Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

29. Jan. 2019

Safety Data Sheet according to 1907/2006/EC, Article 31

Trad	e name: FL22YFL	Flux gel	F-SW 32 Typ 1.2.3.A DIN EN 29454
1.)	IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING		
1.1)	Details of the supplier		
	Manufacturer/Supplier: Address:	EDSYN GMBH EUROPA Finkenweg 2 Tel. 0934 D 97892 Kreuzwertheim Fax: 0934	
	Informing department: Emergency telephone number:	Quality Tel. 09342 As above or next toxicological information of	
	Product identifier:		
1.2)	Relevant identified uses of the substance or mixture and uses advised against	No further relevant information available.	
	Application of the substance/the preparation:	Soldering flux.	
2.)	HAZARDS IDENTIFICATION		
2.1)	Classification of the substance or mixture		
	Classification according to Regulation (EC) No 1272/2008 Classification according to Directive 67/548/EEC or Directive 1999/45/EC	GHS07 Skin Irrit.2 H315 Causes skin irrit Eye Irrit 2 H319 Causes serious Skin Sens. 1 H317 May cause and Aquatic Chronic 3 H412 Harmful to aqua Xi; Irritant R36 Irritating to eyes. Xi; Sensitising	s eye irritation. allergic skin reaction.

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	R52/53 F	- Harmfı	ause sensitisation by skin contact. ul to aquatic organisms, may cause long-term adverse in the aquatic environment.
Classification system:	The classification is according to the latest editions of the EU-lists, and extended by company and literature data.		
Label elements			
Labelling according to Regulation (EC) No 1272/2008	The product is classified and labelled according to the CLP regulation.		
Hazard pictograms:			
	<!-- -->	〈!〉	
		HS07	
_	Warning		
Hazard-determining components of labelling:			opropyl-1, 4a-dimethylphenanthren-1-methanol.
Hazard statements:	H315 H319		Causes skin irritation. Causes serious eye irritation.
	H317 H412		May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.
Precautionary statements:	P280		Wear protective gloves/protective clothing/eye protection / face protection.
	P273 P303+P361+P	P353	Avoid release to the environment. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with
	P305+P351+P	2338	water / shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P333+P313		If skin irritation or rash occurs: Get medical advice / attention.
Other hazards			
Results of PBT- and vPvB-assessment:			
PBT: vPvB:			
COMPOSITION/INFORMATION ON INGREDIENTS			
Chemical characterization: Mixtures	Description: Mixture of the substances listed below with non hazardous additions.		
	Label elements Labelling according to Regulation (EC) No 1272/2008 Hazard pictograms: Signal word: Hazard-determining components of labelling: Hazard statements: Precautionary statements: Other hazards Results of PBT- and vPvB- assessment: PBT: vPvB: COMPOSITION/INFORMATION ON INGREDIENTS Chemical characterization:	Classification system: Label elements Labelling according to Regulation (EC) No 1272/2008 Hazard pictograms: Warning Rosin, esterific tetradecahydro Hazard statements: H315 H319 H317 H412 Precautionary statements: P280 P273 P303+P361+F P305+P351+F P3	Classification system: Label elements Labelling according to Regulation (EC) No 1272/2008 Hazard pictograms: GHS07 Warning Rosin, esterified. tetradecahydro-7-ist Hazard statements: Hazard statements: Precautionary statements: P280 P273 P303+P351+P353 P305+P351+P338 P333+P313 Other hazards Results of PBT- and vPvB-assessment: PBT: vPvB: COMPOSITION/INFORMATION ON INGREDIENTS Chemical characterization: Mixtures Mixtures The classification is extended by compa

