

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

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Loctite Super Glue Liquid

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

# 1.1. Product identifier

Loctite Super Glue Liquid

#### **Contains:**

Ethyl 2-cyanoacrylate

**1.2. Relevant identified uses of the substance or mixture and uses advised against** Intended use:

Super glue

#### 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 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY-Email: technical.services@henkel.co.uk

# **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

Classification (CLP):	
Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	

# 2.2. Label elements

Label elements (CLP):

Hazard pictogram:	
Signal word:	Warning
Hazard statement:	H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
Supplemental information	EUH202 Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.
Precautionary statement:	<ul> <li>P261 Avoid breathing vapours.</li> <li>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P302+P352 IF ON SKIN: Wash with plenty of soap and water.</li> </ul>

#### 2.3. Other hazards

Persons suffering from allergic reactions to acrylates should avoid contact with the product.

# **SECTION 3: Composition/information on ingredients**

# 3.2. Mixtures

General chemical description: Super glue Base substances of preparation: Cyanoacrylate

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Ethyl 2-cyanoacrylate 7085-85-0	230-391-5 01-2119527766-29	80- 100 %	Eye Irrit. 2 H319 STOT SE 3 H335 Skin Irrit. 2 H315
Hydroquinone 123-31-9	204-617-8 01-2119524016-51	0,01-< 0,1 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 Carc. 2 H351 Muta. 2 H341 Acute Tox. 4; Oral H302 Eye Dam. 1 H318 Skin Sens. 1 H317 M factor: 10
Bis(2-hydroxy-3-tert-butyl-5- methylphenyl)methane 119-47-1	204-327-1	0,1-< 1 %	Repr. 2 H361

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

General information:

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Do not pull bonded skin apart. It may be gently peeled apart using a blunt object such as a spoon, preferably after soaking in warm soapy water.

Cyanoacrylates give off heat on solidification. In rare cases a large drop will generate enough heat to cause a burn. Burns should be treated normally after the adhesive has been removed from the skin.

If lips are accidentally stuck together apply warm water to the lips and encourage maximum wetting and pressure from saliva inside the mouth.

Peel or roll lips apart. Do not try to pull the lips apart with direct opposing action.

Eye contact:

If the eye is bonded closed, release eyelashes with warm water by covering with wet pad.

Cyanoacrylate will bond to eye protein and will cause periods of weeping which will help to debond the adhesive.

Keep eye covered until debonding is complete, usually within 1-3 days.

Do not force eye open. Medical advice should be sought in case solid particles of cyanoacrylate trapped behind the eyelid cause any abrasive damage.

Ingestion:

Ensure that breathing passages are not obstructed. The product will polymerise immediately in the mouth making it almost impossible to swallow. Saliva will slowly separate the solidified product from the mouth (several hours).

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

Causes serious eye irritation.

SKIN: Redness, inflammation.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

# 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:

carbon dioxide, foam, powder, water spray jet, fine water spray

#### **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) and carbon dioxide (CO2) can be released.
5.3. Advice for firefighters
Wear protective equipment.
Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures** 

### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Avoid contact with skin and eyes.

# 6.2. Environmental precautions

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

#### 6.3. Methods and material for containment and cleaning up

Remove with liquid-absorbing material (sand, peat, sawdust). 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

Open and handle container with care. Avoid skin and eye contact. Ensure that workrooms are adequately ventilated.

#### Hygiene measures:

Do not eat, drink or smoke while working. Wash hands before work breaks and after finishing work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.

For optimum shelf life store in original containers under refrigerated conditions at 2 - 8°C (35.6 - 46.4 °F) Store in a cool place, max. storage temperature 30°C. Store in a dry place. Keep container tightly sealed and store in a frost free place.

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

# 7.3. Specific end use(s)

Super glue

# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

# **Occupational Exposure Limits**

Valid for

Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Ethyl 2-cyanoacrylate 7085-85-0 [ETHYL CYANOACRYLATE]	0,3	1,5	Short Term Exposure Limit (STEL):		EH40 WEL
Hydroquinone 123-31-9 [HYDROQUINONE]		0,5	Time Weighted Average (TWA):		EH40 WEL

# **Occupational Exposure Limits**

Valid for

Ireland

Ingredient [Regulated substance]	ррт	mg/m <sup>3</sup>	• •	Short term exposure limit category / Remarks	Regulatory list
Ethyl 2-cyanoacrylate 7085-85-0 [ETHYL CYANOACRYLATE]	0,2		Time Weighted Average (TWA):		IR_OEL
Hydroquinone 123-31-9 [HYDROQUINONE]		0,5	Time Weighted Average (TWA):		IR_OEL

