

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	e name: Fluxi FL 88 LF	Flux Dispenser	F-SW 33 DIN EN 29454 / 1.2.3.A
1.)	IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING		
1.1)	Manufacturer Supplier: Address:	5	Fel. 09342 - 6413 Fax: 09342 - 6417
	Responsible Department: Emergency telephone number:	QS	
	Product identifier:	Flux dispenser FL 88 LF	
1.2)	Relevant identified uses of the substance or mixture and uses advised against:		
	Use of the substance/mixture:	Fluxes Industrial use of processing aids. Process regulator or aid. Surface active agent.	
	Uses advised against:	Do not use for private purposes (househo	old).
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 diz:	ziness.
	Classification according to Regulation (EC) No. 1272/2008 [CLP]		
	Hazard categories:	Flammable liquid: Flam. Liq. 2 Serious eye damage/eye irritation: Eye Specific target organ toxicity – single	
	Hazard statements:	Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.	

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2.2)	Label elements		
	Hazardous components which must be listed on the label	Propan-2-ol; isoprop	oyl alcohol; isopropanol
	Signal word:	Danger	
	Pictograms:	GHS02-GHS07	
	Hazard statements:	H225 H319 H336	Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.
	Precautionary statements:	P210 P233	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed.
		P241	Use explosion-proof electrical/ventilating/lighting equipment.
		P242 P243	Use only non-sparking tools. Take precautionary measures against static discharge.
		P261 P271	Avoid breathing dust/fume/gas/mist/vapours/spray. 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 P305+P351+P338	Call a POISON CENTER/doctor if you feel unwell. 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 P403+P233	Keep cool. Store in a well-ventilated place. Keep container tightly closed.
		P405 P501	Store locked up. Dispose of contents/container to Dispose of this material and its container to hazardous or special waste collection point.
2.3)	Other hazards	No information avail	able.

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3.)	COMPOSITION / INFOR	RMATION ON						
3.1)	3.1) Mixtures							
	Chemical characterizat	tion:	Contains:	Alcohol, Activate	or, resin			
3.2)	Mixtures							
Hazaı	dous components:							
Che	mical name			Quantity %	Classification according to Directive 67/548/EEC Classification according to Regulation (EC) Nr. 1272/2008 [CLP]			
	an-2-ol; isopropyl hol; isopropanol	EC No 200-661-7 CAS No 67-63-0 Index No 603-11		70-100	F – Highly flammable, Xi – Irritant, R11-36- 67 Flam. Liq.2, Eye Irrit. 2, STOT SE 3; H225,			
	- ,	REACH No EC No 204-673-3			H319, H336 Xi – Irritant R36			
adip	ic acid	CAS No 124-04-9 Index No 607-14 REACH No	-	1-5	Eye Irrit. 2; H319			
Full to	ext of R-, H- and EUH-ph Further information	irases: see sectio	Contains: According		or the corresponding national regulations the labelled.			
4.)	FIRST AID MEASURES	<u>i</u>						
4.1)	Description of first aid	measures						
	General information:		In case of accident or unwellness, seek medical advice immediately (show directions for use safety data sheet if possible).					
	After inhalation:		Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use safety data sheet if possible).					
	After contact with skin	:	Wash with plenty of water. Take off contaminated clothing and wash it before reuse.					
	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)	4.2) Most important symptoms and effects, both acute and delayed			Rinse mouth immediately and drink plenty of water.				
4.3)	<ol> <li>Indication of any immediate medical attention and special treatment needed</li> </ol>			Treat symptomatically. No known symptoms to date.				

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5.)	FIREFIGHTING MEASURES			
5.1)	Extinguishing media Suitable extinguishing media:	Carbon dioxide (CO2), foam, extinguishing powder.		
	Unsuitable extinguishing media:	D powder, water		
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, eyes 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. Treat the recovered material as Prescribed in the section on waste disposal.		
		See protective measures under point 7 and 8.		
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.		
	Further information on handling:	Avoid contact with skin and eyes. Do not spray on naked flames or any incandescent material.		

