



Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 20.03.2008

V - 4

Revision: 20.03.2008

1 Identification of substance:

- **Product details:**
- **Trade name:** Cramolin Flux-off
- **Article number:** 107 Aerosol
- **Application of the substance / the preparation:**
Efficiently removes Rosin Flux and other Soldering Residues from Printed Circuit Boards.
- **Manufacturer/Supplier:**
ITW Chemische Produkte GmbH & Co. KG
Mühlacker Str. 149
D-75417 Mühlacker
Tel: +49 7041 96340
Fax: +49 7041 963429
E-Mail: info@itwcp.de
Internet: www.itwcp.de
- **Informing department:** Product safety department
- **Emergency information:**
ITW Chemische Produkte GmbH & Co. KG
Tel: +49 7041 96340 Mo - Do 8:00 - 16:30 Fr 8:00 - 14:00

2 Hazards identification

• Hazard designation:



Xi Irritant
F Highly flammable
N Dangerous for the environment

• Information pertaining to particular dangers for man and environment

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Warning! Pressurized container.

Has a narcotizing effect.

R 11 Highly flammable.

R 36/37 Irritating to eyes and respiratory system.

R 43 May cause sensitisation by skin contact.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 67 Vapours may cause drowsiness and dizziness.

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

Do not pierce or burn, even after use.

95.0 % by mass of the contents are flammable

Keep out of the reach of children

• Classification system

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

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3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Active substance with propellant.

- **components:**

CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol Xi, F; R 11-36-67	25-<50%
CAS: 64742-95-6 EINECS: 265-199-0	Solvent naphtha (petroleum), light arom. Xn, Xi, N; R 10-37-51/53-65	25-<50%
CAS: 123-86-4 EINECS: 204-658-1	n-butyl acetate R 10-66-67	10-<25%
CAS: 107-98-2 EINECS: 203-539-1	1-methoxypropan-2-ol R 10	2.5-<10%
CAS: 109-87-5 EINECS: 203-714-2	dimethoxymethane Xi, F; R 11-43	2.5-<10%
CAS: 124-38-9 EINECS: 204-696-9	carbon dioxide	2.5-<10%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation**
In case of unconsciousness bring patient into stable side position for transport.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
- **After skin contact**
Instantly wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact**
Rinse opened eye for several minutes under running water. Then consult doctor.
- **After swallowing**
Do not induce vomiting; instantly call for medical help.
A person vomiting while lying on their back should be turned onto their side.

5 Fire fighting measures

- **Suitable extinguishing agents** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents** Water.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Store in a cool place. Heat will increase pressure and may lead to the container exploding.
- **Protective equipment:**
Wear self-contained breathing apparatus.
Do not inhale explosion gases or combustion gases.
- **Additional information** Cool endangered containers with water spray jet.

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6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
Avoid contact with the eyes and skin.
- **Measures for environmental protection:**
Inform respective authorities in case product reaches water or sewage system.
Do not allow to enter drainage system, surface or ground water.
- **Measures for cleaning/collecting:**
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Absorb liquid components with liquid-binding material.
Dispose of the material collected according to regulations.
- **Additional information:** See Section 7 for information on safe handling

7 Handling and storage

- **Handling**
- **Information for safe handling:**
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
Keep away from heat and direct sunlight.
Open and handle container with care.
- **Information about protection against explosions and fires:**
Do not spray on flames or red-hot objects.
Beware: Container is pressurized. Keep away from direct sun exposure and temperatures over 50°C. Do not open by force or throw into fire even after use.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and containers:**
Store in cool location.
Store only in the original container.
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Store in a cool place. Heat will increase pressure and may lead to the container exploding.
Protect from heat and direct sunlight.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

67-63-0 propan-2-ol (25-<50%)

WEL (Great Britain)

Short-term value: 1250 mg/m³, 500 ppm
Long-term value: 999 mg/m³, 400 ppm

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123-86-4 n-butyl acetate (10-<25%)

WEL (Great Britain)	Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm
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107-98-2 1-methoxypropan-2-ol (2.5-<10%)

WEL (Great Britain)	Short-term value: 560 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm Sk
IOELV (European Union)	Short-term value: 568 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm Skin

109-87-5 dimethoxymethane (2.5-<10%)

WEL (Great Britain)	Short-term value: 3950 mg/m ³ , 1250 ppm Long-term value: 3160 mg/m ³ , 1000 ppm
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124-38-9 carbon dioxide (2.5-<10%)

WEL (Great Britain)	Short-term value: 27400 mg/m ³ , 15000 ppm Long-term value: 9150 mg/m ³ , 5000 ppm
IOELV (European Union)	Long-term value: 9000 mg/m ³ , 5000 ppm

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**

The usual precautionary measures should be adhered to general rules for handling chemicals.
Keep away from foodstuffs, beverages and feed.
Take off immediately all contaminated clothing
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Do not eat, drink or smoke while working.
- **Breathing equipment:** During good ventilation/exhaust or during brief, small load not necessarily.
- **Protection of hands:**

Solvent resistant gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **Material of gloves**

Nitrile rubber, NBR
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.
- **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 protection:** Tightly sealed safety glasses.

