

SAFETY DATA SHEET

1. Identification of the substance/preparation and supplier contact information

Product : EF-28 Alcohol-Resin Paste Flux
Description : Alcohol/Rosin based No-Clean Soldering Flux
Supplier : Surclean Materials Technology,
SMT Technology Centre,
Cowes, Isle of Wight,
PO31 7AD, United Kingdom.

Tel: +44 (0)1983 290333
Email: info@surclean.co.uk

Substance/preparation : Preparation

2. Composition/information on ingredients

Material uses : Electrical Soldering Flux

Chemical name	CAS no.	%	EC Number	Risk/precautionary Phrases
Gum Rosin (Colophony) Propan-2-ol	8050-09-7 67-63-0	60 - 80 15 - 20	232-475-7 200-661-7	H317 H225, H319, H336
See section 16 for the full text of the P & H Phrases declared above				

Occupational Exposure Limit(s), if available, are listed in Section 8
The classifications listed, indicate the potential hazards of the ingredients

3. Hazards identification

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classifications : H317
H225
H319, H336

Effects and symptoms

Skin contact : Slightly hazardous in case of skin contact (irritant).
Eye Contact : Hazardous in case of eye contact (irritant).
Toxicity : **Colophony**: CAUTION: Certain sensitive individuals may develop eczema and/or occupational asthma on exposure to this material.
Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL.

4. First aid measures

First-Aid measures

General : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.

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- Ingestion** : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
- Skin Contact** : while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Obtain medical attention immediately.
- Eye Contact** : Check for and remove any contact lenses. In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Cold water may be used. Obtain medical attention.

5. Fire-fighting measures

- Extinguishing media** : Recommended: alcohol resistant foam, CO₂, powders, water spray.
Not to be used : waterjet.
- Hazardous thermal decomposition products** : These products are carbon oxides (CO, CO₂).
- Special fire-fighting procedures** : Fire-fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.
- Protection of fire-fighters** : Be sure to use an approved/certified respirator or equivalent.
- Recommendations** : Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to sewers or waterways.

6. Accidental release measures

- Personal Precautions** : Immediately contact emergency personnel. Use suitable protective equipment (Section 8). Do not touch or walk through spilled material.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Environmental precautions and clean-up methods** : Use a shovel to put the material into a convenient waste disposal container.

Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.
- Hygiene measures** : Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.
- Storage** : Keep container tightly closed.
- Packaging materials**
- Recommended** : Use original container.

8. Exposure controls/personal protection

- Engineering measures** : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
- Hygiene measures** : Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
Europe propan-2-ol	ACGIH TLV (United States, 1/2004). Notes: ACGIH 2003 Adoption Refers to Appendix A – Carcinogens. STEL: 400 ppm 15 minute(s). Form: All forms TWA: 200 ppm 8 hour(s). Form: All forms
Sweden propan-2-ol	AFS (Sweden, 7/2000). KTV: 600 mg/m ³ 15 minute(s). Form: All forms KTV: 250 ppm 15 minute(s). Form: All forms NGV: 350 mg/m ³ 8 hour(s). Form: All forms NGV: 150 ppm 8 hour(s). Form: All forms

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Denmark

propan-2-ol

Arbejdstilsynet (Denmark, 10/2016). Skin

GV: 490 mg/m³ 8 hour(s). Form: All forms

GV: 200 ppm 8 hour(s). Form: All forms Carcinogen

Norway

propan-2-ol

Arbejdstilsynet (Norway, 10/2018).

AN: 245 mg/m³ 8 hour(s). Form: All forms

AN: 100 ppm 8 hour(s). Form: All forms

France

Colophony

INRS (France, 12/2019).

VME: 0.1 mg/m³ 8 hour(s). Form: All forms

propan-2-ol

INRS (France, 6/2018). Notes: Advisory

VLE: 980 mg/m³ 15 minute(s). Form: All forms

VLE: 400 ppm 15 minute(s). Form: All forms

Netherlands

propan-2-ol

Nationale MAC-lijst (Netherlands, 3/2014). Notes: Legal

TGG: 650 mg/m³ 8 hour(s). Form: All forms

TGG: 250 ppm 8 hour(s). Form: All forms

Germany

propan-2-ol

MAK-Werte Liste (Germany, 9/2020).

