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

1.1. Product identifier

Product form : Mixture

Trade name : IF 8001 No-Clean, Soldering Flux For Selective Soldering

Product code : RP8001*, RPPEN8001*

(* All packaging included)

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

1.2.1. Relevant identified uses

Main use category : Reserved for industrial and professional use.

Use of the substance/mixture : Selective fluxing applications

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Interflux® Electronics N.V.
Eddastraat 51
9042 GENT - Belgium
T +32 9 2514959 - F +32 9 2514970
reach@interflux.com - www.interflux.com

1.4. Emergency telephone number

Emergency number : ++1-703-527-3887 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) no 1272/2008 (CLP)

Flam. Liq. 2 H225
STOT SE 2 H371

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11

Full text of R-phrases: see section 16

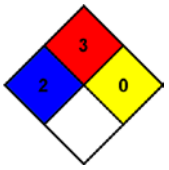
Adverse physicochemical, human health and environmental effects

No additional information available

Other information

NFPA code : 2-3-0

:



2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02

GHS08

Signal word (CLP) : Danger

Hazardous ingredients : carbinol

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour
H371 - May cause damage to organs (after ingestion)

Precautionary statements (CLP) : P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P270 - Do no eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection

P403+P233 - Store in a well-ventilated place. Keep container tightly closed

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Denaturated ethanol	(CAS N°) 64-17-5 (EC N°) 200-578-6 (EC index no) 603-002-00-5 (REACH-no) mixture, not applicable	80 - 90	F; R11
Dicarboxylic acid	(CAS N°) 124-04-9 (EC N°) 204-673-3 (EC index no) 607-144-00-9 (REACH-no) 01-2119457561-38	5 - 10	Xi; R36

Name	Product identifier	%	Classification according to Regulation (EC) no 1272/2008 (CLP)
ethanol	(CAS N°) 64-17-5 (EC N°) 200-578-6 (EC index no) 603-002-00-5 (REACH-no) 01-2119457610-43	78 - 85	Flam. Liq. 2, H225
Dicarboxylic acid	(CAS N°) 124-04-9 (EC N°) 204-673-3 (EC index no) 607-144-00-9 (REACH-no) 01-2119457561-38	5 - 10	Eye Irrit. 2, H319
carbinol	(CAS N°) 67-56-1 (EC N°) 200-659-6 (EC index no) 603-001-00-X (REACH-no) 01-2119433307-44	< 3	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
2-propanol	(CAS N°) 67-63-0 (EC N°) 200-661-7 (EC index no) 603-117-00-0 (REACH-no) 01-2119457558-25	< 2	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Depending on the victim's condition: doctor/hospital.

First aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First aid measures after skin contact : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

First aid measures after eye contact : Rinse immediately with plenty of water. Take victim to an ophthalmologist if irritation persists.

First aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Give activated charcoal. Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Doctor: gastric lavage.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis.

Symptoms/injuries after skin contact : Slight irritation.

Symptoms/injuries after eye contact : Liquid splashes in the eye may cause irritation.

Symptoms/injuries after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Risk of aspiration pneumonia.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Polyvalent foam. Alcohol-resistant foam. BC powder. Carbon dioxide.

Unsuitable extinguishing media : Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD. Highly flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

Explosion hazard : DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

Reactivity : Violent to explosive reaction with (strong) oxidizers. Upon combustion CO and CO2 are formed.

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: consider evacuation.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Prevent spreading in sewers. Keep containers closed. Wash contaminated clothes.

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Protective goggles. protective clothing. Large spills/in enclosed spaces: compressed air apparatus.

Emergency procedures : Keep upwind. Mark the danger area. Consider evacuation. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.

Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Do not discharge the waste into the drain. Keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Work under local exhaust/ventilation.

Hygiene measures : Do no eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Maximum storage period : 1 year

Storage temperature : 5 - 35 °C

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Prohibitions on mixed storage	:	KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources. oxidizing agents. (strong) acids. (strong) bases.
Storage area	:	Meet the legal requirements. Store in a cool area. Store in a dry area. Fireproof storeroom.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. dry. clean. correctly labelled. meet the legal requirements.
Packaging materials	:	SUITABLE MATERIAL: stainless steel. HDPE drums.

7.3. Specific end use(s)

REACH Disclaimer:
This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanol (64-17-5)		
Belgium	Limit value (mg/m³)	1907 mg/m³
Belgium	Limit value (ppm)	1000 ppm
France	VLE (mg/m³)	9500 mg/m³
France	VLE (ppm)	5000 ppm
France	VME (mg/m³)	1900 mg/m³
France	VME (ppm)	1000 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	960 mg/m³
Germany	TRGS 900 Occupational exposure limit value (ppm)	500 ppm
The Netherlands	MAC TGG 8H (mg/m³)	1000 mg/m³
The Netherlands	MAC TGG 8H (ppm)	130 ppm
The Netherlands	MAC TGG 15MIN (mg/m³)	1900 mg/m³
The Netherlands	MAC TGG 15MIN (ppm)	950 ppm
United Kingdom	WEL TWA (mg/m³)	1920 mg/m³
United Kingdom	WEL TWA (ppm)	1000 ppm

8.2. Exposure controls

Personal protective equipment : Gloves. (Nitrile rubber): Recommended thickness: >0.35mm. Protective goggles. Protective clothing. Wear gas mask if conc. in air .

