

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

1.1 Product identifier

- **Trade name: 4226A**
- **Other Means of Identification:** Clear Insulating Varnish (Aerosol)
- **Related Part Number:** 4226A-340G
- **UFI:** 5FS0-40C9-J004-XEHT

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

- **Application of the substance / the mixture**
High voltage protective coating for electronic and electrical devices
- **Uses advised against** Not available

1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

MG Chemicals Ltd. (Head Office)
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA
+(1) 905-331-1396
info@mgchemicals.com

MG Chemicals
Heame House, 23 Bliston Street
Sedgely Dudley DY3 1JA.
United Kingdom
+(44) 1663 362888

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
+(1) 760 476 3961
UK Toll free: +(0) 800 680 0425

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

SECTION 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.



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

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— GB —

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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

Signal word Warning

Hazard-determining components of labelling:

n-butyl acetate
heptan-2-one

Hazard statements

H223-H229 Flammable aerosol. Pressurised container: May burst if heated.
H336 May cause drowsiness or dizziness.

Precautionary statements

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.
P405 Store locked up.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

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

Dangerous components:

CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1	n-butyl acetate ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336, EUH066	43.0%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5	propane ⚠ Flam. Gas 1A, H220; Press. Gas (Comp.), H280	20.0%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0	isobutane ⚠ Flam. Gas 1A, H220; Press. Gas (Comp.), H280	11.0%
CAS: 110-43-0 EINECS: 203-767-1 Index number: 606-024-00-3	heptan-2-one ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	4.0%
CAS: 136-52-7 EINECS: 205-250-6	cobalt(II) 2-ethylhexanoate ⚠ Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350; Repr. 1B, H360; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	$\geq 0.025 - < 0.1\%$

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

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation:

Remove person to fresh air and keep comfortable for breathing.

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If feeling unwell: Call a POISON CENTRE or doctor.

· **After skin contact:**

Take off immediately all contaminated clothing. Wash skin with plenty of water.

If skin irritation or rash occurs: Get medical advice or attention.

Wash contaminated clothing before reuse.

· **After eye contact:**

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If symptoms persist consult doctor.

· **After swallowing:**

Rinse mouth.

Do NOT induce vomiting.

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.

SECTION 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.

Use water spray to cool containers.

· **5.2 Special hazards arising from the substance or mixture**

Aerosols containers may erupt with force at temperatures above 50 °C [122 °F].

· **Hazardous combustion products:**

Carbon Oxides (CO_x)

other toxic fumes

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Remove or keep away all sources of extreme heat or open flames.

Avoid breathing mist, spray, or vapors.

· **6.2 Environmental precautions:** 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).

Collect liquid in a sealable, chemical-resistant container.

Wash residue with a paper towel and place dirty towels in container.

Use soap and water to remove the last traces of residue.

· **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.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Use only in well ventilated areas.

Avoid breathing mist, spray, or vapors.

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

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

Keep ignition sources away - Do not smoke.

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Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°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.

Keep in a dry and clean area, away from incompatible substances

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

· **Further information about storage conditions:**

Keep container tightly sealed.

Protect from heat and direct sunlight.

Do not expose to temperatures exceeding 50 °C [122 °F].

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

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

123-86-4 n-butyl acetate

WEL	Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm
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110-43-0 heptan-2-one

WEL	Short-term value: 475 mg/m ³ , 100 ppm Long-term value: 237 mg/m ³ , 50 ppm Sk
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· **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:** Wash hands before breaks and at the end of work.

· **Respiratory protection:**

If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.

· **Hand protection**

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



Protective gloves

For Incidental Contact: Type = Nitrile ; Permeation 3 (> 360 min); Min. Thickness = 0.11 mm ; EN 374-3

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

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.

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· Eye/face protection



Wear safety glasses: EN 166

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Physical state	Aerosol (gas+liquid)
· Form:	Liquid, in aerosol format.
· Colour:	Clear
· Odour:	Aromatic
· Odour threshold:	Not available
· Melting point/freezing point:	Not available
· Boiling point or initial boiling point and boiling range	124–128 °C (123-86-4 n-butyl acetate)
· Flammability	Flammable.
· Lower and upper explosion limit	
· Lower:	2 Vol %
· Upper:	9 Vol %
· Flash point:	27 °C
· Auto-ignition temperature:	415 °C
· Decomposition temperature:	Not available
· pH	Not applicable.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not applicable.
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	4,070 hPa
· Vapour pressure at 50 °C:	55 hPa
· Density:	Not available
· Relative density at 25 °C	0.93
· Vapour density	≥3.9 (Air = 1)
· Particle characteristics	Not available

· 9.2 Other information

· 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:	67.0 %
· VOC (EC)	78.00 %
· Solids content:	>21.9 %
· Evaporation rate	~0.8 (ButAc=1)

· Information with regard to physical hazard classes

· Aerosols	Flammable aerosol. Pressurised container: May burst if heated.
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SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability Chemically stable at normal temperatures and pressures.