Spitzenbegrenzung: 1000 mg/m³ 15 minute(s). Form: All forms

Spitzenbegrenzung: 400 ppm 15 minute(s). Form: All forms

TWA: 500 mg/m³ 8 hour(s). Form: All forms

TWA: 200 ppm 8 hour(s). Form: All forms

TRGS900 MAK (Germany, 8/2020).

Spitzenbegrenzung: 2000 mg/m³ 15 minute(s). Form: All forms

Spitzenbegrenzung: 800 ppm 15 minute(s). Form: All forms

TWA: 500 mg/m³ 8 hour(s). Form: All forms

TWA: 200 ppm 8 hour(s). Form: All forms

Finland

propan-2-ol

Työterveyslaitos (Finland, 6/2020).

STEL: 620 mg/m³ 15 minute(s). Form: All forms

STEL: 250 ppm 15 minute(s). Form: All forms

TWA: 500 mg/m³ 8 hour(s). Form: All forms

TWA: 200 ppm 8 hour(s). Form: All forms

United Kingdom (UK)

Colophony

EH40-MEL (United Kingdom (UK), 2020). Sensitiser skin, Sensitiser inhalation

TWA: 0.05 mg/m³ 8 hour(s). Form: Rosin-based solder flux fume

STEL: 0.15 mg/m³ 15 minute(s). Form: Rosin-based solder flux fume

propan-2-ol

EH40-OES (United Kingdom (UK), 5/2020).

STEL: 1250 mg/m³ 15 minute(s). Form: All forms

STEL: 500 ppm 15 minute(s). Form: All forms

TWA: 999 mg/m³ 8 hour(s). Form: All forms

TWA: 400 ppm 8 hour(s). Form: All forms

Where a MEL has been assigned, exposure should be reduced as low as is reasonably practicable and should not exceed the MEL.

Austria

propan-2-ol

BMWA_MAK (Austria, 4/2018).

STEL: 2000 mg/m³ 4 times per shift, 15 minute(s). Form: All forms

STEL: 800 ppm 4 times per shift, 15 minute(s). Form: All forms

TWA: 500 mg/m³ 8 hour(s). Form: All forms

TWA: 200 ppm 8 hour(s). Form: All forms

Switzerland

propan-2-ol

SUVA (Switzerland, 3/2020).

Kurzzeitgrenzwerte: 1000 mg/m³ 15 minute(s). Form: All forms

Kurzzeitgrenzwerte: 400 ppm 15 minute(s). Form: All forms

MAK: 500 mg/m³ 8 hour(s). Form: All forms

MAK: 200 ppm 8 hour(s). Form: All forms

Belgium

propan-2-ol

Lijst Grenswaarden / Valeurs Limites (Belgium, 11/2018).

STEL: 1248 mg/m³ 15 minute(s). Form: All forms

STEL: 500 ppm 15 minute(s). Form: All forms

TWA: 997 mg/m³ 8 hour(s). Form: All forms

TWA: 400 ppm 8 hour(s). Form: All forms

Czech Republic

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propan-2-ol

178/2001 (Czech Republic, 12/2019). Skin
STEL: 1000 mg/m³ 10 minute(s). Form: All forms
STEL: 407 ppm 10 minute(s). Form: All forms
TWA: 500 mg/m³ 8 hour(s). Form: All forms
TWA: 203.5 ppm 8 hour(s). Form: All forms

Ireland

propan-2-ol

NAOSH (Ireland, 9/2020). Skin
OELV: 1225 mg/m³ 15 minute(s). Form: All forms
OELV: 500 ppm 15 minute(s). Form: All forms
OELV: 980 mg/m³ 8 hour(s). Form: All forms
OELV: 400 ppm 8 hour(s). Form: All forms

Spain

propan-2-ol

INSHT (Spain, 8/2020).
VLA-EC: 1250 mg/m³ 15 minute(s). Form: All forms
VLA-EC: 500 ppm 15 minute(s). Form: All forms
VLA-ED: 998 mg/m³ 8 hour(s). Form: All forms
VLA-ED: 400 ppm 8 hour(s). Form: All forms

Estonia

propan-2-ol

Sotsiaalminister (Estonia, 9/2017).
STEL: 600 mg/m³ 15 minute(s). Form: All forms
STEL: 250 ppm 15 minute(s). Form: All forms
TWA: 350 mg/m³ 8 hour(s). Form: All forms
TWA: 150 ppm 8 hour(s). Form: All forms