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CAS:83137-13-7	Rosin, esterified	3-<10%		
EINECS: 280-192-2	Xi R43	0 10/0		
	♦ Skin Sens.1, H317			
CAS: 1072-62-4	2-Ethylimidazole	3-<10%		
EINECS: 214-011-5	Xn R22; X Xi R36/38			
	① Acute Tox.4, H302; Skin Irrit 2, H315; Eye Irrit.2; H319			
CAS : 635-51-8	phenylsuccinic acid	3-<10%		
EINECS : 211-238-1	Xi R36/37/38			
CAC, 10000 00 C	Skin Irrit.2, H315; Eye Irrit.2, H319; STOT SE 3, H335	0 .100/		
CAS: 13393-93-6 EINECS: 236-476-3	tetradecahydro-7-iisopropyl-1, 4a-dimethylphenanthren-1-methanol Xi R43	3-<10%		
	R53			
	Skin Sens 1, H317; Aquatic Chonic 4, H413			
CAS: 61791-14-8	Amines, coco alkyl, ethoxylated	3-<10%		
Polymer	Xn R22; Xi R36; N R51/53			
	Aquatic Chronic 2, H411; Acute Tox. 4, H302; Eye Irrit.2,			
CAS: 110-15-6	H319 Succinic acid	2,5-<3%		
EINECS: 203-740-4	Xi R41	2,5-2576		
	Eye Dam. 1, H318			
CAS: 1116-76-3	trioctylamine	≤ 2,5%		
EINECS: 214-242-1	Xi R36/37/38			
	Skin Irrit. 2, H315 ; Eye Irrit.2, H319 ; STOT SE 3, H335			
CAS: 498-21-5	Methylsuccinic acid	≤ 2,5%		
EINECS : 207-857-1	Xi R36/37/38			
	\$\frac{1}{\square\$}\$ Skin Irrit.2, H315; Eye Irrit.2, H319; STOT SE 3, H335			
Additional information:	For the wording of the listed risk phrases refer to sec	tion 16.		
.) FIRST AID MEASURES				
.1) Description of first aid n	neasures			
General information:	Remove contaminated clothing.			
After inhalation:	Supply fresh air; consult doctor in case of symptoms	Supply fresh air; consult doctor in case of symptoms. Wash with soap and water. If skin irritation continues, consult a doctor. Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor. Remove contact lenses, if present and easy to do		
After skin contact:				
	·			
After eye contact:				
After swallowing:		Rinse out mouth and then drink plenty of water. Get medical advice for safety reasons.		

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 4.2) Most important symptoms and effects, both acute and delayed No further relevant information available. 4.3) Indication of any immediate medical attention and special treatment needed symptomatic treatment. 	
attention and special treatment	
attention and special treatment	
5.) <u>FIREFIGHTING MEASURES</u>	
5.1) Extinguishing media	
Suitable extinguishing agents: Carbon dioxide (CO ₂), extinguishing power with water spray/fog or alcohol-resistant for	
For safety reasons unsuitable extinguishing agents: Water with a full water jet.	
5.2) Special hazards arising from the substance or mixture Under certain fire conditions, traces of excluded. Nitrogen oxides (NO _x), Carbor dioxide (CO ₂).	
5.3) Advice for firefighters	
Protective equipment: Wear self-contained breathing apparatus.	
Additional information: Cool endangered containers with water s and contaminated fire Fighting water regulations. If without risk possible, move dangerous area.	in accordance with official
6.) ACCIDENTAL RELEASE MEASURES	
6.1) Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprot adequate ventilation. Avoid contact with s vapour.	
6.2) Environmental precautions Do not allow to enter drainage system, surespective authorities in case product read	
6.3) Methods and material for containment and cleaning up Ensure adequate ventilation. Absorb with diatomite, acid binders, universal binders, or disposal in suitable containers. Disposaccording to regulations.	, sawdust). Send for recovery
6.4) Reference to other sections See section 8 for information on personal parts.	protection equipment.
7.) HANDLING AND STORAGE	
7.1) Precautions for safe handling Ensure good ventilation/exhaustion at the skin and eyes.	workplace. Avoid contact with
Information about protection against explosions and fires: Keep ignition sources away – Do not smoke	ĸe.

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7.2)	Conditions for safe storage, including
	any incompatibilities

STORAGE

Requirements to be met by storerooms and containers:

Information about storage in one common storage facility:

Further information about storage conditions:

7.3) Specific end use(s)

Observe all local and national regulations for storage of water polluting products.

Store away from foodstuffs.

Store container in a well ventilated position. Store in cool, dry conditions in well sealed containers

No further relevant information available.

8.) EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:

No further data; see item 7.