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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.
	Further information on storage conditions:	Always close containers tightly after the removal of product. Keep container tightly closed. Protect against direct sunlight.
7.3)	Specific end use(s)	Surface active agent. Further information: refer to Technical Data Sheet.
8.)	EXPOSURE CONTROLS / PERSONAL PROTECTION	
8.1)	Control parameters	
Expo	sure limits (EH40)	

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

Additional advice on limit values:	Use apr

8.2) Exposure controls

Use appropriate respiratory protection.



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

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		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: Odour:	colourless - light red alcohol		
		Test-method		
	pH-Value:	not applicable etc.:		
	<u>Changes in the physical state</u> Melting point: Initial boiling point and boiling range: Flash point:	not determined ca. 80 ℃ 12 ℃		
	Flammability Solid: Gas: Lower explosion limits: Upper explosion limits: Ignition temperature:	not applicable not applicable 2 vol. % 12 vol. % 425 ℃		

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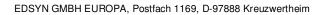
	<u>Auto-ignition temperature</u> Solid: Gas: Decomposition temperature:	not applicable not applicable not determined		
	Oxidizing properties: Vapour pressure (at 20 °C): Vapour pressure (at 50 °C): Density: Water solubility:	Not oxidizing. 48 hPa 236 hPa ca. 0,8 g/cm <sup>3</sup> slightly soluble		
0.2)	Solubility in other solvents: Partition coefficient: Vapour density: Evaporation rate: Solvent content: Other information	not determined not determined not determined not determined ca. 97 %		
9.2)	Solid content:	not determined		
		In contact with water do not emit flammable gases. Thermal decomposition at $^{\circ}\!$		
10.	STABILITY AND REACTIVITY			
10.1)	Reactivity	Flammable, Ignition hazard. No risks worthy of mention.		
10.2)	Chemical stability	Stability and reactivity: Yes. In contact with water do not emit flammable gases.		
10.3)	Possibility of hazardous reactions	Reacts violently with peroxides. Alkali metals.		
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	No data available.		
10.6)	Hazardous decomposition products	Thermal decomposition can lead to the escape of irritating gases and vapours.		
	Further information	No special measures are necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used. Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.		
11.)	TOXICOLOGICAL INFORMATION			
11.1)	Information on toxicological effects			
	Toxicocinetics, metabolism and distribution	No data available		



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	Acute toxicity:	adipic acid					
		CAS No	Exposure routes	Method	Dose	Species	Source
		124-04-9	oral	LD50	ca.5700 mg/kg	Rat	
			inhalative (4 h) aerosol	LC50	>7,7mg/l	Rat	
	Additional information on tests	This mixture 1272/2008 [0		as hazardo	ous according	g to regulation	(EC) No.
12.)	ECOLOGICAL INFORMATION						
12.1)	Toxicity	The product	is not: Ecoto	xic.			
		<u>adipic acid</u> <u>CAS No 124</u>	<u>-04-9</u>				
		Aquatic- toxicity	Method	Dose	[h] [d]	Species	Source
		Acute fish toxicity	LC50	230 mg	g/l 96 h	Leuciscus idus	
		Acute algae toxicity	e ErC50	31 mg/	l 72 h	Desmodes- mus subspicatus	IUCLID
		Acute crustacea toxicity	EC50	86 mg/	l 48 h	Daphnia magna	
12.2)	Persistence and degradability					e determined tents (see section	
12.3)	Bioaccumulative potential		n potential lor	nger term o		on/degradation e environmenta	
		Partition co		ctanol/wat	er	Log Pow	1
		adipic acid	lame	124-04-9		0,081	
12.4)	Mobility in soil	No data avai	lable.				
12.5)	Results of PBT and vPvB assessment:	This substance does not meet the criteria for classification as PBT or vPvB.					
12.6)	Other adverse effects	No data avai	lable.				
	Further information	Avoid release	e to the envir	onment.			
		The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the single components (see section 3).				•	