Turkey

Colophony

NIOSH REL (United States, 6/2018). Notes: Note: Carcinogenic in the presence of formaldehyde, acetaldehyde, or malonaldehyde. See Appendix C (Aldehydes) See Appendix A - NIOSH Potential Occupational Carcinogen
TWA: 0.1 mg/m³ 10 hour(s). Form: All forms

propan-2-ol

NIOSH REL (United States, 12/2017).
STEL: 1225 mg/m³ 15 minute(s). Form: All forms
STEL: 500 ppm 15 minute(s). Form: All forms
TWA: 980 mg/m³ 10 hour(s). Form: All forms
TWA: 400 ppm 10 hour(s). Form: All forms

Lithuania

propan-2-ol

Del Lietuvos Higienos Normos (Lithuania, 12/2019).
STEL: 600 mg/m³ 15 minute(s). Form: All forms
STEL: 250 ppm 15 minute(s). Form: All forms
TWA: 350 mg/m³ 8 hour(s). Form: All forms
TWA: 150 ppm 8 hour(s). Form: All forms

Slovakia

propan-2-ol

Nariadenie Vlády Slovenskej republiky (Slovakia, 1/2020).
PEAK: 1000 mg/m³ 4 times per shift, 30 minute(s). Form: All forms
PEAK: 400 ppm 4 times per shift, 30 minute(s). Form: All forms
TWA: 500 mg/m³ 8 hour(s). Form: All forms
TWA: 200 ppm 8 hour(s). Form: All forms

Hungary

propan-2-ol

EüM-SzCsM (Hungary, 1/2021). Skin
PEAK: 2000 mg/m³ 15 minute(s). Form: All forms
TWA: 500 mg/m³ 8 hour(s). Form: All forms

Poland

propan-2-ol

Ministra Pracy i Polityki Społecznej (Poland, 11/2018).
STEL: 1.2 mg/m³ 15 minute(s). Form: All forms
TWA: 900 mg/m³ 8 hour(s). Form: All forms

Slovenia

propan-2-ol

Uradni list Republike Slovenije (Slovenia, 5/2019).
PEAK: 2000 mg/m³ 4 times per shift, 15 minute(s). Form: All forms
PEAK: 800 ppm 4 times per shift, 15 minute(s). Form: All forms
TWA: 500 mg/m³ 8 hour(s). Form: All forms
TWA: 200 ppm 8 hour(s). Form: All forms

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Personal protective equipment

- Respiratory protection** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Recommended: organic vapor (Type A) and particulate filter FFA1P2D EN405:2002
- Hand protection** : Chemical-resistant, impervious gloves or gauntlets complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
4-8 hour(s) (breakthrough time): nitrile rubber
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Recommended: safety glasses with side shields EN 166 1F
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Body: Recommended: overall

9. Physical and chemical properties

General information

Appearance

- Physical state** : Solid.
- Colour** : Amber.
- Odour** : Alcohol-like. Characteristic.

Important health, safety and environmental information

- Boiling point** : 82°C (179.6°F)
- Flash point** : Closed cup: 12°C (53.6°F).
- Flammability (solid, gas)** : Highly flammable solid.
- Explosion limits** : Lower: 2% Upper: 12%
- Relative density** : 1 (20°C / 68°F)
- Solubility** : Partially soluble in cold water, hot water.
- Vapor density** : >1 (Air = 1)
- Evaporation rate (butyl acetate = 1)** : >1 compared to Butyl acetate.

10. Stability and reactivity

- Stability** : The product is stable.
- Hazardous decomposition products** : These products are carbon oxides (CO, CO₂).

11. Toxicological information

Acute toxicity

<u>Ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
propan-2-ol	LD50	5045 mg/kg	Oral	Rat
	LD50	6410 mg/kg	Oral	Rabbit
	LD50	3600 mg/kg	Oral	Mouse
	LD50	12800 mg/kg	Dermal	Rabbit
	LDLo	1537 mg/kg	Oral	Dog
	LDLo	3570 mg/kg	Oral	human
	LDLo	5272 mg/kg	Oral	man

Local effects

- Skin irritation** : Slightly hazardous in case of skin contact (irritant).
- Eye irritation** : Hazardous in case of eye contact (irritant).
- Sensitisation** : Slightly hazardous in case of skin contact (sensitiser).
- Toxicity data** : **Colophony**: CAUTION: Certain sensitive individuals may develop eczema and/or occupational asthma on exposure to this material.
Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL.