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- **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**
Avoid open flames, excessive heat, sparks, ignition sources, and incompatible substances.
- **10.5 Incompatible materials:**
Strong oxidizing agents
Strong reducing agents
Strong bases
- **10.6 Hazardous decomposition products:**
No dangerous decomposition products known.
Hazardous combustion products: see section 5.

SECTION 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	41,750 mg/kg (rat)
Inhalative	LC50/4 h	>418 mg/kg (rabbit)

123-86-4 n-butyl acetate

Oral	LD50	>10,768 mg/kg (rat)
Dermal	LD50	>17,600 mg/kg (rabbit)
Inhalative	LC50/4 h	>21 mg/l (rat)

74-98-6 propane

Inhalative	LC50/4 h	>800,000 ppm (rat)
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75-28-5 isobutane

Inhalative	LC50/4 h	>800,000 ppm (rat)
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110-43-0 heptan-2-one

Oral	LD50	1,670 mg/kg (rat)
Dermal	LD50	12,600 µL/kg (rabbit)
Inhalative	LC50/4 h	>16.7 mg/kg (rabbit)

136-52-7 cobalt(II) 2-ethylhexanoate

Oral	LD50	3,129 mg/kg (rat)
Dermal	LD50	5,690 mg/kg (rat)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **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.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Summary of Effects and Symptoms by Routes of Exposure**
 - **Eyes:**
may cause mild irritation
redness
 - **Skin:**
may cause mild irritation
dry skin
redness
 - **Inhalation:**
dizziness

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drowsiness
headache
blurred vision

· **Swallowed:**

irritation
abdominal pain
drowsiness
nausea
burning sensation

· **Additional toxicological information:**

· **Delayed and immediate effects as well as chronic effects from short and long-term exposure**
No further relevant information available.

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

123-86-4 n-butyl acetate

LC50 96h | 18 mg/L (minnow)

110-43-0 heptan-2-one

EC50/48 h | >100 mg/L (daphnia)

LC50 96h | 131 mg/L (minnow)

· **12.2 Persistence and degradability**

· **12.3 Bioaccumulative potential**

· **12.4 Mobility in soil**

· **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**

· **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.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation** This material and its container must be disposed of as hazardous waste.

· **European waste catalogue**

HP3 | Flammable

HP5 | Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

· **Uncleaned packaging:**

· **Recommendation:**

Containers may still present a chemical hazard/ danger when empty.
Dispose of contents in accordance with all local, regional, national, and international regulations.




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Where possible retain label warnings and SDS and observe all notices pertaining to the product.

SECTION 14: Transport information

<ul style="list-style-type: none"> 14.1 UN number or ID number ADR, IMDG, IATA 	UN1950
<ul style="list-style-type: none"> 14.2 UN proper shipping name ADR, IMDG IATA 	AEROSOLS Aerosols, flammable
<ul style="list-style-type: none"> 14.3 Transport hazard class(es) ADR <div>  </div> <ul style="list-style-type: none"> Class Label 	2 5F Gases. 2.1
<ul style="list-style-type: none"> IMDG, IATA <div>  </div> <ul style="list-style-type: none"> Class Label 	2.1 Gases. 2.1
<ul style="list-style-type: none"> 14.4 Packing group ADR, IMDG, IATA 	Not applicable
<ul style="list-style-type: none"> 14.5 Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> 14.6 Special precautions for user Hazard identification number (Kemler code): EMS Number: Stowage Code Segregation Code 	Warning: Gases. - F-D,S-U 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 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.
<ul style="list-style-type: none"> 14.7 Maritime transport in bulk according to IMO instruments 	Not applicable.
<ul style="list-style-type: none"> Transport/Additional information: <div>  </div> Limited Quantity	

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· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· Transport category	2
· Tunnel restriction code	D
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1950 AEROSOLS, 2.1

SECTION 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 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

- **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.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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EUH066 Repeated exposure may cause skin dryness or cracking.

· **Department issuing SDS:** Regulatory department

· **Contact:** sds@mgchemicals.com

· **Date of previous version:** 06.05.2024

· **Version number of previous version:** 3.00

· **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. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1B: Carcinogenicity – Category 1B

Repr. 1B: Reproductive toxicity – Category 1B

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

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