# **Predicted No-Effect Concentration (PNEC):**

Name on list	Environmental	Exposure	Value				Remarks
	Compartment	period					
			mg/l	ppm	mg/kg	others	
Hydroquinone 123-31-9	aqua (freshwater)					0,114 µg/L	
Hydroquinone 123-31-9	aqua (marine water)					0,0114 µg/L	
Hydroquinone 123-31-9	sediment (freshwater)					0,98 µg/kg	
Hydroquinone 123-31-9	sediment (marine water)					0,097 µg/kg	
Hydroquinone 123-31-9	aqua (intermittent releases)					0,00134 mg/L	
Hydroquinone 123-31-9	soil					0,129 µg/kg	
Hydroquinone 123-31-9	sewage treatment plant (STP)					0,71 mg/L	

### **Derived No-Effect Level (DNEL):**

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Ethyl 2-cyanoacrylate 7085-85-0	Workers	Inhalation	Long term exposure - local effects		9,25 mg/m3	
Ethyl 2-cyanoacrylate 7085-85-0	Workers	Inhalation	Long term exposure - systemic effects		9,25 mg/m3	
Ethyl 2-cyanoacrylate 7085-85-0	general population	Inhalation	Long term exposure - local effects		9,25 mg/m3	
Ethyl 2-cyanoacrylate 7085-85-0	general population	Inhalation	Long term exposure - systemic effects		9,25 mg/m3	
Hydroquinone 123-31-9	Workers	dermal	Long term exposure - systemic effects		128 mg/kg bw/day	
Hydroquinone 123-31-9	Workers	Inhalation	Long term exposure - systemic effects		7 mg/m3	
Hydroquinone 123-31-9	Workers	Inhalation	Long term exposure - local effects		1 mg/m3	
Hydroquinone 123-31-9	general population	dermal	Long term exposure - systemic effects		64 mg/kg bw/day	
Hydroquinone 123-31-9	general population	Inhalation	Long term exposure - systemic effects		1,74 mg/m3	
Hydroquinone 123-31-9	general population	Inhalation	Long term exposure - local effects		0,5 mg/m3	

**Biological Exposure Indices:** 

None

### 8.2. Exposure controls:

Respiratory protection:

Suitable breathing mask when there is inadequate ventilation. Combination filter: ABEKP (EN 14387) This recommendation should be matched to local conditions.

Hand protection:

Recommended are gloves made from Nitril rubber (Material thickness >0,1 mm, Perforation time < 30s). Gloves should be replaced after each short time contact or contamination. Available at laboratory specialized trade or at pharmacies / chemist's shops.

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374. Perforation time > 30 minutes

material thickness > 0.4 mm

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection: Goggles which can be tightly sealed. Protective eye equipment should conform to EN166.

Skin protection: 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	liquid
11	transparent
	Straw
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	80 - 93 °C (176 - 199.4 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	1,05 g/cm3
(20 °C (68 °F))	
Bulk density	No data available / Not applicable
Viscosity	30,0 - 50,0 mPa.s
0	
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative)	Insoluble
(20 °C (68 °F); Solvent: Water)	
Solubility (qualitative)	Soluble
(Solvent: Acetone)	
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

Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

See section reactivity

#### 10.4. Conditions to avoid

None if used for intended purpose.

# **10.5. Incompatible materials** See section reactivity

See section reactivity

**10.6. Hazardous decomposition products** carbon oxides.

# **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 (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following. Persons suffering from allergic reactions to acrylates should avoid contact with the product.

#### **STOT-single exposure:**

May cause respiratory irritation.

# Skin irritation:

Causes skin irritation.

Bonds skin in seconds. Considered to be of low toxicity: acute dermal LD50 (rabbit)>2000mg/kg Due to polymerisation at the skin surface allergic reaction is unlikely to occur

#### Eye irritation:

Causes serious eye irritation. Liquid product will bond eyelids. In a dry atmosphere (RH<50%) vapours may cause irritation and lachrymatory effect

#### Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
		<b>T</b> 000 <b>T</b>	<b>.</b>	unic		
Ethyl 2-cyanoacrylate	LD50	> 5.000 mg/kg	oral		rat	OECD Guideline 401 (Acute
7085-85-0						Oral Toxicity)
Hydroquinone	LD50	367 mg/kg	oral		rat	OECD Guideline 401 (Acute
123-31-9						Oral Toxicity)
Bis(2-hydroxy-3-tert-	LD50	> 10.000 mg/kg	oral		rat	•
butyl-5-						
methylphenyl)methane						
119-47-1						

# Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	LD50	> 2.000 mg/kg	dermal		rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Bis(2-hydroxy-3-tert- butyl-5-	LD50	> 10.000 mg/kg	dermal		rat	Definal Toxicity)
methylphenyl)methane 119-47-1						

### Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate	slightly irritating	24 h	rabbit	OECD Guideline 404 (Acute
7085-85-0				Dermal Irritation / Corrosion)

### Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	irritating	72 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

# Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	not sensitising		guinea pig	
Hydroquinone 123-31-9	sensitising	Guinea pig maximisat ion test	guinea pig	

# Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	negative	bacterial reverse mutation assay (e.g Ames test)			OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Hydroquinone 123-31-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)
Bis(2-hydroxy-3-tert- butyl-5- methylphenyl)methane 119-47-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)