8.1) Control parameters

Components with critical values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:

The lists that were valid during the compilation were used as basis.

8.2) Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Avoid contact with the eyes. Avoid close or long term contact with the skin. Do not inhale gases / fumes / aerosols. Use skin protection cream for preventive skin protection. Wash hands during breaks and at the end of the work. Do not eat, drink or smoke while working. Keep away from foodstuffs, beverages and foot.

Breathing equipment:

Use breathing protection with high concentrations. If all workplace limits are observed and good ventilations is ensured, no special precautions necessary.

Protection of hands:

Protection gloves.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. The glove material has to be impermeable and resistant to the product/the substance/the preparation. Check the permeability prior to each renewed use of the glove. To avoid skin problems reduce the wearing of gloves to the required minimum. Due to missing tests no recommendation to the glove material can be given for the product/the preparation/the chemical mixture.

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Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

Protective gloves should be replaced at first signs of wear. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable

Butyl rubber - BR

Fluorocarbon rubber (Viton) - FKM

Eye protection: Tightly sealed safety glasses.

Body protection: Protective work clothing. Body protection must be chosen depending on

activity and possible exposure.

Limitation and supervision of exposure into the environment:

Do not allow to enter drainage system, surface or ground water.

9.) PHYSICAL AND CHEMICAL PROPERTIES

9.1) Information on basic physical and chemical properties

General information

Appearance:

Form:

Colour: Smell:

Odour threshold:

pH-value:

Change in condition

Melting point/Melting range: Boiling point/Boiling range:

Flash point:

Inflammability (solid, gaseous): Ignition temperature:

Decomposition temperature:

Self-inflammability:

liquid

different according to colour

characteristic not determined

not determined

not determined

not determined

124 °C (ASTM D93 (Pensky-Martens))

not determined. 186 °C (DIN 51794)

not determined. Product is not selfigniting.

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9.2.)	Danger of explosion: Critical values for explosion, Lower Critical values for explosion, Upper: Oxidizing properties: Vapour pressure: Density at 20 °C: Relative density: Vapour density (AIR = 1): Evaporation rate: Solubility in / Miscibility with water: Partition coefficient (n-octanol/water): Viscosity dynamic: Viscosity kinematic: Other information	Product is not explosive. not determined. not determined. Not classified as oxidising. not determined. 1 g/cm³ not determined. not determined. not determined. not miscible or difficult to mix. not determined. not determined. not determined. not determined. not determined. not determined.		
5.2.)	Other information	Further information please refer to technical data sheet.		
10.)	STABILITY AND REACTIVITY			
10.1)	Reactivity	No further relevant information available		
10.2)	Chemical stability Thermal decomposition / conditions to be avoided:	No decomposition if used stored according to specifications.		
10.3)	Possibility of hazardous reactions	No dangerous reactions known.		
10.4)	Conditions to avoid	No further relevant information available.		
10.5)	Incompatible materials	Strong oxidizing agents.		
10.6)	Hazardous decomposition products	Nitrogen oxides (NO $_x$), Carbon monoxide (CO) und Carbon dioxide (CO $_2$).		
11.)	TOXICOLOGICAL INFORMATION			
11.1)	Information on toxicological effects			
	Acute toxicity: LD/LC50 values that are relevant for classification:	1072-62-4 2-Ethylimidazole		
		Oral LD50 1400mg/kg (rat)		
		110-15-6 Succinic acid		
		Oral LD50 2260mg/kg (rat) Dermal LD50 1000mg/kg (guinea pig)		
		61791-14-8 Amines, coco alkyl, ethoxylated Oral		
	Primary irritant effect			
	on the skin:	Irritant for skin and mucous membranes.		
	on the eye:	Causes serious eye irritation.		

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Subacute to chronic toxicity: no data / no sufficient data available.

Additional toxicological information: The product shows the following dangers according to the calculation

method of Regulation (EC) No. 1272/2008 (CLP/GHS):

Eye Irrit.2 Skin Irrit. 2 Skin Sens. 1

Sensitisation: May cause sensitisation by skin contact.

Repeated dose toxicity: According to information currently no known toxic effects.

