

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

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sds no.: 169788

V004.1 Revision: 20.11.2013

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Loctite 431

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

1.1. Product identifier

Loctite 431

Contains:

Ethyl 2-cyanoacrylate

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

Intended use:

Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Limited

2 Bishop Square Business Park AL109EY Herfordshire Hatfield

Great Britain

Phone: +44 1606 593933 Fax-no.: +44 1606 863762

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):

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. Target organ: Respiratory tract irritation

Classification (DPD):

Xi - Irritant

R36/37/38 Irritating to eyes, respiratory system and skin.

2.2. Label elements

Label elements (CLP):

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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: P261 Avoid breathing vapors.

Prevention P280 Wear protective gloves/eye protection.

Precautionary statement: P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

Response contact lenses, if present and easy to do. Continue rinsing.

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

Precautionary statement:

Disposal

P501 Dispose of waste and residues in accordance with local authority requirements.

Label elements (DPD):

Xi - Irritant



Risk phrases:

R36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases:

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.

2.3. Other hazards

None if used properly.

SECTION 3: Composition/information on ingredients

General chemical description:

Cyanoacrylate Adhesive

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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 %	Serious eye irritation 2 H319 Specific target organ toxicity - single exposure 3 H335 Skin irritation 2 H315
Bis(2-hydroxy-3-tert-butyl-5- methylphenyl)methane 119-47-1	204-327-1 01-2119496065-33	>= 0,1-< 1 %	Toxic to reproduction 2 H361f Chronic hazards to the aquatic environment 4 H413
Hydroquinone 123-31-9	204-617-8	>= 0,01-< 0,1 %	Carcinogenicity 2 H351 Germ cell mutagenicity 2 H341 Acute toxicity 4; Oral H302 Serious eye damage 1 H318 Skin sensitizer 1 H317 Acute hazards to the aquatic environment 1 H400 M factor: 10 M factor (Chron Aquat Tox): 10
Dibenzoyl peroxide 94-36-0	202-327-6 01-2119511472-50	>= 0,01-< 0,1 %	Organic peroxides B H241 Serious eye irritation 2 H319 Acute hazards to the aquatic environment 1 H400 Skin sensitizer 1 H317 M factor: 10 M factor (Chron Aquat Tox): 10

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

Declaration of ingredients according to DPD (EC) No 1999/45:

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 %	Xi - Irritant; R36/37/38
Hydroquinone 123-31-9	204-617-8	>= 0,01 -< 0,1 %	Xi - Irritant; R41 Mutagen category 3.; R68 N - Dangerous for the environment; R50 carcinogenic, category 3; R40 Xn - Harmful; R22 R43
Dibenzoyl peroxide 94-36-0	202-327-6 01-2119511472-50	>= 0,01 -< 0,1 %	E - Explosive; R3 Xi - Irritant; R36 O - Oxidizing; R7 R43 N - Dangerous for the environment; R50

For full text of the R-Phrases indicated by codes 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.

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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

EYE: Irritation, conjunctivitis.

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:

Foam, extinguishing powder, carbon dioxide.

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), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.

5.3. Advice for firefighters

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Avoid skin and eye contact.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste.

Dispose of contaminated material as waste according to Chapter 13.

6.4. Reference to other sections

See advice in chapter 8

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ventilation (low level) is recommended when using large volumes

Use of dispensing equipment is recommended to minimise the risk of skin or eye contact

Avoid skin and eye contact.

See advice in chapter 8

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities

For optimum shelf life store in original containers under refrigerated conditions at 2 - 8°C (35.6 - 46.4 °F)

7.3. Specific end use(s)

Adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Great Britain

Ingredient	ppm	mg/m ³	Type	Category	Remarks
ETHYL CYANOACRYLATE	0,3	1,5	Short Term Exposure		EH40 WEL
7085-85-0			Limit (STEL):		
DIBENZOYL PEROXIDE		5	Time Weighted Average		EH40 WEL
94-36-0			(TWA):		
HYDROQUINONE		0,5	Time Weighted Average		EH40 WEL
123-31-9			(TWA):		

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental		Value				Remarks
	Compartment	period					
			mg/l	ppm	mg/kg	others	
Dibenzoyl peroxide 94-36-0	aqua (freshwater)					0,602 μg/L	
Dibenzoyl peroxide 94-36-0	aqua (marine water)					0,0602 μg/L	
Dibenzoyl peroxide 94-36-0	aqua (intermittent releases)					0,602 μg/L	
Dibenzoyl peroxide 94-36-0	STP					0,35 mg/L	
Dibenzoyl peroxide 94-36-0	sediment (freshwater)				0,338 mg/kg		
Dibenzoyl peroxide 94-36-0	soil				0,0758 mg/kg		
Dibenzoyl peroxide 94-36-0	oral					6,67 mg/kg food	