# **Reproductive toxicity:**

Hazardous substances CAS-No.	Result / Classification	Species	Exposure time	Species	Method
Bis(2-hydroxy-3-tert- butyl-5- methylphenyl)methane 119-47-1	NOAEL P = 12,5 mg/kg	screening oral: gavage		rat	OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

# Repeated dose toxicity

Hazardous components CAS-No.	Result		Route of application	Exposure time / Frequency of treatment	Species	Method
Hydroquinone 123-31-9	NOAEL=>= mg/kg	250	oral: gavage	14 days5 days/week. 12 doses	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Hydroquinone 123-31-9	LOAEL=<= mg/kg	500	oral: gavage	14 days5 days/week. 12 doses	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

# **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 (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following. Do not empty into drains, soil or bodies of water.

# 12.1. Toxicity

Hazardous components	Value	Value	Acute	Exposure	Species	Method
CAS-No.	type		Toxicity Study	time		
Hydroquinone 123-31-9	LC50	0,638 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydroquinone 123-31-9	EC50	0,134 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation
Hydroquinone 123-31-9	EC50	0,335 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	Test) OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroquinone 123-31-9	EC 50	0,038 mg/l	Bacteria	30 min	1 /	,
Hydroquinone 123-31-9	NOEC	0,0057 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Bis(2-hydroxy-3-tert-butyl-5- methylphenyl)methane 119-47-1	EC 50	> 10.000 mg/l	Bacteria	3 h		OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

# 12.2. Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Ethyl 2-cyanoacrylate 7085-85-0		aerobic	57 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Hydroquinone 123-31-9	readily biodegradable	aerobic	75 - 81 %	EU Method C.4-E (Determination of the "Ready" BiodegradabilityClosed Bottle Test)
Bis(2-hydroxy-3-tert-butyl-5- methylphenyl)methane 119-47-1	under test conditions no biodegradation observed	aerobic	0 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

# 12.3. Bioaccumulative potential / 12.4. Mobility in soil

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Ethyl 2-cyanoacrylate 7085-85-0	0,776				22 °C	EU Method A.8 (Partition Coefficient)
Hydroquinone 123-31-9	0,59					EU Method A.8 (Partition Coefficient)
Bis(2-hydroxy-3-tert-butyl-5- methylphenyl)methane 119-47-1	6,25				20 °C	OECD Guideline 107 (Partition Coefficient (n- octanol / water), Shake Flask Method)

# 12.5. Results of PBT and vPvB assessment

Hazardous components	PBT/vPvB
CAS-No.	
Hydroquinone	Not fulfilling PBT (persistent/bioaccummulative/toxic) criteria
123-31-9	
Bis(2-hydroxy-3-tert-butyl-5-	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
methylphenyl)methane	Bioaccumulative (vPvB) criteria.
119-47-1	

# 12.6. Other adverse effects

No data available.

# SECTION 13: Disposal considerations

### Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

# Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

# Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances

# **SECTION 14: Transport information**

14.1.	UN number	
	ADR	Not dangerous goods
	RID	Not dangerous goods
	ADN	Not dangerous goods
	IMDG	Not dangerous goods
	IATA	3334
	IATA	5554
14.2.	UN proper ship	pping name
	ADR	Not dangerous goods
	RID	Not dangerous goods
	ADN	Not dangerous goods
	IMDG	Not dangerous goods
	IATA	Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
14.3.	Transport haza	ard class(es)
	100	
	ADR	Not dangerous goods
	RID	Not dangerous goods
	ADN	Not dangerous goods
	IMDG	Not dangerous goods
	IATA	9
14.4.	Packing group	
	ADR	Not dangerous goods
	RID	Not dangerous goods
	ADN	Not dangerous goods
	IMDG	Not dangerous goods
	IATA	III
14.5.	Environmental	hozondo
14.3.	Elivirolimentai	nazarus
	ADR	not applicable
	RID	not applicable
	ADN	not applicable
	IMDG	not applicable
	IATA	not applicable
14.6.	Special precaut	ions for user
	ADR	not applicable
	RID	not applicable
	ADN	not applicable
	IMDG	not applicable
	IATA	Not more than 500 ml (each inner package) - Unrestricted
14.7.	Transport in b	ulk 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 0,00 %

VOC content

(VOCV 814.018 VOC regulation

CH)

### 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.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

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.

### Label elements (DPD):

Xi - Irritant



Risk phrases:

 $R_{36/37/38}$  Irritating to eyes, respiratory system and skin.

Safety phrases:

S2 Keep out of the reach of children. S23 Do not breathe vapour. S24/25 Avoid contact with skin and eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

#### Additional labeling:

Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

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.

Exposure Scenarios for ethyl 2-cyanoacrylate can be downloaded under the following link: http://mymsds.henkel.com/mymsds/.470833..en.ANNEX\_DE.15743123.0.DE.pdf Alternatively they can be accessed on the internet site www.mymsds.henkel.com by entering number 470833.