9 Physical and chemical properties:

General Information

Form:	Aerosol
Colour:	colourless
Odour:	Characteristic

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- **Change in condition**
Melting point/Melting range: Not determined
Boiling point/Boiling range: -78°C
- **Flash point:** -18°C
- **Ignition temperature:** 235.0°C
- **Self-inflammability:** Product is not self igniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/steam mixtures is possible.
- **Critical values for explosion:**
Lower: 1.2 Vol %
Upper: 12.0 Vol %
- **Vapour pressure at 20°C:** 40 hPa
- **Density at 20°C** 0.798 g/cm³
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix
- **Solvent content:**
Organic solvents: 95.0 %

10 Stability and reactivity

- **Thermal decomposition/ Conditions to be avoided:** Protect from heat and direct sunlight.
- **Dangerous reactions** Danger of bursting
- **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

67-63-0 propan-2-ol

Oral	LD50	4570 mg/kg (rat)
Dermal	LD50	13400 mg/kg (kan)
Inhalative	LC50/4 h	30 mg/l (rat)

- **Primary irritant effect:**
 - **on the skin:** Frequent and/ or presistent contact with skin may cause skin irritation.
 - **on the eye:** Irritant effect.
- **Sensitisation:** Sensitisation possible by skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Irritant

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12 Ecological information:

- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Toxic for aquatic organisms (for not coated material, powder form)
Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.

13 Disposal considerations

- **Product:**
- **Recommendation** Disposal must be made according to official regulations.
- **European waste catalogue**

16 05 04	gases in pressure containers (including halons) containing dangerous substances
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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID-GGVS/E Class:** 2 5F Gases.
- **Kemler Number:** -
- **UN-Number:** 1950
- **Packaging group:** -
- **Label** 2.1
- **Designation of goods:** 1950 AEROSOLS (ISOPROPANOL (ISOPROPYL ALCOHOL), METHYLAL)

- **Maritime transport IMDG:**



- **IMDG Class:** 2.1
- **UN Number:** 1950
- **Label** 2.1
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Marine pollutant:** No

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· **Correct technical name:** AEROSOLS (ISOPROPANOL (ISOPROPYL ALCOHOL), dimethoxymethane)

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 2.1

· **UN/ID Number:** 1950

· **Label:** 2.1

· **Packaging group:** -

· **Correct technical name:** AEROSOLS, flammable (ISOPROPANOL (ISOPROPYL ALCOHOL), dimethoxymethane)

15 Regulatory information

· **Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Directives and the Ordinance on Hazardous Materials (GefStoffV).

· **Code letter and hazard designation of product:**



Xi Irritant
F Highly flammable
N Dangerous for the environment

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

dimethoxymethane

· **Risk phrases:**

11 Highly flammable.

36/37 Irritating to eyes and respiratory system.

43 May cause sensitisation by skin contact.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

67 Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

7/9 Keep container tightly closed and in a well-ventilated place.

16 Keep away from sources of ignition - No smoking.

23 Do not breathe fumes.

24/25 Avoid contact with skin and eyes.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

33 Take precautionary measures against static discharges.

37 Wear suitable gloves.

43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

51 Use only in well-ventilated areas.

57 Use appropriate container to avoid environmental contamination.

· **Special designation of certain preparations:**

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

Do not pierce or burn, even after use.

95.0 % by mass of the contents are flammable

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Keep out of the reach of children

· National regulations**· Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.**16 Other information:**

Information is based on our current knowledge but does not establish a promise of product characteristics and does not substantiate any contractual legal relationship. Drawing of back-up data file for:

MSDS - Service - Center gmbH.
Materiel-Safety-Data-Sheet
Alemannenstrasse 49
6830 Rankweil
AUSTRIA

Tel.: +43-(0)5522-60067
Fax.: +43-(0)5522-41031
E-Mail: office@msds.at
www.msds.at

· Relevant R-phrases

- 10 Flammable.
- 11 Highly flammable.
- 36 Irritating to eyes.
- 37 Irritating to respiratory system.
- 43 May cause sensitisation by skin contact.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 65 Harmful: may cause lung damage if swallowed.
- 66 Repeated exposure may cause skin dryness or cracking.
- 67 Vapours may cause drowsiness and dizziness.

· Contact: ITW Chemische Produkte GmbH & Co. KG, D-75417 Mühlacker**· * Data compared to the previous version altered. .**

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