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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	worker	inhalation	Long term exposure - local effects		9,25 mg/m3	
Ethyl 2-cyanoacrylate 7085-85-0	worker	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	
Dibenzoyl peroxide 94-36-0	worker	inhalation	Long term exposure - systemic effects		11,75 mg/m3	
Dibenzoyl peroxide 94-36-0	worker	Dermal	Long term exposure - systemic effects		6,6 mg/kg bw/day	
Dibenzoyl peroxide 94-36-0	general population	inhalation	Long term exposure - systemic effects		2,9 mg/m3	
Dibenzoyl peroxide 94-36-0	general population	Dermal	Long term exposure - systemic effects		3,3 mg/kg bw/day	
Dibenzoyl peroxide 94-36-0	general population	oral	Long term exposure - systemic effects		1,65 mg/kg bw/day	

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

Hand protection:

The use of chemical resistant gloves such as Nitrile is recommended.

Polyethylene or polypropylene gloves are recommended when using large volumes.

Do not use PVC, rubber or nylon gloves.

Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Wear protective glasses.

Skin protection:

Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance liquid
Liquid
Colorless
Odor Irritating

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Odour threshold

No data available / Not applicable

pH No data available / Not applicable

Initial boiling point $> 149 \,^{\circ}\text{C} (> 300.2 \,^{\circ}\text{F})$ Flash point $80 - 93.4 \,^{\circ}\text{C} (176 - 200.12 \,^{\circ}\text{F})$ Decomposition temperature No data available / Not applicable

Vapour pressure 0,6600000 mbar

(25,0 °C (77 °F))

Density 1,1000 g/cm3 (20,0 °C (68 °F))

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)
Polymerises in presence of water.

(Solvent: Water)

Solubility (qualitative) Miscible

(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 No data available / Not applicable Partition coefficient: n-octanol/water 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

No decomposition if used according to specifications.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

None known

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.

Oral toxicity:

Cyanoacrylates are considered to have relatively low toxicity. Acute oral LD50 is >5000mg/kg (rat). It is almost impossible to swallow as it rapidly polymerises in the mouth.

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Inhalative toxicity:

May cause respiratory irritation.

Prolonged exposure to high concentrations of vapours may lead to chronic effects in sensitive individuals In dry atmosphere with < 50% humidity, vapours may irritate the eyes and respiratory system

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	Value	Value	Route of	Exposure	Species	Method
CAS-No.	type		application	time		
Ethyl 2-cyanoacrylate 7085-85-0	LD50	> 5.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Hydroquinone 123-31-9	LD50	367 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute inhalative toxicity:

Hazardous components	Value	Value	Route of	Exposure	Species	Method
CAS-No.	type		application	time		

Acute dermal toxicity:

Hazardous components	Value	Value	Route of	Exposure	Species	Method
CAS-No.	type		application	time		
Ethyl 2-cyanoacrylate	LD50	> 2.000 mg/kg	dermal		rabbit	OECD Guideline 402 (Acute
7085-85-0						Dermal Toxicity)

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	irritating	72 h	rabbit	OECD Guideline 405 (Acute
7085-85-0				Eve 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	
Dibenzoyl peroxide 94-36-0	sensitising	Mouse local lymphnod e assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

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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	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)
	negative	bacterial reverse mutation assay (e.g Ames test)			OECD Guideline 471 (Bacterial Reverse Mutation Assay)
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)
Hydroquinone 123-31-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)

Repeated dose toxicity

Hazardous components CAS-No.	Result		Route of application	Exposure time / Frequency of treatment	Species	Method
Hydroquinone	NOAEL=>=	250	oral: gavage	14 days 5 days/week.	rat	OECD Guideline 407
123-31-9	mg/kg			12 doses		(Repeated Dose 28-Day Oral
						Toxicity in Rodents)

SECTION 12: Ecological information

General ecological information:

Biological and Chemical Oxygen Demands (BOD and COD) are insignificant.

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.

12.1. Toxicity

Ecotoxicity:

