



ADHESIVE FLUX FLT 396 - FLUX ADHESIF FLT396

SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : ADHESIVE FLUX FLT 396

Product code : FLUX ADHESIF FLT396.

UFI : RHN0-901P-D00Q-8E53

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

Soft soldering

Use descriptor system (REACH) :

SU 3 Industrial uses : uses of substances as such or in preparations at industrial sites

PC 38 Welding and soldering products (with flux coatings or flux cores), flux products

1.3. Details of the supplier of the safety data sheet

Registered company name : MBO.

Address : Rue de la Fonderie.21800.Chevigny-Saint-Sauveur.FRANCE.

Telephone : 00 33 3 80 46 12 58. Fax : 00 33 3 80 46 66 59.

admin@mbosolder.com

www.mbosolder.com

1.4. Emergency telephone number : +33 (0)1 45 42 59 59.

Association/Organisation : INRS / ORFILA <http://www.centres-antipoison.net>.

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Skin irritation, Category 2 (Skin Irrit. 2, H315).

Eye irritation, Category 2 (Eye Irrit. 2, H319).

Skin sensitisation, Category 1 (Skin Sens. 1, H317).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS07

Signal Word :

WARNING

Product identifiers :

EC 232-475-7 ROSIN

Hazard statements :

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

Precautionary statements - Prevention :

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/ ...

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Precautionary statements - Response :

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) $\geq 0.1\%$ published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contains substances $\geq 0.1\%$ with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

It is recommended to wear safety glasses, protective gloves, to wash hands after use and to work with a good ventilation of area, and suitable fumes extraction system locally installed.

The product could cause burns during soldering.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixtures****Composition :**

Identification	(EC) 1272/2008	Note	%
CAS: 8050-09-7 EC: 232-475-7 REACH: 01-2119480418-32-0021 ROSIN	GHS07 Wng Skin Sens. 1, H317	[1]	40.00 - 80.00 %
CAS: 8000-41-7 EC: 232-268-1 REACH: 01-2119553062-49-XXXX TERPINEOL NORMAL	GHS07 Wng Skin Irrit. 2, H315 Eye Irrit. 2, H319		15.00 - 35.00 %
CAS: 124-04-9 EC: 204-673-3 REACH: 01-2119457561-38-0000 ADIPIC ACID	GHS07 Wng Eye Irrit. 2, H319	[1]	0.00 - 3.00 %
CAS: 110-15-6 EC: 203-740-4 REACH: 01-2119896114-34-XXXX SUCCINIC ACID	GHS07, GHS05 Dgr Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335	[1]	0.00 - 2.00 %

Specific concentration limits:

Identification	Specific concentration limits	ATE
CAS: 124-04-9 EC: 204-673-3 REACH: 01-2119457561-38-0000 ADIPIC ACID		oral: ATE = 5560 mg/kg BW
CAS: 110-15-6 EC: 203-740-4 REACH: 01-2119896114-34-XXXX SUCCINIC ACID		oral: ATE = 2260 mg/kg BW

Information on ingredients :

(Full text of H-phrases: see section 16)

[1] Substance for which maximum workplace exposure limits are available.



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SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. description of first aid measures

In the event of exposure by inhalation :

Take affected persons into fresh air. If irritation persists, get medical attention.

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

In the event of an allergic reaction, seek medical attention.

If burns should occur from molten metal, treat for burn and get medical assistance if necessary.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Seek medical attention immediately, showing the label.

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

No data available.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- dry chemical agents

- foam

- carbon dioxide (CO₂)

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- irritating fumes

5.3. Advice for firefighters

Wear full body protective clothing and appropriate self-contained breathing apparatus.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

Avoid skin and eyes contact and inhalation of vapors.



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For non first aid worker

Avoid any contact with the skin and eyes.
Keep persons without protective equipment away from danger area.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.
After cooling, contain and collect spillage with absorbent materials.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.
Individuals with a history of skin sensitisation should not, under any circumstance, handle this mixture.

7.1. Precautions for safe handling

Always wash hands after handling.
Remove and wash contaminated clothing before re-using.
The workplace must be ventilated and fumes must be captured at the emission source.
Wear protective shoes and gloves.