CMR-effects (carcinogenity, mutagenicity and toxicity for

reproduction): According to present knowledge no CMR-effects known.

12.) ECOLOGICAL INFORMATION

12.1) Toxicity

EC50/24 h 27 mg/l (water flea (daphnia magna))
LC50/48 h 6,4 mg/l (leuciscus idus)

12.2) Persistence and degradability No further relevant information available.

12.3) Bioaccumulative potential No further relevant information available.

12.4) Mobility in soil No further relevant information available.

Ecotoxical effects:

Remark: Harmful to fish.

Additional ecological information:

Chemical Oxygen Demand (COD-value): not determined.

Biochemical Oxygen Demand (BOD5-value):

ue): not determined.

General notes: There are no quantitative data on the ecological effects of this product

available to us.

Harmful to aquatic life with long lasting effects.

Do not allow product to reach ground water, water bodies or sewage

system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

Water danger class 3 (Self-assessment):

Extremely hazardous for water.

12.5) Results of PBT- and vPvB-

assessment

PBT: Not applicable.

vPvB: Not applicable.

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12.6)	Other adverse effects	No further relevant information available.
13.)	DISPOSAL CONSIDERATIONS	
13.1)	Waste treatment methods	
	Recommendation:	Disposal must be according to official regulations.
	European waste catalogue:	Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
	Uncleaned packagings:	
	Recommendation:	Disposal must be made according to official regulations.
14.)	TRANSPORT INFORMATION	
14.1)	UN-Number ADR, IMDG, IATA	Void.
14.2)	UN proper shipping name ADR, IMDG, IATA	Void.
14.3)	Transport hazard class(es) ADR, IMDG, IATA Class	Void.
14.4)	Packing group ADR, IMDG, IATA	Void.
14.5)	Special precautions for user	Not applicable.
14.6)	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
	Transport/Additional information:	Not dangerous according to the above specifications.
	UN "Model Regulation":	-
15.)	REGULATORY INFORMATION	
15.1)	Safety, health and environmental regulations/legislation specific for the substance or mixture	
	National regulations	
	Information about limitation of use:	Employment restrictions concerning young persons must be observed.
	Decree to be applied in case of technical fault:	Directive 96/82/EC does not apply.
	Water hazard class:	Water danger class 3 (Self-assessment): extremely hazardous for water.
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	Other regulations, limitations and prohibitive regulations Substances of very high concern (SVHC) according to REACH, Article 57:		s not contain any substances, that are included in the	
		candidate list for	eventual authorisation.	
15.2)	Chemical safety assessment	A Chemical Safe	ty Assessment has not been carried out.	
16.)	OTHER INFORMAION	These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.		
	Reasons for changes:		The Material Safety Data Sheet has been revised. Changes in classification and labelling.	
	Relevant phrases:		The(se) R-resp. H-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the preparation/mixture.	
		H302 H315 H317 H318 H319 H335 H411 H413 R22 R36 R36/37/38 R36/38 R41 R43 R51/53	Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Causes serious eye irritation. May cause respiratory irritation. Toxic to aquatic life with long lasting effects. May cause long lasting harmful effects to aquatic life. Harmful if swallowed. Irritating to eyes. Irritating to eyes, respiratory system and skin. Irritating to eyes and skin. Risk of serious damage to eyes. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause long-term adverse effects in the aquatic environment.	
	Abbreviations and acronyms:	ADR IMDG: IATA GHS EINECS EILINCS 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 (division of the American Chemical Society) Lethal concentration, 50 percent Lethal dose, 50 percent	
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	Skin Irrit. 2 Eye dam. 1 Eye Irrit. 2 Skin sens. 1	Skin corrosion/irritation, Hazard Category 2 Serious eye damage/eye irritation, Hazard Category 1 Serious eye damage/eye irritation, Hazard Category 2 Sensitisation – Skin, Hazard Category 1
	STOT SE 3	Specific target organ toxicity – Single exposure, Hazard Category 3
	Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
	Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
	Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
Sources:	These data are ba	sed on information submitted by pre-suppliers.
Data compared to the previous version altered:		
Revision:	18.03.2014 / 11.05.2015	
Version:	5	