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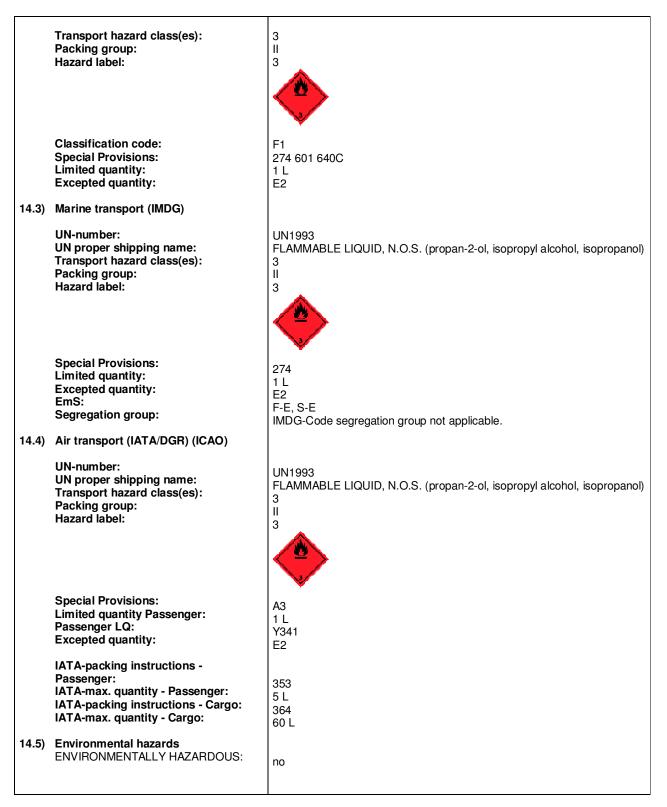


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13.)	DISPOSAL CONSIDERATIONS	
13.1)	Waste treatment methods	
	Advice on disposal	Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.
	Waste disposal number of waste from residues/unused products:	<b>140603</b> 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 used product:	<b>140603</b> 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:	<b>150102</b> 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.
14.)	Transport information	
14.1)	Land transport (ADR/RID) GGVSE:	
	UN-number: UN proper shipping name: Transport hazard class(es): Packing group: Hazard label:	UN1993 FLAMMABLE LIQUID, N.O.S. (propan-2-ol, isopropyl alcohol, isopropanol) 3 II 3
	Classification code: Special Provisions: Limited quantity: Excepted quantity: Transport category: Hazard No: Tunnel restriction code:	F1 274 601 640C 1 L E2 2 33 D/E
14.2)	Inland waterways transport (ADN) UN-number: UN proper shipping name:	UN1993 FLAMMABLE LIQUID, N.O.S. (propan-2-ol, isopropyl alcohol, isopropanol)

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14.6)	Special precautions for user	WARNING: Combustible liquid. Do not allow uncontrolled discharge of product into the environment.		
14.7)	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC-Code	Not applicable etc.:		
	Other applicable information	Discharge into the environment must be avoided.		
15.)	<b>REGULATORY INFORMATION</b>			
15.1)	Safety, health and environmental regulations/legislation specific for the substance or mixture			
	EU regulatory information			
	2010/75/EU (VOC):	99,1 %		
	2004/42/EC (VOC):	96,6 %		
	Additional information	To follow: 850/2	2004/EC, 79/117/EEC, 689/2008/EC.	
	National regulatory information Employment restrictions:	Observe employ	yment restrictions for young people.	
	Water contaminating class (D):	1 - slightly wate	r contaminating	
15.2)	Chemical safety assessment	Chemical safety assessments for substances in this mixture were not carried out.		
16.)	OTHER INFORMATION			
	Abbreviations and acronyms:	ADR: IMDG: IATA: GHS: EINECS: ELINCS: CAS: LC50 : LD50 :	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) International Maritime Code for Dangerous Goods International Air Transport Association Globally Harmonized System of Classification and Labelling of Chemicals European Inventory of Existing Commercial Chemical Substances European List of Notified Chemical Substances Chemical Abstracts Service Lethal concentration, 50 % Lethal dose, 50 %	
	Relevant R-phrases (number and full text):	11 36 67	Highly flammable Irritating to eyes Vapours may cause drowsiness and dizziness	
	Relevant H-and EUH-phrases (number and full text):	H225 H319 H336	Highly flammable liquid and vapour Causes serious eye irritation May cause drowsiness or dizziness	



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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.
Revision date:	22.05.2015
Revision No.:	2.02

(The data for the hazardous ingredients were taken respectively from the last version of the subcontractor's safety data sheet).