



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

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LOCTITE ABLESTIK QMI3555R known as Hysol QMI3555R
(155g)

SDS No. : 255526
V002.1

Revision: 29.05.2015

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Replaces version from: 03.12.2014

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

1.1. Product identifier

LOCTITE ABLESTIK QMI3555R known as Hysol QMI3555R (155g)

Contains:

Chemical frits (containing lead)

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

Intended use:

Die attach adhesive

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@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):

Toxic to reproduction

Category 1A

H360Df May damage the unborn child. Suspected of damaging fertility.

Specific target organ toxicity - repeated exposure

Category 2

H373 May cause damage to organs through prolonged or repeated exposure.

Acute hazards to the aquatic environment

Category 1

H400 Very toxic to aquatic life.

Chronic hazards to the aquatic environment

Category 1

H410 Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:**Signal word:**

Danger

Hazard statement:

H360Df May damage the unborn child. Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Supplemental information

Restricted to professional users.

**Precautionary statement:
Prevention**

P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P281 Use personal protective equipment as required.

**Precautionary statement:
Response**

P308+P313 IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

Contains lead which may harm your health. Lead can cause birth defects and other reproductive harm.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General chemical description:**

Conductive adhesive

Base substances of preparation:

Filler
organic solvent

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	231-131-3	>= 60- < 80 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 M factor: 1.000 M factor (Chron Aquat Tox): 1.000
Silver 7440-22-4	231-131-3	>= 10- < 15 %	
Chemical frits (containing lead) 65997-18-4	266-047-6	>= 10- < 15 %	Acute Tox. 4; Oral H302 Acute Tox. 4; Inhalation H332 Repr. 1A H360Df STOT RE 2 H373
p-Menth-1-en-8-ol 98-55-5	202-680-6	>= 1- < 5 %	Eye Irrit. 2 H319 Skin Irrit. 2 H315

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, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

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

Chronic overexposure to lead may result in damage to the blood forming, nervous, urinary and reproductive systems. Severe lead toxicity will cause sterility, abortion and neonatal mortality and morbidity.

Prolonged or repeated skin contact with silver and its salts may cause a blue-gray discoloration of the skin and mucous membranes that is irreversible (Argyria).

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:

Foam, extinguishing powder, carbon dioxide.
Water spray jet

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

Danger of decomposition if exposed to heat.
See section 10.

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

Keep unprotected persons away.
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

Remove mechanically.

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

For small spills wipe up with paper towel and place in container for disposal.

Dispose of contaminated material as waste according to Section 13.

Ensure adequate ventilation.

6.4. Reference to other sections

See advice in section 8

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

Extract when the product is heated.

Avoid naked flames, sparking and sources of ignition.

See advice in section 8

Avoid skin and eye contact.

Hygiene measures:

Do not eat, drink or smoke while working.

Keep away from food, beverages and animal feed.

Wash hands before work breaks and after finishing work.

Extractors are required on all machines used for thermal or for cutting and grinding processes.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.

Protect against contamination.

Store in a cool, dry place.

Must be stored in a room with spill collection facilities.

Keep away from heat and direct sunlight.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

Do not store with strongly acidic or strongly alkaline products.

7.3. Specific end use(s)

Die attach adhesive

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational Exposure Limits**

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Silver 7440-22-4 [SILVER (METALLIC)]		0,1	Time Weighted Average (TWA):		EH40 WEL
Silver 7440-22-4 [SILVER, METALLIC]		0,1	Time Weighted Average (TWA):	Indicative	ECTLV
Silver 7440-22-4 [SILVER (METALLIC)]		0,1	Time Weighted Average (TWA):		EH40 WEL
Silver 7440-22-4 [SILVER, METALLIC]		0,1	Time Weighted Average (TWA):	Indicative	ECTLV

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

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

Do not inhale vapors and fumes.

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:

Goggles which can be tightly sealed.

or

protective shield

Skin protection:

Wear protective equipment.

Suitable protective clothing

apron

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	liquid pasty silver
Odor	of solvent
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point (1.013 hPa)	> 78 °C (> 172.4 °F)
Flash point	78,5 °C (173.3 °F); ASTM D3278
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density (20 °C (68 °F))	3,8 g/cm ³
Bulk density	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
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Not miscible or difficult to mix
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable

Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	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

Oxidizing agents, acids, halogens and halogenated compounds.

Peroxides.

Water, Amines, Alkalis, Alcohols.

Forms an explosive mixture with nitric acid

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Danger of decomposition if exposed to heat.

Heat, flames, sparks and other sources of ignition.

10.5. Incompatible materials

See section reactivity

10.6. Hazardous decomposition products

Hydrocarbons

Metallic oxides

At higher temperature carbon oxides and nitrogen oxides may be generated.

Polymerization may occur at elevated temperature or in the presence of incompatible materials.

May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

See section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General toxicological information:

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

STOT-repeated exposure:

May cause damage to organs through prolonged or repeated exposure.

Dermal toxicity:

Prolonged or repeated skin contact with silver and its salts may cause a blue-gray discoloration of the skin and mucous membranes that is irreversible (Argyria).

Skin irritation:

Prolonged or repeated contact may cause skin irritation.

Eye irritation:

Prolonged or repeated contact may cause eye irritation.

Expected to cause eye irritation by abrasive action of tiny metal particles

Avoid eye contact.

Reproductive toxicity:

May damage the unborn child. Suspected of damaging fertility.

Other remarks:

Chronic overexposure to lead may result in damage to the blood forming, nervous, urinary and reproductive systems. Severe lead toxicity will cause sterility, abortion and neonatal mortality and morbidity.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
p-Menth-1-en-8-ol 98-55-5	LD50	2.830 mg/kg	oral		mouse	
p-Menth-1-en-8-ol 98-55-5	LD50	4.300 mg/kg			rat	

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
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Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
p-Menth-1-en-8-ol 98-55-5	LD50	> 3.000 mg/kg	dermal		rabbit	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Silver 7440-22-4	slightly irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
p-Menth-1-en-8-ol 98-55-5	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Silver 7440-22-4	slightly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

SECTION 12: Ecological information**General ecological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Other adverse effects:

The product contains wastewater-relevant heavy metals. Officially determined threshold values for wastewater (also for partial flows, if applicable) and local discharge guidelines must be observed.

12.1. Toxicity**Ecotoxicity:**

Very toxic to aquatic life with long lasting effects.

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

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
p-Menth-1-en-8-ol 98-55-5	LC50	> 10 - 100 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)

12.2. Persistence and degradability

Persistence and Biodegradability:

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
p-Menth-1-en-8-ol 98-55-5	readily biodegradable	aerobic	100 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Mobility:

Cured adhesives are immobile.

Bioaccumulative potential:

No data available.

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
p-Menth-1-en-8-ol 98-55-5	2,98					

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Disposal must be made according to official regulations.

Waste code

06 04 05 - wastes containing other heavy metals

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**

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Silver)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

14.4. Packaging group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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 %
(1999/13/EC)**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

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.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H360Df May damage the unborn child. Suspected of damaging fertility.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Further information:

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.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.