Materials for protective clothing	:	GIVE EXCELLENT RESISTANCE: butyl rubber. viton. GIVE GOOD RESISTANCE: neoprene. tetrafluoroethylene. GIVE LESS RESISTANCE: nitrile rubber. polyethylene. GIVE POOR RESISTANCE: natural rubber. PVA. PVC.
Hand protection	:	The selected protective gloves must meet the specifications of EU Directive 89/686/EEC and EN 374, derived therefrom.
Eye protection	:	Eye protection designed to protect against liquid splashes should be worn.
Skin and body protection	:	Wear suitable protective clothing.
Respiratory protection	:	Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear gas mask with filter type A if conc. in air > exposure limit.
Other information	:	Do no eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Colour	:	Colourless.
Odour	:	Mild odour of aliphatic alcohol.
Odour threshold	:	No data available
pH	:	5 - 5,5
Melting point	:	-115 °C
Freezing point	:	No data available
Boiling point	:	78 °C

Flash point	:	13 °C
Relative evaporation rate (butylacetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	8,3
Flammability (solid, gas)	:	No data available
Explosive limits	:	3,3 - 19,0 vol %
Vapour pressure	:	59 hPa
Relative vapour density at 20 °C	:	1,6
Relative density	:	0,845-0,860 g/ml
Solubility	:	Water: Partially soluble Ethanol: Soluble
Log Pow	:	No data available
Log Kow	:	No data available
Self ignition temperature	:	363 °C
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	0,0012 Pa.s (20 °C)
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

Other properties : Gas/vapour heavier than air at 20°C. Clear. Volatile.

SECTION 10: Stability and reactivity

10.1. Reactivity

Violent to explosive reaction with (strong) oxidizers. Upon combustion CO and CO2 are formed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

IF 8001 No-Clean, Soldering Flux For Selective Soldering	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 16000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	85 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	64000 ppm/4h (Rat)
ATE (oral)	5000,000 mg/kg bodyweight

Skin corrosion/irritation	:	Not classified pH: 5 - 5,5
Serious eye damage/irritation	:	Not classified pH: 5 - 5,5
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	May cause damage to organs (after ingestion).

Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - air	:	TA-Luft Klasse 5.2.5. Not dangerous for the ozone layer (Council Regulation (EC) no 1005/2009).
Ecology - water	:	Mild water pollutant (surface water). Slightly or not bioaccumulative. Readily biodegradable in water.

IF 8001 No-Clean, Soldering Flux For Selective Soldering	
LC50 fishes 1	14200 mg/l (96 h; Pimephales promelas; Nominal concentration)
EC50 Daphnia 1	9300 mg/l (48 h; Daphnia magna)
LC50 fish 2	13000 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	10800 mg/l (24 h; Daphnia magna)

12.2. Persistence and degradability

IF 8001 No-Clean, Soldering Flux For Selective Soldering	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0,8 - 0,967 g O^2/g substance
Chemical oyxgen demand (COD)	1,70 g O^2/g substance
ThOD	2,10 g O^2/g substance
BOD (% of ThOD)	0,43 % ThOD

12.3. Bioaccumulative potential

ethanol (64-17-5)	
Log Pow	-0,31 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

ethanol (64-17-5)	
Surface tension	0,022 N/m (20 °C)

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	:	Disposal must be done according to official regulations.
Waste disposal recommendations	:	Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into surface water. May be discharged to wastewater treatment installation.
Ecology - waste materials	:	Other organic solvents, washing liquids and mother liquors. LWCA (the Netherlands): KGA category 03. Hazardous waste (91/689/EEC). Do not discharge into surface water. Packaging containing residues of or contaminated by. dangerous substances.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

UN-No	:	1170

14.2. UN proper shipping name

Proper Shipping Name	:	ethanol (ethyl alcohol)

Transport document description : UN 1170 ethanol (ethyl alcohol), 3, II

14.3. Transport hazard class(es)

Class (UN) : 3

Hazard labels (UN) : 3

14.4. Packing group

Packing group (UN) : II

14.5. Environmental hazards

Other information : No supplementary information available.

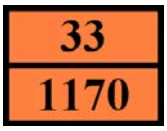
14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 33

Classification code (ADR) : F1

Orange plates :



14.6.2. Transport by sea

EmS-No. (1) : F-E

EmS-No. (2) : S-D

14.6.3. Air transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Additional rules to be obtained at Interflux® Electronics NV
Remark:
Above mentioned regulations are in force at the moment of publication of this (SDS) safety data sheet. With reference to possible modifications in transport regulations of dangerous goods, we advise you to verify its validity at Interflux® Electronics NV.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU Regulations

Contains no REACH candidate substance

EURAL code : 14 06 03*, 15 01 10*

15.1.2. National regulations

Water hazard class (WGK) : 1 - slightly hazardous to water

WGK remark : Classification in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005

Storage class (LGK) : LGK 3A - Flammable liquid materials (Flashpoint < 55 °C)

VbF class : B - Liquids with a flashpoint below 21°C, but soluble in water at 15°C or flammable ingredients that are soluble in water at 15°C

15.2. Chemical safety assessment

Chemical safety assessments for substances in this preparation were carried out

SECTION 16: Other information

Other information : Intrastat code 3810 90 90.

Full text of R-, H- and EUH-phrases::

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
STOT SE 2	Specific target organ toxicity — Single exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H370	Causes damage to organs
H371	May cause damage to organs
R11	Highly flammable
R36	Irritating to eyes
F	Highly flammable
Xi	Irritant

SDS EU (REACH Annex II)
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

DISCLAIMER
The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. Because we cannot anticipate or control the many different conditions under which this information and our products may be used, we do not guarantee the applicability or the accuracy of this information or the suitability of our products in any given situation. Users of our products should make their own tests to determine the suitability of each such product for their particular purposes. The products discussed are sold without such warranty, either expressed or implied.