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

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Hazardous components CAS-No.	Value type	Value	Acute Toxicity	Exposure	Species	Method
CAS-NO.	туре		Study	tille		
Bis(2-hydroxy-3-tert-butyl-5-	LC50	> 500 mg/l	Fish	48 h	Oryzias latipes	OECD Guideline
methylphenyl)methane						203 (Fish, Acute
119-47-1	,		Į			Toxicity Test)
Bis(2-hydroxy-3-tert-butyl-5-	EC50	> 1.000 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline
methylphenyl)methane						202 (Daphnia sp.
119-47-1						Acute
						Immobilisation
			1			Test)
Bis(2-hydroxy-3-tert-butyl-5-	EC50	> 1.000 mg/l	Algae			OECD Guideline
methylphenyl)methane						201 (Alga, Growth
119-47-1]					Inhibition Test)
Hydroquinone	LC50	0,17 mg/l	Fish	96 h	Brachydanio rerio (new name:	OECD Guideline
123-31-9					Danio rerio)	203 (Fish, Acute
						Toxicity Test)
Hydroquinone 123-31-9	EC50	0,29 mg/l	Daphnia	48 h	Daphnia magna	
Hydroquinone	EC50	0,335 mg/l	Algae	3 d	Selenastrum capricornutum	OECD Guideline
123-31-9	LC30	0,333 mg i	riigae	3 4	(new name: Pseudokirchnerella	
123 31 7					subcapitata)	Inhibition Test)
Dibenzoyl peroxide	LC50	0,06 mg/l	Fish	96 h	suocapitata)	OECD Guideline
94-36-0	2000	0,00 11191	1 1011	7011		203 (Fish, Acute
71300						Toxicity Test)
Dibenzoyl peroxide	EC50	0,11 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline
94-36-0	2000	0,11 11191	Bupinnu	.01	Dupiniu mugnu	202 (Daphnia sp.
						Acute
						Immobilisation
						Test)
Dibenzoyl peroxide	EC50	0,06 mg/l	Algae	72 h		OECD Guideline
94-36-0		- ,	-8			201 (Alga, Growth
						Inhibition Test)

12.2. Persistence and degradability

Persistence and Biodegradability: No data available.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Ethyl 2-cyanoacrylate		aerobic	57 %	OECD Guideline 301 D (Ready
7085-85-0				Biodegradability: Closed Bottle
				Test)
Bis(2-hydroxy-3-tert-butyl-5-	under test conditions no		0 %	OECD Guideline 301 F (Ready
methylphenyl)methane	biodegradation observed			Biodegradability: Manometric
119-47-1				Respirometry Test)
Hydroquinone	readily biodegradable	aerobic	75 - 81 %	EU Method C.4-E (Determination
123-31-9				of the "Ready"
				BiodegradabilityClosed Bottle
				Test)
Dibenzoyl peroxide	readily biodegradable		> 60 %	OECD Guideline 301 D (Ready
94-36-0				Biodegradability: Closed Bottle
				Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Mobility:

Cured adhesives are immobile.

Bioaccumulative potential: No data available.

Hazardous components	LogKow Bioconcentration	Exposure	Species	Temperature	Method
CAS-No.	factor (BCF)	time			

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Ethyl 2-cyanoacrylate 7085-85-0	0,776			22 °C	EU Method A.8 (Partition Coefficient)
Bis(2-hydroxy-3-tert-butyl-5- methylphenyl)methane 119-47-1	6,24				
Hydroquinone 123-31-9	1,03				
Dibenzoyl peroxide 94-36-0		66,6	fish		OECD Guideline 305 (Bioconcentration: Flow- through Fish Test)
Dibenzoyl peroxide 94-36-0	3,46				-

12.5. Results of PBT and vPvB assessment

Hazardous components	PBT/vPvB
CAS-No.	
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	
Dibenzoyl peroxide	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
94-36-0	Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Cured adhesive: Dispose of as water insoluble non-toxic solid chemical in authorised landfill or incinerate under controlled conditions.

Dispose of in accordance with local and national regulations.

Contribution of this product to waste is very insignificant in comparison to article in which it is used

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Disposal must be made according to official regulations.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other 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.

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SECTION 14: Transport information

14.1. UN number

ADR Not dangerous goods
RID Not dangerous goods
ADNR Not dangerous goods
IMDG Not dangerous goods

IATA 3334

14.2. UN proper shipping name

ADR Not dangerous goods
RID Not dangerous goods
ADNR Not dangerous goods
IMDG Not dangerous goods

IATA Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)

14.3. Transport hazard class(es)

ADR Not dangerous goods
RID Not dangerous goods
ADNR Not dangerous goods
IMDG Not dangerous goods

IATA 9

14.4. Packaging group

ADR Not dangerous goods
RID Not dangerous goods
ADNR Not dangerous goods
IMDG Not dangerous goods

IATA III

14.5. Environmental hazards

ADR not applicable
RID not applicable
ADNR not applicable
IMDG not applicable
IATA not applicable

14.6. Special precautions for user

ADR not applicable RID not applicable ADNR not applicable IMDG not applicable

IATA Primary packs containing less than 500ml are unregulated by this mode of transport

and may be shipped unrestricted.

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 (1999/13/EC) < 3.00 %

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

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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:

R22 Harmful if swallowed.

R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.

R36 Irritating to eyes.

R36/37/38 Irritating to eyes, respiratory system and skin.

R40 Limited evidence of a carcinogenic effect.

R41 Risk of serious damage to eyes.

R43 May cause sensitisation by skin contact.

R50 Very toxic to aquatic organisms.

R68 Possible risk of irreversible effects.

R7 May cause fire.

H241 Heating may cause a fire or explosion.

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.

H361f Suspected of damaging fertility.

H400 Very toxic to aquatic life.

H413 May cause long lasting harmful effects to aquatic life.

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.

Annex - Exposure Scenarios:

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.