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EDSYN GMBH EUROPA

Zentrum für Löt- und Entlötsysteme

EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

27.12.2018

Material Safety Data Sheet - according to Regulation (EC) No. 1907/2006

INTERNATIONAL STANDARD NORM ISO 11014-1

Trade name: FLUXI FL 88	**Flux Dispenser**	**F-SW 34** **DIN ISO 29454 / 2.2.3.A**
1.) **IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**		
1.1.) **Manufacturer/Supplier Address:**	**EDSYN GMBH EUROPA** Finkenweg 2 D 97892 Kreuzwertheim e-Mail: Edsyn-europa@t-online.de Website: www.edsyn-europa.de	Tel. 09342 - 6413 Fax: 09342 - 6417
1.2) **Product identifier**	Flux dispenser FLUXI FL 88	
1.3) **Relevant identified uses of the substance or mixture and uses advised against**		
Use of the substance/mixture	Fluxes Industrial use of processing aids.	
2.) **HAZARDS IDENTIFICATION**		
2.1) **Classification of the substance or mixture**		
Classification according to Directive 67/548/EEC or 1999/45/EC		
Indications of danger:	F – Highly flammable, Xi – Irritant	
R-phrases:	Highly flammable. Irritating to eyes. Vapours may cause drowsiness and dizziness.	
Classification according to Regulation (EC) No. 1272/2008 [CLP]		
Hazard categories:	**Flammable liquid:** Flam. Liq. 2 **Serious eye damage/eye irritation:** Eye Irrit. 2 **Specific target organ toxicity – single exposure:** STOT SE 3	
Hazard Statements:	Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.	
2.2) **Label elements**		
Hazardous components which must be listed on the label:	propan-2-ol; isopropyl alcohol; isopropanol	

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	Signal word:	Danger
	Pictograms:	GHS02-GHS07
		 
	Hazard statements:	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
	Precautionary statements:	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P241 Use explosion-proof electrical/ventilating/lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/doctor if you feel unwell. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. P370+P378 In case of fire: Use SECTION 5: Firefighting measures to extinguish. P235 Keep cool. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/container to Dispose of this material and its container to hazardous or special waste collection point.
	Special labelling of certain mixtures:	EUH208 Contains Rosin, colophony. May produce an allergic Reaction.
2.3)	**Other hazards**	No information available.

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3.)	**COMPOSITION / INFORMATION ON INGREDIENTS**	
3.1)	**Mixtures**	
	Chemical characterization	Contains: Alcohol

Hazardous components:

Chemical name		Quantity %	Classification according to Directive 67/548/EEC Classification according to Regulation (EC) Nr. 1272/2008 [CLP]
propan-2-ol; isopropyl alcohol; isopropanol	EC No 200-661-7 CAS No 67-63-0 Index No 603-117-00-0 REACH No	80-100	F – Highly flammable, Xi – Irritant, R11-36-67 Flam. Liq.2, Eye Irrit. 2, STOT SE 3; H225, H319, H336
adipic acid	EC No 204-673-3 CAS No 124-04-9 Index No 607-144-00-9 REACH No	1-4	Xi – Irritant R36 Eye Irrit. 2; H319
Itaconic acid	EC No 202-599-6 CAS No 97-65-4 Index No REACH No	1-4	Xi – Irritant, R41 Eye Dam. 1; H318
Rosin, colophony	EC No 232-475-7 CAS No 8050-09-7 Index No 650-015-00-7 REACH No	0-2	R43 Skin Sens. 1; H317

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

3.2)	**Further information**	Contains: resin. >> No risks worthy of mention.

4.)	**FIRST AID MEASURES**	
4.1)	**Description of first aid measures**	
	After inhalation:	Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary.
	After contact with skin:	After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
	After contact with eyes:	After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
	After ingestion:	Rinse mouth immediately and drink plenty of water.
4.2)	**Most important symptoms and effects, both acute and delayed**	No information available.

