



Safety Data Sheet according to Regulation (EC) No 1907/2006

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LOCTITE 425-01 RWF 37K known as 425-01 REWORK FLUX

SDS No. : 175144
V006.0

Revision: 13.03.2019
printing date: 27.08.2019

Replaces version from: 23.01.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

LOCTITE 425-01 RWF 37K known as 425-01 REWORK FLUX

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

Intended use:
Rework flux

1.3. Details of the supplier of the safety data sheet

Henkel Ltd
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000
Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Serious eye irritation Category 2
H319 Causes serious eye irritation.

Chronic hazards to the aquatic environment Category 3
H412 Harmful to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Signal word: **Warning**

Hazard statement: **H319 Causes serious eye irritation.**
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement: P273 Avoid release to the environment.
Prevention

Precautionary statement: P337+P313 If eye irritation persists: Get medical advice/attention.
Response

2.3. Other hazards

Avoid breathing fumes given out during soldering.

After handling solder wash hands with soap and water before eating, drinking or smoking.

Keep out of reach of children.

Flux fumes may irritate the nose, throat and lungs and may after prolonged/repeated exposure give an allergic reaction (asthma).

This product contains modified rosin.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
2-phenoxyethanol 122-99-6	204-589-7 01-2119488943-21	50- 100 %	Eye Irrit. 2 H319 Acute Tox. 4; Oral H302
Rosin, hydrogenated 65997-06-0	266-041-3 01-2119487113-41	10- 20 %	Aquatic Chronic 2 H411

For full text of the H - statements and other abbreviations see section 16 "Other information".
 Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

EYE: Irritation, conjunctivitis.

Prolonged or repeated contact may cause skin irritation.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media**Suitable extinguishing media:**

water, carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released. The flux medium will give rise to irritating fumes.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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.

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

After handling solder wash hands with soap and water before eating, drinking or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated place.

Refer to Technical Data Sheet

7.3. Specific end use(s)

Rework flux

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

None

Occupational Exposure Limits

Valid for
Ireland

None

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
2-Phenoxyethanol 122-99-6	aqua (freshwater)		0,943 mg/l				
2-Phenoxyethanol 122-99-6	aqua (marine water)		0,094 mg/l				
2-Phenoxyethanol 122-99-6	aqua (intermittent releases)		3,44 mg/l				
2-Phenoxyethanol 122-99-6	sewage treatment plant (STP)		24,8 mg/l				
2-Phenoxyethanol 122-99-6	sediment (freshwater)				7,237 mg/kg		
2-Phenoxyethanol 122-99-6	sediment (marine water)				0,724 mg/kg		
2-Phenoxyethanol 122-99-6	Soil				1,26 mg/kg		
2-Phenoxyethanol 122-99-6	Predator						
Rosin, hydrogenated 65997-06-0	aqua (freshwater)		0,0016 mg/l				
Rosin, hydrogenated 65997-06-0	aqua (marine water)		0,00016 mg/l				
Rosin, hydrogenated 65997-06-0	aqua (intermittent releases)		0,016 mg/l				
Rosin, hydrogenated 65997-06-0	sediment (freshwater)				0,007 mg/kg		
Rosin, hydrogenated 65997-06-0	sediment (marine water)				0,0007 mg/kg		
Rosin, hydrogenated 65997-06-0	Soil				0,00045 mg/kg		
Rosin, hydrogenated 65997-06-0	sewage treatment plant (STP)		1000 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
2-Phenoxyethanol 122-99-6	Workers	dermal	Long term exposure - systemic effects		20,83 mg/kg	
2-Phenoxyethanol 122-99-6	Workers	inhalation	Long term exposure - systemic effects		8,07 mg/m ³	
2-Phenoxyethanol 122-99-6	Workers	inhalation	Long term exposure - local effects		8,07 mg/m ³	
2-Phenoxyethanol 122-99-6	General population	oral	Acute/short term exposure - systemic effects		9,23 mg/kg	
2-Phenoxyethanol 122-99-6	General population	dermal	Long term exposure - systemic effects		10,42 mg/kg	
2-Phenoxyethanol 122-99-6	General population	inhalation	Long term exposure - systemic effects		2,41 mg/m ³	
2-Phenoxyethanol 122-99-6	General population	oral	Long term exposure - systemic effects		9,23 mg/kg	
2-Phenoxyethanol 122-99-6	General population	inhalation	Long term exposure - local effects		2,41 mg/m ³	
Rosin, hydrogenated 65997-06-0	Workers	Inhalation	Long term exposure - systemic effects		117 mg/m ³	
Rosin, hydrogenated 65997-06-0	Workers	dermal	Long term exposure - systemic effects		17 mg/kg	
Rosin, hydrogenated 65997-06-0	General population	Inhalation	Long term exposure - systemic effects		35 mg/m ³	
Rosin, hydrogenated 65997-06-0	General population	dermal	Long term exposure - systemic effects		10 mg/kg	
Rosin, hydrogenated 65997-06-0	General population	oral	Long term exposure - systemic effects		10 mg/kg	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure adequate ventilation, especially in confined areas.

