### Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

18. Nov. 2022

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

| Trade name: FL22YFL |  | Flux gel   | F-SW 32 Typ 1.2.3.A<br>DIN EN 29454             |
|---------------------|--|--|---|
| 1.)                 | IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING   |  |   |
| 1.1)                | Details of the supplier  |  |   |
|                     | Manufacturer/Supplier:<br>Address:   |  | 342 – 6413<br>342 – 6417                        |
|                     | Informing department:<br>Emergency telephone number:   | Quality Tel. 093<br>As above or next toxicological information   | 42 – 6413<br>a centre.                          |
|                     | Product identifier:  |  |   |
| 1.2)                | Relevant identified uses of the<br>substance or mixture and uses<br>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 i Eye Irrit 2 H319 Causes serior Skin Sens. 1 H317 May cause ar Aquatic Chronic 3 H412 Harmful to aquatic Chronic | us eye irritation.<br>n allergic skin reaction. |

### Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

18. Nov. 2022

R43 May cause sensitisation by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse

effects 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.

2.2) Label elements

Labelling according to Regulation (EC)

No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms:



Warning

GHS0

Signal word:

Hazard-determining components of

labelling:

Rosin, esterified.

 $tetrade cahydro-7-isopropyl-1,\,4a-dimethyl phen anthren-1-methanol.$ 

Hazard statements: H315 Causes skin irritation.

H319 Causes serious eye irritation.H317 May cause an allergic skin reaction.

**H412** Harmful to aquatic life with long lasting effects.

Precautionary statements: P280 Wear protective gloves/protective clothing/eye

protection / face protection.

**P273** Avoid release to the environment.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately

all contaminated clothing. Rinse skin with

water / shower.

**P305+P351+P338** 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.

2.3) Other hazards

Results of PBT- and vPvB-

assessment:

PBT: vPvB:

Not applicable. Not applicable.

3.) COMPOSITION/INFORMATION ON INGREDIENTS

3.1) Chemical characterization:

**Mixtures** 

**Description:** Mixture of the substances listed below with non hazardous

additions.

## Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

| CAS:83137-13-7 Rosin, esterifie |                                | Rosin, esterified   | 3-<10%  |  |  |
|---------------------------------|--------------------------------|---|---|--|--|
| EINECS: 280-192-2 Xi R43        |                                |   | 0 10,0  |  |  |
|                                 |                                | Skin Sens.1, H317   |   |  |  |
| CAS: 1072-62-4 2-Ethylimidazol  |                                | 2-Ethylimidazole  | 3-<10%  |  |  |
| EINE                            | ECS: 214-011-5                 | Xn R22; Xi R36/38   |   |  |  |
|                                 |                                | Acute Tox.4, H302; Skin Irrit 2, H315; Eye Irrit.2; H   | <del>-</del> 1319   |  |  |
| CAS: 635-51-8 phenylsuccinic    |                                | phenylsuccinic acid   | 3-<10%  |  |  |
| LIINL                           | 100 . 211-230-1                | Xi R36/37/38  | /38   |  |  |
| CAS                             | : 13393-93-6                   | Skin Irrit.2, H315; Eye Irrit.2, H319; STOT SE 3, H<br>tetradecahydro-7-iisopropyl-1, 4a-dimethylphenanthre | 1335<br>n-1-methanol 3-<10%   |  |  |
|                                 | : 13393-93-0<br>ECS: 236-476-3 | Xi R43  | 3-\1070   |  |  |
|                                 |                                | R53   |   |  |  |
|                                 |                                | Skin Sens 1, H317; Aquatic Chonic 4, H413   |   |  |  |
|                                 | : 61791-14-8                   | Amines, coco aikyi, etnoxylated   | 3-<10%  |  |  |
| Poly                            | mer                            | 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%   |  |  |
|                                 | ECS: 203-740-4                 | <b>※</b> Xi R41   | ,   |  |  |
|                                 |                                | Eye Dam. 1, H318  |   |  |  |
|                                 | : 1116-76-3                    | trioctylamine   | ≤ 2,5%  |  |  |
| EINE                            | ECS: 214-242-1                 | Xi R36/37/38  |   |  |  |
|                                 |                                | Skin Irrit. 2, H315 ; Eye Irrit.2, H319 ; STOT SE 3,  | H335  |  |  |
|                                 | : 498-21-5<br>ECS : 207-857-1  | Methylsuccinic acid   | ≤ 2,5%  |  |  |
| LIINL                           | 200 : 207-007-1                | Xi R36/37/38  |   |  |  |
|                                 |                                | Skin Irrit.2, H315; Eye Irrit.2, H319; STOT SE 3, H   | 1335  |  |  |
|                                 |                                | 1   |   |  |  |
|                                 | Additional information:        | For the wording of the listed risk phras  | es refer to section 16.   |  |  |
| .)                              | FIRST AID MEASURES             |   |   |  |  |
| .1)                             | Description of first aid r     | neasures  |   |  |  |
|                                 | General information:           | Remove contaminated clothing.   |   |  |  |
|                                 | After inhalation:              | Supply fresh air; consult doctor in case  | e of symptoms.  |  |  |
| After skin contact:             |                                | Wash with soap and water. If skin irrita  | 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 swallowing:              | Rinse out mouth and then drink plenty safety reasons.   | of water. Get medical advice for  |  |  |

## Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

| Most important symptoms and effects, both acute and delayed         | No further relevant information available.  |  |
|---|---|--|
| Indication of any immediate medical                                 |   |  |
| attention and special treatment needed                              | symptomatic treatment.  |  |
| FIREFIGHTING MEASURES   |   |  |
| Extinguishing media   |   |  |
| Suitable extinguishing agents:                                      | Carbon dioxide (CO <sub>2</sub> ), extinguishing powder spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.   |  |
| For safety reasons unsuitable extinguishing agents:                 | Water with a full water jet.  |  |
| Special hazards arising from the substance or mixture               | Under certain fire conditions, traces of other toxic gases cannot be excluded. Nitrogen oxides ( $NO_x$ ), Carbon monoxide ( $CO_2$ ) and Carbon dioxide ( $CO_2$ ).  |  |
| Advice for firefighters   |   |  |
| Protective equipment:   | Wear self-contained breathing apparatus.  |  |
| Additional information:   | Cool endangered containers with water spray jet. Dispose of fire debris and contaminated fire Fighting water in accordance with official regulations. If without risk possible, move drums with material away from dangerous area.  |  |
| ACCIDENTAL RELEASE MEASURES   |   |  |
| Personal precautions, protective equipment and emergency procedures | Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapour.   |  |
| Environmental precautions   | Do not allow to enter drainage system, surface or ground water. Inform respective authorities in case product reaches water or sewage system.   |  |
| Methods and material for containment and cleaning up                | Ensure adequate ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Send for recovery or disposal in suitable containers. Dispose of the material collected according to regulations.   |  |
| Reference to other sections   | See section 8 for information on personal protection equipment.   |  |
| HANDLING AND STORAGE  |   |  |
| Precautions for safe handling                                       | Ensure good ventilation/exhaustion at the workplace. Avoid contact with skin and eyes.  |  |
| Information about protection against explosions and fires:          | Keep ignition sources away – Do not smoke.  |  |
|   | Indication of any immediate medical attention and special treatment needed  FIREFIGHTING MEASURES Extinguishing media Suitable extinguishing agents:  For safety reasons unsuitable extinguishing agents: Special hazards arising from the substance or mixture  Advice for firefighters Protective equipment: Additional information:  ACCIDENTAL RELEASE MEASURES Personal precautions, protective equipment and emergency procedures  Environmental precautions  Methods and material for containment and cleaning up  Reference to other sections  HANDLING AND STORAGE Precautions for safe handling  Information about protection against |  |

### Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

18. Nov. 2022

| 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.

### Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

18. Nov. 2022

### 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:

liquid

different according to colour

characteristic not determined

not determined

**Change in condition** 

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

not determined not determined

Flash point:

Inflammability (solid, gaseous): Ignition temperature:

Decomposition temperature:

Self-inflammability:

124 °C (ASTM D93 (Pensky-Martens))

not determined. 186 °C (DIN 51794) not determined.

Product is not selfigniting.

## Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

|       | 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: | Product is not explosive. not determined. not classified as oxidising. not determined. 1 g/cm³ not determined. |                     |
|-------|---|--|---------------------|
| 9.2.) | Other information   | Further information please refer to technical data si  | neet.               |
| 10.)  | STABILITY AND REACTIVITY  |  |                     |
| 10.1) | Reactivity  | No further relevant information available  |                     |
| 10.2) | <b>Chemical stability</b> 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 (CO $_{2}$ ).   | Carbon dioxide      |
| 11.)  | TOXICOLOGICAL INFORMATION   |  |                     |
| 11.1) | Information on toxicological effects  |  |                     |
|       | Acute toxicity:<br>LD/LC50 values that are relevant for<br>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 (guir  | iea pig)            |
|       |   | 61791-14-8 Amines, coco alkyl, ethoxylated   |                     |
|       |   | Oral LD50 1000 - 1500mg/h  | (g (rat) (OECD 401) |
|       | Primary irritant effect   |  |                     |
|       | on the skin:  | Irritant for skin and mucous membranes.  |                     |
|       | on the eye:   | Causes serious eye irritation.   |                     |
|       |   |  |                     |

### Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

18. Nov. 2022

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

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

110-15-6 Succinic acid Aquatic toxicity:

EC50/48 h 374,2 mg/l (water flea (daphnia magna))

61791-14-8 Amines, coco alkyl, ethoxylated

EC50/24 h 27 mg/l (water flea (daphnia magna))

6,4 mg/l (leuciscus idus) LC50/48 h

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):

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.

## Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

| 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) | <b>UN-Number</b><br>ADR, IMDG, IATA  | Void.   |
| 14.2) | UN proper shipping name<br>ADR, IMDG, IATA   | Void.   |
| 14.3) | Transport hazard class(es) ADR, IMDG, IATA Class   | Void.   |
| 14.4) | Packing group<br>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.                      |
|       |  |   |
|       |  |   |

## Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

|       |  | _   |   |  |
|-------|--|---|---|--|
|       | Other regulations, limitations and prohibitive regulations |   |   |  |
|       | Substances of very high concern                            |   |   |  |
|       | (SVHC) according to REACH, Article                         |   |   |  |
|       | 57:  |   | es not contain any substances, that are included in the reventual authorisation.  |  |
| 15.2) | Chemical safety assessment                                 | A Chemical Safe   | ety 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  | Harmful if swallowed.   |  |
|       |  | H315  | Causes skin irritation.   |  |
|       |  | H317  | May cause an allergic skin reaction.  |  |
|       |  | H318  | Causes serious eye damage.  |  |
|       |  | H319<br>H335  | Causes serious eye irritation.  |  |
|       |  | H411  | May cause respiratory irritation.  Toxic to aquatic life with long lasting effects.   |  |
|       |  | H413  | May cause long lasting harmful effects to aquatic life.   |  |
|       |  | R22<br>R36  | Harmful if swallowed.<br>Irritating to eyes.  |  |
|       |  | R36/37/38   | Irritating to eyes.  Irritating to eyes, respiratory system and skin.   |  |
|       |  | R36/38  | Irritating to eyes and skin.  |  |
|       |  | R41   | Risk of serious damage to eyes.   |  |
|       |  | R43   | May cause sensitisation by skin contact.  |  |
|       |  | R51/53  | Toxic to aquatic organisms, may cause long-term   |  |
|       |  | R53   | adverse effects in the aquatic environment.  May cause long-term adverse effects in the aquatic   |  |
|       |  | Nos   | environment.  |  |
|       | 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   |  |
|       |  | EILINCS   | European List of Notified Chemical Substances   |  |
|       |  | CAS   | Chemical Abstracts Service (division of the American  |  |
|       |  | 1.050   | Chemical Society)   |  |
|       |  | LC50<br>LD50  | Lethal concentration, 50 percent<br>Lethal dose, 50 percent   |  |
|       |  |   | · '   |  |
|       |  |   |   |  |
|       |  | 1   |   |  |

## Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

|  | Acute Tox. 4 Acute toxicity, Hazard Category 4 Skin Irrit. 2 Skin corrosion/irritation, Hazard Category 2 Eye dam. 1 Serious eye damage/eye irritation, Hazard Category 1 Eye Irrit. 2 Serious eye damage/eye irritation, Hazard Category 2 Skin sens. 1 Sensitisation – Skin, Hazard Category 1 STOT SE 3 Sensitisation – Skin, Hazard Category 1 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 based on information submitted by pre-suppliers.  |
| Data compared to the previous version altered: |  |
| Revision:                                      | 18.03.2014 / 11.05.2015  |
| Version:                                       | 5  |