4.3) Indication of any immediate medical attention and special treatment needed	Treat symptomatically.
5.) FIREFIGHTING MEASURES	
5.1) Extinguishing media **Suitable extinguishing media:**	Water spray jet, Carbon dioxide (CO2). Foam. Extinguishing powder.
5.2) Special hazards arising from the substance or mixture	Flammable. Vapours can form explosive mixtures with air.
5.3) Advice for firefighters	In case of fire: Wear self-contained breathing apparatus.
Additional information:	Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
6.) ACCIDENTAL RELEASE MEASURES	
6.1) Personal precautions, protective equipment and emergency procedures	Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eye and clothes. Use personal protection equipment.
6.2) Environmental precautions	Do not allow uncontrolled discharge of product into the environment. Danger of explosion.
6.3) Methods and material for containment and cleaning up	Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.
6.4) Reference to other sections	Safe handling: see section 7. Personal protection equipment: see section 8. Disposal: see section 13.
7.) HANDLING AND STORAGE	
7.1) Precautions for safe handling	
Advice on safe handling:	If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.
Advice on protection against fire and explosion:	Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.
7.2) Conditions for safe storage, including any incompatibilities	
Requirements for storage rooms and vessels:	Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on storage compatibility: Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

7.3) Specific end use(s)

Fluxes
Industrial use of processing aids.

8.) EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1) Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/m³	Category	Origin
64-17-5	Ethanol	1000 -	1920 -		TWA (8 h) STEL (15 min)	WEL WEL
67-63-0	Propan-2-ol	400 500	999 1250		TWA (8 h) STEL (15 min)	WEL WEL
8050-09-7	Rosin-based solder flux fume	- -	0.05 0.15		TWA (8 h) STEL (15 min)	WEL WEL

8.2) Exposure controls



Appropriate engineering controls: If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

8.3) Personal protection

Protective and hygiene measures: Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection: Suitable eye protection: goggles.

Hand protection: When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistence to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Additional protection measures for the hands
Hand protection: DIN EN 374
CR (polychloroprenes, Chloroprene rubber)
Thickness of glove material: 0,65 mm
penetration time (maximum wearing period): > 120 min.
NBR (Nitrile rubber)
Thickness of glove material: 0,4 mm
penetration time (maximum wearing period): > 480 min.

	Breakthrough times and swelling properties of the material must be taken into consideration. Take recovery periods for skin regeneration. In the case of wanting to use the gloves again, clean them before taking off and air them well. Use gloves only once. When handling with chemical substances, protective gloves must be worn with CE label including the four control digits. Before using check leak tightness / impermeability.
Skin protection:	Flame-retardant protective clothing. Wear anti-static footwear and clothing.
Respiratory protection:	In case of inadequate ventilation wear respiratory protection. (In case of inadequate ventilation) wear respiratory protection. Use appropriate respiratory protection. Use only respiratory protection equipment with CE-symbol including four-digit test number. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, closed-circuit breathing apparatus must be used! Filtering device (full mask or mouthpiece) with filter: A
Environmental exposure controls	No special measures are necessary.

9.) PHYSICAL AND CHEMICAL PROPERTIES

9.1) Information on basic physical and chemical properties

Physical state:	liquid	
Colour:	light yellow	
Odour:	Alcohol	
		Test-method
pH-Value:	not applicable etc.:	
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	ca. 80 °C	
Flash point:	12 °C	
Flammability		
Solid:	not applicable	
Gas:	not applicable	
Lower explosion limits:	2 vol. %	
Upper explosion limits:	12 vol. %	
Auto-ignition temperature		
Solid:	not applicable	
Gas:	not applicable	
Decomposition temperature:	not determined	
Oxidizing properties:	Not oxidizing.	
Vapour pressure: (at 20°C)	48 hPa	
Vapour pressure: (at 50°C)	236 hPa	

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Density:	ca. 0,8 g/cm³
Water solubility:	slightly soluble
Solubility in other solvents:	not determined
Partition coefficient:	not determined
Vapour density:	not determined
Evaporation rate:	not determined
Solvent content:	ca. 97 %
9.2) Other information	
Solid content:	not determined

10.) STABILITY AND REACTIVITY

10.1) Reactivity	Flammable, Ignition hazard. No risks worthy of mention.
10.2) Chemical stability	Stability and reactivity: Yes
10.3) Possibility of hazardous reactions	Violent reaction with: Oxidizing agents, strong.
10.4) Conditions to avoid	Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.
10.5) Incompatible materials	Alkali metals.
10.6) Hazardous decomposition products	Thermal decomposition can lead to the escape of irritating gases and vapours.

11.) TOXICOLOGICAL INFORMATION

11.1) Information on toxicological effects

Acute toxicity

adipic acid

CAS No.	Exposure routes	Method	Dose	Species	Sources
124-04-9	oral	LD50 mg/kg	ca.5700	Rat	
	inhalative (4 h) aerosol	LC50	>7,7mg/l	Rat	

Itaconic acid

CAS No.	Exposure routes	Method	Dose	Species	Sources
97-65-4	oral	LD50 mg/kg	>2000 mg/kg	Rat	

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP]

12.) ECOLOGICAL INFORMATION

12.1) Toxicity:

The product is not: Ecotoxic.