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; \geq 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; \geq 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.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	paste
	light brown
Odor	mild
Odour threshold	No data available / Not applicable
pH	Not determined
Melting point	Not determined
Solidification temperature	No data available / Not applicable
Initial boiling point	187 °C (368.6 °F)
Flash point	121 °C (249.8 °F)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density	1,0 g/cm ³
()	
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative)	Insoluble
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	500 °C (932 °F)
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with strong oxidants.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if stored and applied as directed.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 11: Toxicological information

General toxicological information:

Prolonged or repeated contact may cause skin irritation.

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
2-phenoxyethanol 122-99-6	LD50	1.850 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Rosin, hydrogenated 65997-06-0	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
2-phenoxyethanol 122-99-6	LD50	> 5.000 mg/kg	rabbit	not specified
Rosin, hydrogenated 65997-06-0	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

Fumes evolved at soldering temperatures will irritate the nose, throat and lungs. Prolonged or repeated exposure to flux fumes may result in sensitisation in sensitive workers.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
2-phenoxyethanol 122-99-6	NOAEC	> 1.000 mg/l	dust/mist		rat	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
2-phenoxyethanol 122-99-6	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Fumes emitted during soldering may irritate the eyes.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
2-phenoxyethanol 122-99-6	irritating	15 d	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
2-phenoxyethanol 122-99-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
2-phenoxyethanol 122-99-6	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2-phenoxyethanol 122-99-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-phenoxyethanol 122-99-6	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Carcinogenicity

No data available.

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
2-phenoxyethanol 122-99-6	NOAEL P < 1.875 mg/kg NOAEL F1 < 375 mg/kg NOAEL F2 < 375 mg/kg	two- generation study	oral: feed	mouse	not specified

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
2-phenoxyethanol 122-99-6		inhalation: aerosol	6 h/d 5 d/w	rat	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
2-phenoxyethanol 122-99-6	LOAEL > 500 mg/kg		13 w 5 d/w	rabbit	OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
2-phenoxyethanol 122-99-6	NOAEL 500 mg/kg		13 w 5 d/w	rabbit	OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
2-phenoxyethanol 122-99-6	NOAEL 700 mg/kg	oral: feed	13 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-phenoxyethanol 122-99-6	NOEC	23 mg/l	34 d	Pimephales promelas	OECD Guideline 210 (fish early lite stage toxicity test)
2-phenoxyethanol 122-99-6	LC50	250 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Rosin, hydrogenated 65997-06-0	LC50	1,7 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-phenoxyethanol 122-99-6	EC50	> 500 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Rosin, hydrogenated 65997-06-0	EL50		48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-phenoxyethanol 122-99-6	NOEC	9,43 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-phenoxyethanol 122-99-6	NOEC	70 mg/l	72 h	Desmodesmus subspicatus	EU Method C.3 (Algal Inhibition test)
2-phenoxyethanol 122-99-6	EC50	625 mg/l	72 h	Desmodesmus subspicatus	EU Method C.3 (Algal Inhibition test)
Rosin, hydrogenated 65997-06-0	EC50	39,6 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Rosin, hydrogenated 65997-06-0	NOEC	6,25 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2-phenoxyethanol 122-99-6	EC50	> 1.000 mg/l	30 min	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Rosin, hydrogenated 65997-06-0	EC0	> 10.000 mg/l	18 h		not specified

12.2. Persistence and degradability

The product is not biodegradable.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
2-phenoxyethanol 122-99-6	readily biodegradable	aerobic	90 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Rosin, hydrogenated 65997-06-0	readily biodegradable	aerobic	80 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

12.3. Bioaccumulative potential

No data available.

No substance data available.

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
2-phenoxyethanol 122-99-6	1,2	23 °C	EU Method A.8 (Partition Coefficient)
Rosin, hydrogenated 65997-06-0	> 4		not specified

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
2-phenoxyethanol 122-99-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Rosin, hydrogenated 65997-06-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Product disposal:

Dispose of as hazardous waste in compliance with local and national regulations.

Incineration under controlled conditions is recommended.

Disposal of uncleaned packages:

Dispose of as unused product.

Waste code

16 05 08 - discarded organic chemicals consisting of or containing dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

- 14.1. UN number**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.2. UN proper shipping name**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.3. Transport hazard class(es)**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.4. Packing group**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.5. Environmental hazards**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.6. Special precautions for user**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**
not applicable

SECTION 15: Regulatory information

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

VOC content < 3 %
(2010/75/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Great Britain):

Remarks	<p>The Health & Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations. L5:General Approved Code of Practice to the COSHH Regulations. HS(G)97:A Step by Step Guide to the COSHH Regulations. HS(G)193: COSHH essentials: Easy steps to control chemicals. IND (G)248L:Solder fume and you. IND(G)249L:Controlling health risks from rosin (colophony) based solder fluxes. Under the Management of Health and Safety at Work Regulations, employers are required to assess the particular risks to health at work of pregnant workers and workers who have recently given birth or who are breast feeding. Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, e.g COSHH Essentials.</p>
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SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

Further information:

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