Fire prevention :

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.
Observe precautions stated on label and also industrial safety regulations.
Avoid skin and eye contact with this mixture.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Store in the original packaging, sealed, in the refrigerator (between 5 and 10°C), protected from the weather and away from sources of heat, for a period of 12 months.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
8050-09-7				SEN	
124-04-9	5 mg/m3				

- Germany - AGW (BAuA - TRGS 900, 08/08/2019) :

CAS	VME :	VME :	Excess	Notes
124-04-9		2E mg/m ³		2 (I)
110-15-6		2E mg/m ³		2 (I)

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- France (INRS - ED984 / 2020-1546) :

CAS	VME-ppm :	VME-mg/m ³ :	VLE-ppm :	VLE-mg/m ³ :	Notes :	TMP No :
8050-09-7	-	0.1	-	-	-	65.66

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
8050-09-7	0.05 mg/m ³	0.15 mg/m ³		Sen	

Derived no effect level (DNEL) or derived minimum effect level (DMEL):

ADIPIC ACID (CAS: 124-04-9)

Final use:Exposure method:
Potential health effects:
DNEL :**Workers.**Inhalation.
Short term local effects.
5 mg of substance/m³

TERPINEOL NORMAL (CAS: 8000-41-7)

Final use:Exposure method:
Potential health effects:
DNEL :**Workers.**Dermal contact.
Long term systemic effects.
1.17 mg/kg body weight/dayExposure method:
Potential health effects:
DNEL :Inhalation.
Long term systemic effects.
5.8 mg of substance/m³**Final use:**Exposure method:
Potential health effects:
DNEL :**Consumers.**Ingestion.
Long term systemic effects.
0.42 mg/kg body weight/dayExposure method:
Potential health effects:
DNEL :Dermal contact.
Long term systemic effects.
0.42 mg/kg body weight/dayExposure method:
Potential health effects:
DNEL :Inhalation.
Long term systemic effects.
1.25 mg of substance/m³**Predicted no effect concentration (PNEC):**

ADIPIC ACID (CAS: 124-04-9)

Environmental compartment:
PNEC :Soil.
0.0228 mg/kgEnvironmental compartment:
PNEC :Fresh water.
0.126 mg/lEnvironmental compartment:
PNEC :Sea water.
0.0126 mg/l

TERPINEOL NORMAL (CAS: 8000-41-7)

Environmental compartment:
PNEC :Soil.
0.052 mg/kg

Environmental compartment:

Fresh water.

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PNEC :	62 µg/l
Environmental compartment: PNEC :	Sea water. 6.2 µg/l
Environmental compartment: PNEC :	Fresh water sediment. 0.442 mg/kg
Environmental compartment: PNEC :	Marine sediment. 0.044 mg/kg
Environmental compartment: PNEC :	Waste water treatment plant. 2.57 mg/l

8.2. Exposure controls**Personal protection measures, such as personal protective equipment**

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Before handling, wear safety goggles with protective sides accordance with standard EN166.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

- protective work clothing

- protective shoes

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Independent breathing apparatus for respiratory protection :

It is recommended to set up a fumes exhaust system closer to their emission. In case of insufficient ventilation, wear suitable respiratory equipment. In case of formation of vapors, wear suitable respiratory equipment with filter.



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SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state

Physical state : Paste.

Colour

Color : amber

Odour

Odour threshold : Not stated.

Melting point

Melting point/melting range : Not specified.

Freezing point

Freezing point / Freezing range : Not stated.

Boiling point or initial boiling point and boiling range

Boiling point/boiling range : Not specified.

Flammability

Flammability (solid, gas) : Not stated.

Lower and upper explosion limit

Explosive properties, lower explosivity limit (%) : Not stated.

Explosive properties, upper explosivity limit (%) : Not stated.

Flash point

Flash point interval : Not relevant.

Auto-ignition temperature

Self-ignition temperature : Not specified.

Decomposition temperature

Decomposition point/decomposition range : Not specified.

pH

pH : Not relevant.

pH (aqueous solution) : Not stated.

Kinematic viscosity

Viscosity : Not stated.

Solubility

Water solubility : Insoluble.

Fat solubility : Not stated.

Partition coefficient n-octanol/water (log value)

Partition coefficient: n-octanol/water : Not stated.

Vapour pressure

Vapour pressure (50°C) : Not relevant.

Density and/or relative density

Density : > 1

Relative vapour density

Vapour density : Not stated.

9.2. Other information

Acid number (FLT396) : 98 mgKOH/g

9.2.1. Information with regard to physical hazard classes

No data available.

9.2.2. Other safety characteristics

No data available.



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SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

The product is stable under normal conditions of use and storage, but reacts with strong oxidisers.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

Reaction with strong oxidizers.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.

May cause an allergic reaction by skin contact.