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adipic acid
CAS-Nr. 124-049

Aquatic toxicity	Method	Dose	h	Species	Source
Acute fish toxicity	LC50	230 mg/l	96	Leuciscus idus	
Acute algae toxicity	ErC50	31 mg/l	72	Desmodes-mus subspicatus	IUCLID
acute crustacea toxicity	EC50	86 mg/l	48	Daphnia magna	

12.2) Persistence and degradability

The product has not been tested.

12.3) Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

Chemical name	CAS No	Log Pow
adipic acid	124-04-9	0,081

12.4) Mobility in soil

The product has not been tested.

12.5) Results of PBT and vPvB assessment

The product has not been tested.

12.6) Other adverse effects:

No information available.

Further information:

Avoid release to the environment.

13.) DISPOSAL CONSIDERATIONS

13.1) Waste treatment methods

Advice on disposal:

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused and used products:

140603
WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (except 07 and 08); waste organic solvents, refrigerants and foam/aerosol propellants; other solvents and solvent mixtures Classified as hazardous waste.

Waste disposal number of contaminated packaging:

150102
WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging:

Wash with plenty of water. Completely emptied packages can be recycled.

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14.) TRANSPORT INFORMATION	
14.1) Land transport ADR/RID/GGVSE	
UN number:	UN1993
UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (propan-2-ol; isopropyl alcohol; isopropanol
Transport hazard class(es):	3
Packing group:	II
Hazard label:	3
	
Classification code:	F1
Special Provisions:	274 601 640C
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E
14.2) Inland waterways transport (ADN)	
UN number:	UN1993
UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (propan-2-ol; isopropyl alcohol; isopropanol)
Transport hazard class(es):	3
Packing group:	II
Hazard label:	3
	
Classification code:	F1
Special Provision:	274 601 640C
Limited quantity:	1 L
Excepted quantity:	E2
14.3) Marine transport (IMDG)	
UN number:	UN1993
UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (propan-2-ol; isopropyl alcohol; isopropanol)
Transport hazard class(es):	3
Packing group:	II
Hazard label:	3
	

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Special Provision:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-E
Segregation group:	IMDG-Code segregation group not applicable.
14.4) Air transport (ICAO)IATA/DGR:	
UN number:	UN1993
UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (propan-2-ol; isopropyl alcohol; isopropanol)
Transport hazard class(es):	3
Packing group:	II
Hazard label:	3 
Special Provisions:	A3
Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2
IATA-packing instructions-Passenger:	353
IATA-max. quantity-Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L
14.5) Environmental hazards	
ENVIRONMENTALLY HAZARDOUS:	no
14.6) Special precautions for user	**Warning:** Combustible liquid.
14.7) Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	not applicable.

15.) REGULATORY INFORMATION	
15.1) Safety, health and environmental regulations/legislation specific for the substance or mixture	
EU regulatory information	
2010/75/EU (VOC):	100 %
2004/42/EC (VOC) :	100 %
Additional information	**To follow:** 850/2004/EC, 79/117/EEC, 689/2008/EC.

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	National regulatory information	
	Employment restriction: Water contaminating class (D): Skin resorption/Sensitization:	Observe employment restrictions for young people. 1 – slightly water contaminating. Causes allergic hypersensitivity reactions.
15.2)	**Chemical safety assessment**	Chemical safety assessment for substances in this mixture were not carried out.
16.)	**OTHER INFORMATION**	
	Abbreviations and acronyms:	ADR: (Accord européen sur le Transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonized 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 LC50 : Lethal concentration, 50 % LD50 : Lethal dose, 50 %
	Relevant R-phrases (Number and full text):	11 Highly flammable. 36 Irritating to eyes. 41 Risk of serious damage to eyes. 43 May cause sensitisation by skin contact. 67 Vapours may cause drowsiness and dizziness.
	Relevant H- and EUH-phrases (Number and full text):	H225 Highly flammable liquid and vapour. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. EUH208 Contains Rosin, colophony. May produce an allergic reaction.
	Further information	The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.
	Revised date:	22.05.2015
	Revision No:	4.02

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractors`s safety data sheet).