

SAFETY DATA SHEET

**Manufacturer – Surclean Material Technology, SMT Technology Centre,
Cowes, I.o.W., PO31 7AD, UK.**

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

EF-28LQ Alcohol-Resin Liquid Flux

1. Identification of the substance/preparation

Product

EF-28LQ Alcohol-Resin Liquid Flux

Description

Alcohol/Rosin based No-Clean Soldering Flux

2. Composition/information on ingredients

Material uses: Electrical Soldering Flux

Chemical name	CAS no.	%	EC Number	Risk/precautionary Phrases
Gum Rosin (Colophony)	8050-09-7	20-40	232-475-7	H317
Propan-2-ol	67-63-0	60-80	200-661-7	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.

Classification	H317 H225 H319, H336
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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.
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	Careful 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. Firefighting Measures

Extinguishing media	Recommended: alcohol resistant foam, CO ₂ , powders, water spray. Not to be used - waterjet.
Hazardous thermal decomposition products	These products are carbon oxides (CO, CO ₂).
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.

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6. Accidental Release Measures

Personal precautions Immediately contact emergency personnel. Use suitable protective equipment.

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 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.

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Ingredient name

Occupational exposure limit

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/m³ 15 minute(s). Form: All forms
KTV: 250 ppm 15 minute(s). Form: All forms
NGV: 350 mg/m³ 8 hour(s). Form: All forms
NGV: 150 ppm 8 hour(s). Form: All forms

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

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Germany

Propan-2-ol	<p>MAK-Werte Liste (Germany, 9/2020). Spitzenbegrenzung: 1000 mg/m³ 15 minute(s). Form: All forms 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</p> <p>TRGS900 MAK (Germany, 8/2020). Spitzenbegrenzung: 2000 mg/m³ 15 minute(s). Form: All forms 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</p>
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Finland

Propan-2-ol	<p>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</p>
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United Kingdom (UK)

Colophony	<p>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</p>
Propan-2-ol	<p>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</p>

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	<p>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</p>
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Switzerland

Propan-2-ol **SUVA (Switzerland, 3/2020).**
Kurzeitsgrenzwerte: 1000 mg/m³ 15 minute(s). Form: All forms
Kurzeitsgrenzwerte: 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

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

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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/m ³ 10 hour(s). Form: All forms
Propan-2-ol	NIOSH REL (United States, 12/2017). STEL: 1225 mg/m ³ 15 minute(s). Form: All forms STEL: 500 ppm 15 minute(s). Form: All forms TWA: 980 mg/m ³ 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/m ³ 15 minute(s). Form: All forms STEL: 250 ppm 15 minute(s). Form: All forms TWA: 350 mg/m ³ 8 hour(s). Form: All forms TWA: 150 ppm 8 hour(s). Form: All forms
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Slovakia

Propan-2-ol	Nariadenie Vlády Slovenskej republiky (Slovakia, 1/2020). PEAK: 1000 mg/m ³ 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/m ³ 8 hour(s). Form: All forms TWA: 200 ppm 8 hour(s). Form: All forms
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Hungary

Propan-2-ol	EüM-SzCsM (Hungary, 1/2021). Skin PEAK: 2000 mg/m ³ 15 minute(s). Form: All forms TWA: 500 mg/m ³ 8 hour(s). Form: All forms
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Poland

Propan-2-ol	Ministra Pracy I Polityki Społecznej (Poland, 11/2018). STEL: 1.2 mg/m ³ 15 minute(s). Form: All forms TWA: 900 mg/m ³ 8 hour(s). Form: All forms
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Slovenia

Propan-2-ol	Uradni list Republike Slovenije (Slovenia, 5/2019). PEAK: 2000 mg/m ³ 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/m ³ 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 vapour (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	Liquid
Colour	Amber
Odour	Alcohol-like. Characteristic.

Important health, safety and environmental information

Boiling point	82°C (179.6°F)
Flash point	Closed cup: 9°C (48.2°F).

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Flammability ~-(solid, gas)	Highly flammable liquid.
Explosion limits	Lower: 2% Upper: 12%
Relative density	<1 (20°C / 68°F)
Solubility	Partially soluble in cold water, hot water.
Vapour density	>1 (Air = 1)
Evaporation rate (butyl acetate =>1 compared to Butyl acetate. 1)	

10. Stability and Reactivity

Stability: The product is stable

Hazardous decomposition products: These products are carbon oxides (CO, CO₂).

11. Toxicological Information

Acute toxicity

Ingredient name	Test	Result	Route	Species
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).

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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.

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

Ingredient name	Species	Period	Result
Propan-2-ol	Pimephales promelas (EC50)	48 hours	10000 mg/l
	Lepomis macrochirus (LC50)	96 hours	>1400 mg/l
	Pimephales promelas (LC50)	96 hours	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.


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Waste classification	Not applicable
European waste catalogue (EWC)	20 08 04
Hazardous waste	Yes

14. Transport Information

International transport regulations

	UN Number	Proper shipping name	Class	Packing group	Label	Additional information
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
IAIA-DGR Class	1993	FLAMMABLE LIQUIDS, N.O.S. (propan-2-ol)	3	II		Quantity limitation - Passenger Aircraft 5L Quantity limitation - Cargo Aircraft 60 L

15. Regulatory Information

EU Regulations
Hazard symbol(s)



Indication of Danger	Highly flammable, irritant
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.
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).
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

Other regulations TRGS 900

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History

Date of printing	28/02/2023
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Date of previous issue	No previous Validation
Version	2
Prepared by	Neil Everett - Technical Director, SMT-Surclean

**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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