11.1.1. Substances

Acute toxicity :

SUCCINIC ACID (CAS: 110-15-6)

Oral route : LD50 = 2260 mg/kg
Species : Rat

ADIPIC ACID (CAS: 124-04-9)

Oral route : LD50 = 5560 mg/kg
Species : Rat

Dermal route : LD50 > 7940 mg/kg
Species : Rabbit

Inhalation route (n/a) : LC50 > 7.7 mg/l
Species : Rat
Duration of exposure : 4 h

TERPINEOL NORMAL (CAS: 8000-41-7)

Oral route : LD50 > 2000 mg/kg
Species : Rat
OECD Guideline 401 (Acute Oral Toxicity)

Dermal route : LD50 > 2000 mg/kg
Species : Rabbit
OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (Dusts/mist) : LC50 > 4.76 mg/l
Species : Rat



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OECD Guideline 403 (Acute Inhalation Toxicity)

Serious damage to eyes/eye irritation :

SUCCINIC ACID (CAS: 110-15-6)

The substance produces at least in one animal effects on the cornea that are not expected to reverse or have not fully reversed within an observation period of normally 21 days.

Species : Rabbit

The substance produces at least in one animal effects on the iris that are not expected to reverse or have not fully reversed within an observation period of normally 21 days.

Species : Rabbit

The substance produces at least in one animal effects on the conjunctiva that are not expected to reverse or have not fully reversed within an observation period of normally 21 days.

Species : Rabbit

11.1.2. Mixture

No toxicological data available for the mixture.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

Do not allow product to reach ground water, water source or sewage system.

12.1.1. Substances

TERPINEOL NORMAL (CAS: 8000-41-7)

Fish toxicity :

LC50 = 80 mg/l

Species : Danio rerio

Duration of exposure : 96 h

OECD Guideline 203 (Fish, Acute Toxicity Test)

Species : Danio rerio

Duration of exposure : 96 h

Crustacean toxicity :

EC50 = 73 mg/l

Species : Daphnia magna

Duration of exposure : 48 h

OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

ADIPIC ACID (CAS: 124-04-9)

Fish toxicity :

LC50 > 1000 mg/l

Species : Brachydanio rerio

Duration of exposure : 96 h

Crustacean toxicity :

EC50 = 46 mg/l

Species : Daphnia magna

Duration of exposure : 48 h

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.



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12.2. Persistence and degradability

12.2.1. Substances

SUCCINIC ACID (CAS: 110-15-6)

Biodegradability :

no degradability data is available, the substance is considered as not degrading quickly.

ADIPIC ACID (CAS: 124-04-9)

Biodegradability :

Rapidly degradable.

TERPINEOL NORMAL (CAS: 8000-41-7)

Biodegradability :

Rapidly degradable.

ROSIN (CAS: 8050-09-7)

Biodegradability :

no degradability data is available, the substance is considered as not degrading quickly.

12.3. Bioaccumulative potential

12.3.1. Substances

ADIPIC ACID (CAS: 124-04-9)

Octanol/water partition coefficient :

log K_{ow} = 0.093

TERPINEOL NORMAL (CAS: 8000-41-7)

Octanol/water partition coefficient :

log K_{ow} < 3.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Endocrine disrupting properties

No data available.

12.7. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Exempt from transport classification and labelling.

14.1. UN number or ID number

-

14.2. UN proper shipping name

-



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14.3. Transport hazard class(es)

-

14.4. Packing group

-

14.5. Environmental hazards

-

14.6. Special precautions for user

-

SECTION 15: Regulatory information

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/643 (ATP 16)
- EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/849 (ATP 17)

- Container information:

No data available.

- Particular provisions :

No data available.

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

We cannot anticipate any and all conditions and situations under which the information and our products or the combination of both with others will be used. We do not assume any liability in the safety and suitability of our products alone or in combination with others. Users must make their own tests to determine the safety and suitability of each product used alone or with other products for their own use.

Except any previous written agreement, our products are sold without guarantee and customers must assume all liability for any loss or damage suffered by themselves or by third parties, either from handling or use of our products alone or with others. In case of any difference or variation seen during the use of the products we request that you contact our technical department.

Wording of the phrases mentioned in section 3 :

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Abbreviations :

- LD50 : The dose of a test substance resulting in 50% lethality in a given time period.
- LC50 : The concentration of a test substance resulting in 50% lethality in a given period.
- EC50 : The effective concentration of substance that causes 50% of the maximum response.
- REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.
- ATE : Acute Toxicity Estimate
- BW : Body Weight
- DNEL : Derived No-Effect Level
- PNEC : Predicted No-Effect Concentration
- UFI : Unique formulation identifier.
- STEL : Short-term exposure limit
- TWA : Time Weighted Averages
- TMP : French Occupational Illness table
- TLV : Threshold Limit Value (exposure)
- AEV : Average Exposure Value.
- ADR : European agreement concerning the international carriage of dangerous goods by Road.



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IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

GHS07 : Exclamation mark

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.