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Over-exposure signs/symptoms

Target organs : Contains material which causes damage to the following organs: upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

12. Ecological information

Ecotoxicity data

<u>Ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
propan-2-ol	Pimephales promelas (EC50)	48 hour(s)	10000 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	>1400 mg/l
	Pimephales promelas (LC50)	96 hour(s)	6550 mg/l

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Methods of disposal ; Waste of residues ; Contaminated packaging : The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Transport information

Waste classification : Not applicable.




European waste catalogue (EWC) : 20 08 04

Hazardous waste : Yes.

Regulatory Information

14.

International transport regulations

	<u>UN number</u>	<u>Proper shipping name</u>	<u>Class</u>	<u>Packing group</u>	<u>Label</u>	<u>Additional Information</u>
ADR/RID Class	1993	FLAMMABLE LIQUIDS, N.O.S. (propan-2-ol)	3	II		Hazard identification number 33 CEPIC Tremcard 30GF1-II
IMDG Class	1993	FLAMMABLE LIQUIDS, N.O.S. (propan-2-ol)	3	II		Emergency schedules (EmS) F-E, S-E
IATA-DGR Class	1993	FLAMMABLE LIQUIDS, N.O.S. (propan-2-ol)	3	II		Quantity limitation - Passenger Aircraft 5 L Quantity limitation - Cargo Aircraft 60 L

15. Regulatory information

EU Regulations

Hazard symbol(s) :



Indication of Danger :

Highly flammable, Irritant

Highly flammable, Irritant

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Hazard Phrases	: H317- May cause skin sensitization. H225- Flammable liquid. H228- Flammable solid H319- Eye irritant. H336- Vapour has Narcotic effect.
Precautionary Phrases	: P262- Do not get in eyes, on skin, or on clothes. P270- Do not eat, drink, or smoke when using this product. P281- Use Personal Protection Equipment as appropriate to stated Hazards. P302- If on skin, wash away with detergent and warm water. P305- If in eyes, rinse with copious amounts of water and seek medical attention.
Contains	: Colophony CAS - 232-475-7
Product use	: Classification and labelling have been performed according to EU directives 67/548/EEC, 1999/45/EC, including amendments and the intended use, plus GHS, Reach Rohs regulations. - Industrial applications (Soldering operations).
EC Statistical classification (Tariff Code)	: 32089091

National regulations

Highly flammable, Irritant

Denmark

Additional warning phrases: Not applicable.

Denmark– Cancer risks : National Working Environment Authorities Ordinance on Measures to Prevent Cancer Risks during Work with Substances and Preparations is applicable.

Denmark – Restrictions on use : Not to be used by professional users below 18 years of age, see the National Working Environment Authorities Executive Order on young peoples dangerous work.

Statutory order 517 on aerosols : Not applicable.

Netherlands

K-Klasse : K1

CPR : d

SHHR : 2IJ

Germany

Employment restrictions in accordance with § 15b of the Hazardous Substance Ordinance : Yes.

Other Regulations : TRGS 900

Hazardous incident ordinance : Yes.

Ordinance on combustible liquids : Class: B

Hazard class for water : 2

16. Other information

Full text of P phrases referred to in sections 2 and 3 - Europe : P262- Do not get in eyes, on skin or on clothes. P270- Do not eat, drink, or smoke when using this product. P281- Use PPE as required. P302- If on skin, wash away with detergent and warm water. P305- If in eyes, rinse with copious amounts of water, and seek medical attention.

Full text of H phrases referred to in sections 2 and 3 - Europe : H317- Skin sensitization
H225- Flammable liquid. H228- Flammable solid.
H319- Eye irritant
H336- Vapour has Narcotic effect

History

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Prepared by : Neil Everitt -
Technical Director - SMT-Surclean

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The Health and Safety At Work Act 1974, section 6.

Control of Substances Hazardous to Health (CoSHH) Regulations 2002 and its amendments.

Product contains only TSCA and EINECS listed substances. The product does not contain any substance on the EU restricted or substances of very high concern, lists. All substances are Reach registered.

This safety data sheet has been prepared in accordance with the requirements of the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 which implement EC Directives 1999/45/EC and 2001/58/EC and later amendments.

Notice to user

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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