



## Safety Data Sheet

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LOCTITE MF 300S known as FLUX MF300S 20L

SDS No. : 153930

V001.2

Revision: 23.05.2016

printing date: 09.01.2019

### Section 1. Identification of the substance/preparation and of the company/undertaking

**Product name:** LOCTITE MF 300S known as FLUX MF300S 20L

**Other means of identification:** LOCTITE MF 300S 20L

**Product code:** IDH714303

**Recommended use of the chemical and restrictions on use**

**Intended use:** Liquid Flux

**Identification of manufacturer, importer or distributor**

**Importer:** Henkel Singapore Pte Ltd 401 Commonwealth Drive, #03-01/02, Haw Par Technocentre, Singapore. 149598  
Phone : +65 62660100 Fax : +65 62661161

**E-mail address of person responsible for Safety Data Sheet:** ap-ua-psra.sea@henkel.com

**Emergency information:** FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call CHEMTREC: +1 703-741-5970

### Section 2. Hazards identification

**GHS Classification:**

Substance or mixture is not classified as hazardous according to Globally Harmonized System(GHS).

**GHS label elements:**

Substance or mixture is not classified as hazardous according to Globally Harmonized System(GHS).

### Section 3. Composition / information on ingredients

**Substance or Mixture:**  
Mixture

**Declaration of hazardous chemical:**

Hazard component CAS-No.	Content	GHS Classification
Glutaric acid 110-94-1	1- 10 %	Serious eye damage/eye irritation 2 H319
Adipic acid 124-04-9	1- 10 %	Serious eye damage/eye irritation 2 H319
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	0.1- 1 %	Serious eye damage/eye irritation 1 H318 Skin Sensitization 1 H317

#### Section 4. First aid measures

<b>Inhalation:</b>	Move to fresh air. If symptoms persist, seek medical advice.
<b>Skin contact:</b>	Rinse with running water and soap. Obtain medical attention if irritation persists.
<b>Eye contact:</b>	Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.
<b>Ingestion:</b>	Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.
<b>Indication of immediate medical attention and special treatment needed:</b>	See section: Description of first aid measures

#### Section 5. Fire fighting measures

<b>Suitable extinguishing media:</b>	water, carbon dioxide, foam, powder
<b>Improper extinguishing media:</b>	High pressure waterjet
<b>Specific hazards arising from the chemical:</b>	In the event of a fire, carbon monoxide (CO), carbon dioxide (CO <sub>2</sub> ) and nitrogen oxides (NO <sub>x</sub> ) can be released.
<b>Special protection equipment and precautions for firefighters:</b>	Wear self-contained breathing apparatus.
<b>Additional fire fighting advice:</b>	In case of fire, keep containers cool with water spray.

#### Section 6. Accidental release measures

<b>Personal precautions:</b>	Wear protective equipment. Avoid contact with skin and eyes.
<b>Environmental precautions:</b>	Do not empty into drains / surface water / ground water.
<b>Clean-up methods:</b>	For small spills wipe up with paper towel and place in container for disposal. For large spills absorb onto inert absorbent material and place in sealed container for disposal.

#### Section 7. Handling and storage

<b>Handling:</b>	Use only in well-ventilated areas. Avoid skin and eye contact. Avoid breathing fumes given out during soldering. Keep out of the reach of children. See advice in section 8
<b>Storage:</b>	Store only in the original container. Ensure good ventilation/extraction.

**Section 8. Exposure controls / personal protection**

Components with specific control parameters for workplace:

ADIPIC ACID 124-04-9	<b>Value type</b>	Time Weighted Average (TWA):
	<b>mg/m<sup>3</sup></b>	5
	<b>Remarks</b>	ACGIH
ADIPIC ACID 124-04-9	<b>Value type</b>	Time Weighted Average (TWA):
	<b>mg/m<sup>3</sup></b>	5
	<b>Remarks</b>	SG PEL

- Respiratory protection:** Ensure adequate ventilation.  
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area  
Filter type: A (EN 14387)
- Hand protection:** Chemical-resistant protective gloves (EN 374).  
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):  
nitrile rubber (NBR; >= 0.4 mm thickness)  
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):  
nitrile rubber (NBR; >= 0.4 mm thickness)  
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.
- Eye protection:** Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.  
Protective eye equipment should conform to EN166.
- Body protection:** Wear suitable protective clothing.  
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.
- Engineering controls:** Ensure good ventilation/extraction.
- Hygienic measures:** Good industrial hygiene practices should be observed. Do not eat, drink or smoke while working. After handling solder wash hands with soap and water before eating, drinking or smoking.

**Section 9. Physical and chemical properties**

- Appearance:** Clear, Colorless  
Liquid
- Odor:** None
- Odor threshold (CA):** No data available.
- pH:** acidic
- Melting point / freezing point:** 0.0 °C (32 °F)
- Specific gravity:** No data available.
- Boiling point:** 100.0 °C (212 °F)
- Flash point:** Does not flash.
- Evaporation rate:** No data available.

