

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

1 Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** 413C**Other Means of Identification:** Heavy Duty Flux Remover**Related Part Number:** 413C-Liquid, 413C-1L, 413C-20L**UFI:** JFR0-202H-V006-0AJ1**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 Flux remover for electronics**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:**

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

Other emergency telephone numbers: +(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

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

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

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

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

GB

(Contd. on page 2)

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

Trade name: 413C

(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

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



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 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

- **Signal word** Danger
- **Hazard-determining components of labelling:**
propan-2-ol
- **Hazard statements**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
- **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.
P280 Wear protective gloves, protective clothing, and eye protection.
P370+P378 In case of fire: Use CO2, powder or water spray to extinguish.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **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

GB

(Contd. on page 3)

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

Trade name: 413C

(Contd. of page 2)



3 Composition/information on ingredients

3.2 Mixtures

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

· **Dangerous components:**

CAS: 67-63-0 propan-2-ol 75.0%

EINECS: 200-661-7  Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336

CAS: 616-38-6 dimethyl carbonate 25.0%

EINECS: 210-478-4  Flam. Liq. 2, H225

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

4 First aid measures

· 4.1 Description of first aid measures

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **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:** 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:

Dilute with plenty of water.

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.

(Contd. on page 4)

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

Trade name: 413C

(Contd. of page 3)

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.
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:**
67-63-0 propan-2-ol
WEL Short-term value: 1250 mg/m³, 500 ppm
Long-term value: 999 mg/m³, 400 ppm
- **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 eyes.
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.

(Contd. on page 5)

GB

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

Trade name: 413C

(Contd. of page 4)

· **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**· **Physical state**

Fluid

· **Colour:**

According to product specification

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

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

82 °C (67-63-0 propan-2-ol)

· **Flammability**

Highly flammable.

· **Lower and upper explosion limit**· **Lower:**

2 Vol % (67-63-0 propan-2-ol)

· **Upper:**

12 Vol % (67-63-0 propan-2-ol)

· **Flash point:**

11 °C

· **Auto-ignition temperature:**

456 °C

· **Decomposition temperature:**

Not determined.

· **pH**

Not determined.

· **Viscosity:**· **Kinematic viscosity at 20 °C**20.5 mm²/s· **Dynamic:**

Not determined.

· **Solubility**· **water:**

Fully miscible.

· **Partition coefficient n-octanol/water (log value)**

Not determined.

· **Vapour pressure at 20 °C:**

43 hPa (67-63-0 propan-2-ol)

· **Density and/or relative density**· **Density at 20 °C:**0.84 g/cm³· **Relative density**

Not determined.

· **Bulk density:**856 kg/m³· **Vapour density**

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:**

75.0 %

· **VOC (EC)**

100.00 %

· **Solids content:**

0.0 %

(Contd. on page 6)

GB

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

Trade name: 413C

(Contd. of page 5)

- **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:**
-
- 67-63-0 propan-2-ol**
- Oral LD50 5,045 mg/kg (rat)
- Dermal LD50 12,800 mg/kg (rabbit)
- Inhalative LC50/4 h 30 mg/l (rat)
- 616-38-6 dimethyl carbonate**
- Oral LD50 13,000 mg/kg (rat)
- Dermal LD50 >5,000 mg/kg (rabbit)
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
 - **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.

(Contd. on page 7)

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

Trade name: 413C

(Contd. of page 6)

- **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.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties**

None of the ingredients is listed.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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** UN1993

(Contd. on page 8)

GB

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

Trade name: 413C

(Contd. of page 7)

· 14.2 UN proper shipping name

· ADR

1993 FLAMMABLE LIQUID, N.O.S.
(ISOPROPANOL (ISOPROPYL ALCOHOL),
DIMETHYL CARBONATE)

· IMDG

FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL
(ISOPROPYL ALCOHOL), DIMETHYL
CARBONATE)

· IATA

Flammable liquid, n.o.s. (ISOPROPANOL
(ISOPROPYL ALCOHOL), DIMETHYL
CARBONATE)

· 14.3 Transport hazard class(es)

· ADR, IMDG, IATA



· Class

3 Flammable liquids.

· Label

3

· 14.4 Packing group

· ADR, IMDG, IATA

II

· 14.5 Environmental hazards:

Not applicable.

· 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)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30
mlMaximum net quantity per outer packaging: 500
ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30
mlMaximum net quantity per outer packaging: 500
ml

· UN "Model Regulation":

UN 1993 FLAMMABLE LIQUID, N.O.S.
(ISOPROPANOL (ISOPROPYL ALCOHOL),
DIMETHYL CARBONATE), 3, II

GB

(Contd. on page 9)

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

Trade name: 413C

(Contd. of page 8)

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 P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 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**
None of the ingredients is listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
None of the ingredients is listed.
- **15.2 Chemical safety assessment:**
A Chemical Safety Assessment has not been carried out.

16 Other information

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

- **Relevant phrases**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
- **Department issuing SDS:** Product safety department.
- **Contact:** sds@mgchemicals.com
- **Date of previous version:** 01.02.2024
- **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

(Contd. on page 10)

according to 1907/2006/EC, Article 31

Printing date 01.02.2024

Version number 1

Revision: 01.02.2024

Trade name: 413C

(Contd. of page 9)

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
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

GB