long-term value: 441 mg/m³, 100 ppm Sk

108-88-3 toluene

WEL Short-term value: 384 mg/m³, 100 ppm Long-term value: 191 mg/m³, 50 ppm Sk

Ingredients with biological limit values:

1330-20-7 xylene

BMGV 650 mmol/mol creatinine

Medium: urine

Sampling time: post shift Parameter: methyl hippuric acid

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.

Store protective clothing separately. Avoid contact with the eyes and skin.

(Contd. on page 6)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

(Contd. of page 5)

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 Aerosol

· Colour: According to product specification

56 ℃

Odour: Characteristic Odour threshold: Not determined.

Melting point/freezing point: Undetermined.

· Boiling point or initial boiling point and

boiling range · Flammability Not applicable.

· Lower and upper explosion limit

· Lower: 3 Vol % Upper: 26 Vol % -17 ℃ · Flash point: · Auto-ignition temperature: 315 ℃

Decomposition temperature: Not determined. · pH Not determined.

· Viscosity:

· Kinematic viscosity at 20 °C <20.5 mm²/s · Dynamic: Not determined.

(Contd. on page 7)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

(Contd. of page 6)

Solubility

· water: Fully miscible.

· Partition coefficient n-octanol/water (log

value)

· Vapour pressure at 20 ℃:

Not determined.

5,200 hPa (115-10-6 dimethyl ether)

· Density and/or relative density

Density at 20 °C: 0.89 g/cm³
 Relative density Not determined.
 Vapour density Not determined.

9.2 Other information

· Appearance:

Form: Aerosol

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

Ignition temperature:

Product is not selfigniting.

• Explosive properties: Product is not semginting.

• Product is not explosive. However, formation

of explosive air/vapour mixtures are possible.

· Solvent content:

· Organic solvents: · VOC (EC)

<92.00 % >8.0 %

<92.0 %

Solids content:
Change in condition

· Evaporation rate Not applicable.

Information with regard to physical hazard

classes

Explosives VoidFlammable gases Void

· Aerosols Flammable aerosol. Pressurised container:

May burst if heated.

· 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

Oxidising liquids
Oxidising solids
Organic peroxides
Corrosive to metals
Desensitised explosives
Void
Void
Void
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.

(Contd. on page 8)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

(Contd. of page 7)

- 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 Harmful in contact with skin or if inhaled.
- LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Dermal LD50

11,765 mg/kg (rabbit)

Inhalative LC50/4 h 52.4 mg/l

115-10-6 dimethyl ether

Inhalative LC50/4 h 308 mg/l (rat)

67-64-1 acetone

Oral LD50 5,800 mg/kg (rat) Dermal LD50 20,000 mg/kg (rabbit)

1330-20-7 xylene

LD50 4,300 mg/kg (rat) Oral Dermal LD50 2,000 mg/kg (rabbit)

78-93-3 butanone

Oral LD50 3,300 mg/kg (rat) Dermal LD50 5,000 mg/kg (rabbit)

100-41-4 ethylbenzene

Oral LD50 3,500 mg/kg (rat) Dermal LD50 17,800 mg/kg (rabbit)

108-88-3 toluene

LD50 Oral 5,000 mg/kg (rat) LD50 12,124 mg/kg (rabbit) Dermal

Inhalative LC50/4 h 5,320 mg/l (mouse)

- · Skin corrosion/irritation Causes skin irritation.
- · Serious eye damage/irritation Causes serious eye irritation.
- 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 Suspected of causing cancer.
- · Reproductive toxicity Suspected of damaging fertility or the unborn child.
- · STOT-single exposure May cause respiratory irritation. May cause drowsiness or dizziness.
- STOT-repeated exposure

May cause damage to the hearing organs through prolonged or repeated exposure.

- · **Aspiration hazard** May be fatal if swallowed and enters airways.
- · 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.

(Contd. on page 9)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

(Contd. of page 8)

- · 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
- 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.

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

- 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

· 14.2 UN proper shipping name

· ADR

· IMDG

· IATA

· 14.3 Transport hazard class(es)

UN1950

1950 AEROSOLS

AEROSOLS

Aerosols, flammable

· ADR



· Class · Label 2 5F Gases.

2.1

(Contd. on page 10)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

(Contd. of page 9)

· IMDG, IATA



· Class

2.1 Gases.

· Label

2.1

· 14.4 Packing group

· ADR, IMDG, IATA · 14.5 Environmental hazards: not regulated Not applicable.

· 14.6 Special precautions for user

Warning: Gases.

· Hazard identification number (Kemler

code):

EMS Number:

F-D.S-U

Stowage Code

SW1 Protected from sources of heat.

SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of

living quarters.

SG69 For AEROSOLS with a maximum · Segregation Code

capacity of 1 litre:

Segregation as for class 9. Stow "separated

from" class 1 except for division 1.4.

For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of

class 2.

For WASTE AEROSOLS:

Segregation as for the appropriate subdivision of

class 2.

· 14.7 Maritime transport in bulk according

to IMO instruments

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

1L Code: E0

Excepted quantities (EQ)

Not permitted as Excepted Quantity

· Transport category

· Tunnel restriction code D

· IMDG

· Limited quantities (LQ)

1L

Code: E0

· Excepted quantities (EQ)

Not permitted as Excepted Quantity

UN "Model Regulation":

UN 1950 AEROSOLS, 2.1

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.

(Contd. on page 11)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

· Regulated poisons

(Contd. of page 10)

None of the ingredients is listed.

None of the ingredients is listed.

· Reportable explosives precursors

67-64-1 acetone: 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 P3a FLAMMABLE AEROSOLS
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 150 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 48
- 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

67-64-1 acetone

· Regulation (EC) No 273/2004 on drug precursors

67-64-1 acetone: 3 78-93-3 butanone: 3 108-88-3 toluene: 3

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

67-64-1 acetone: 3 78-93-3 butanone: 3 108-88-3 toluene: 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

H220 Extremely flammable gas.

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H361d Suspected of damaging the unborn child.

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

(Contd. on page 12)

Printing date 27.03.2024 Version number 5 (replaces version 4) Revision: 27.03.2024

Trade name: 422B

(Contd. of page 11)

EUH066 Repeated exposure may cause skin dryness or cracking.

- · Department issuing SDS: Product safety department.
- · Contact: sds@mgchemicals.com
- · Date of previous version: 26.01.2024
- · Version number of previous version: 4
- 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

ATE: Acute toxicity estimate values

Flam. Gas 1A: Flammable gases - Category 1A

Aerosol 2: Aerosols - Category 2

Press. Gas (Comp.): Gases under pressure - Compressed gas

Flam. Liq. 2: Flammable liquids - Category 2

Flam. Liq. 3: Flammable liquids - Category 3

Acute Tox. 4: Acute toxicity – Category 4 Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

Carc. 2: Carcinogenicity - Category 2

Repr. 2: Reproductive toxicity - Category 2

Repr. 2: Reproductive toxicity - Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

Asp. Tox. 1: Aspiration hazard - Category 1

* Data compared to the previous version altered.