<b>Flammability (solid, gas):</b>	No data available.
<b>Lower explosive limit:</b>	No data available.
<b>Upper explosive limit:</b>	No data available.
<b>Vapor pressure:</b> (; 20.0 °C (68 °F))	2.3300000 kPa
<b>Vapor density:</b>	No data available.
<b>Density:</b>	1.0110 g/cm <sup>3</sup>
<b>Solubility:</b>	No data available.
<b>Partition coefficient: n-octanol/water:</b>	No data available.
<b>Auto ignition:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>VOC content:</b> (2010/75/EC)	< 3 %

### Section 10. Stability and reactivity

<b>Reactivity/Incompatible materials:</b>	Strong oxidizing agents. Acids. Strong bases.
<b>Chemical stability:</b>	Stable under recommended storage conditions.
<b>Conditions to avoid:</b>	No decomposition if stored and applied as directed.
<b>Hazardous decomposition products:</b>	Thermal decomposition can lead to release of irritating gases and vapors.

### Section 11. Toxicological information

Symptoms of Overexposure: Flux fumes may irritate the nose, throat and lungs and may after prolonged/repeated exposure give an allergic reaction (asthma).  
Prolonged or repeated contact may cause eye irritation.  
Prolonged or repeated contact may cause skin irritation.  
May cause an allergic skin reaction.

**Acute oral toxicity:**

Adipic acid 124-04-9	Value type	LD50
	Value	5,560 mg/kg
	Species	rat
	Method	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Value type	LD50
	Value	> 5,000 mg/kg
	Species	rat
	Method	

**Acute inhalative toxicity:**

Adipic acid 124-04-9	Value type	LC50
	Value	> 7.7 mg/l
	Exposure time	4 h
	Species	rat
	Method	

**Acute dermal toxicity:**

2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)

**Skin corrosion/irritation:**

Adipic acid 124-04-9	Result	slightly irritating
	Exposure time	
	Species	rabbit
	Method	

**Serious eye damage/irritation:**

Adipic acid 124-04-9	Result	moderately irritating
	Exposure time	
	Species	rabbit
	Method	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Result	Category I
	Exposure time	
	Species	rabbit
	Method	EPA OTS 798.4500 (Acute Eye Irritation)

**Respiratory or skin sensitization:**

Adipic acid 124-04-9	Result	not sensitising
	Test type	
	Species	guinea pig
	Method	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Result	sensitising
	Test type	Mouse local lymphnode assay (LLNA)
	Species	mouse
	Method	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

**Germ cell mutagenicity:**

Adipic acid 124-04-9	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Result	negative
	Type of study / Route of administration	in vitro mammalian chromosome aberration test
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Result	negative
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)

**Section 12. Ecological information****Ecotoxicity:**

Do not empty into drains / surface water / ground water.

**Toxicity:**

Glutaric acid 110-94-1	Value type	LC50
	Value	330 mg/l

	Acute Toxicity Study	Fish
	Exposure time	24 h
	Species	Lepomis macrochirus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Adipic acid 124-04-9	Value type	LC50
	Value	97 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Pimephales promelas
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Adipic acid 124-04-9	Value type	EC50
	Value	85.7 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Adipic acid 124-04-9	Value type	EC50
	Value	> 100 mg/l
	Acute Toxicity Study	Algae
	Exposure time	
	Species	
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC0
	Value	> 100 mg/l
	Acute Toxicity Study	Algae
	Exposure time	
	Species	
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
Adipic acid 124-04-9	Value type	EC0
	Value	10,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	16 h
	Species	
	Method	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Value type	LC50
	Value	36 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Pimephales promelas
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Value type	EC50
	Value	99 mg/l
	Acute Toxicity Study	Daphnia
	Exposure time	48 h
	Species	Daphnia magna
	Method	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Value type	NOEC
	Value	4.6 mg/l
	Acute Toxicity Study	Algae
	Exposure time	
	Species	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
	Value type	EC50
	Value	82 mg/l
	Acute Toxicity Study	Algae
	Exposure time	
	Species	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)
	Method	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Value type	EC 50
	Value	680 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	
	Method	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

**Persistence and degradability:**

Glutaric acid 110-94-1	Result	inherently biodegradable
	Route of application	aerobic
	Degradability	90 - 100 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
	Result	readily biodegradable
	Route of application	
	Degradability	100 %
	Method	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
Adipic acid 124-04-9	Result	inherently biodegradable
	Route of application	no data
	Degradability	100 %
	Method	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
	Result	readily biodegradable
	Route of application	no data
	Degradability	96 %
	Method	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	Result	
	Route of application	aerobic
	Degradability	5 %
	Method	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

**Bioaccumulative potential / Mobility in soil:**

Glutaric acid 110-94-1	LogKow	-0.29
	Temperature	
	Method	
Adipic acid 124-04-9	LogKow	0.081
	Temperature	25 °C
	Method	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
2,4,7,9-Tetramethyldec-5-yne-4,7-diol 126-86-3	LogKow	2.8
	Temperature	22 °C
	Method	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

**Section 13. Disposal considerations**

**Product**

**Method of disposal:** Dispose of in accordance with local and national regulations.

**Packaging**

**Disposal of uncleaned packages:** Use packages for recycling only when totally empty.

**Section 14. Transport information**

**General information:**

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

### Section 15. Regulatory information

**Regulatory Information:** Workplace Safety And Health Act (Chapter 354A) Workplace Safety And Health (Approved Codes of Practice) Notification 2013 SS586 Specification for Hazard Communication for hazardous chemicals and dangerous good Part 1,2,3

**Global inventory status:**

Regulatory list	Notification
EINECS	yes
TSCA	yes
AICS	yes
DSL	yes
ENCS (JP)	yes
KECI (KR)	yes
PICCS (PH)	yes
IECSC	yes

### Section 16. Other information

**Disclaimer:** This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.