



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

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4305 Flashcure(R) Light Cure Adhesive

SDS No. : 153628
V002.6

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

1.1. Product identifier

4305 Flashcure(R) Light Cure Adhesive

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):

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.
Contains Bis(2,4,6-Trimethylbenzoyl)phenylphosphine oxide. May produce an allergic reaction.

**Precautionary statement:
Prevention**

P261 Avoid breathing mist/vapours.

**Precautionary statement:
Response**

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
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.

Contains Bis(2,4,6-Trimethylbenzoyl)phenylphosphine oxide. May produce an allergic reaction.

2.3. Other hazards

None if used properly.

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

Cyanoacrylate Adhesive

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(2,4,6- Trimethylbenzoyl)phenylphosphine oxide 162881-26-7	423-340-5 01-2119489401-38	> 0,1- <= 0,5 %	Skin sensitizer 1 H317 Chronic hazards to the aquatic environment 4 H413
Hydroquinone 123-31-9	204-617-8 01-2119524016-51	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

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.

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
Bis(2,4,6- Trimethylbenzoyl)phenylphosphine oxide 162881-26-7	423-340-5 01-2119489401-38	> 0,1 - <= 0,5 %	R43 R53
Hydroquinone 123-31-9	204-617-8 01-2119524016-51	0,01 - < 0,1 %	carcinogenic, category 3; R40 Mutagen category 3.; R68 Xn - Harmful; R22 Xi - Irritant; R41 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.

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:

None known

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.

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

5.3. Advice for firefighters

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

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

Ensure adequate ventilation.

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.

6.4. Reference to other sections

See advice in section 8

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 section 8

Hygiene measures:

Good industrial hygiene practices should be observed.
 Wash hands before work breaks and after finishing work.
 Do not eat, drink or smoke while working.

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)

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 7085-85-0	0,3	1,5	Short Term Exposure Limit (STEL):		EH40 WEL
HYDROQUINONE 123-31-9		0,5	Time Weighted Average (TWA):		EH40 WEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			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	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/m ³	
Ethyl 2-cyanoacrylate 7085-85-0	Workers	Inhalation	Long term exposure - systemic effects		9,25 mg/m ³	
Ethyl 2-cyanoacrylate 7085-85-0	general population	Inhalation	Long term exposure - local effects		9,25 mg/m ³	
Ethyl 2-cyanoacrylate 7085-85-0	general population	Inhalation	Long term exposure - systemic effects		9,25 mg/m ³	
Bis(2,4,6-Trimethylbenzoyl)phenylphosphine oxide 162881-26-7	Workers	Inhalation	Long term exposure - systemic effects		7,8 mg/m ³	
Bis(2,4,6-Trimethylbenzoyl)phenylphosphine oxide 162881-26-7	Workers	Inhalation	Acute/short term exposure - systemic effects		7,8 mg/m ³	
Bis(2,4,6-Trimethylbenzoyl)phenylphosphine oxide 162881-26-7	Workers	Dermal	Long term exposure - systemic effects		3,3 mg/kg	
Bis(2,4,6-Trimethylbenzoyl)phenylphosphine oxide 162881-26-7	Workers	Dermal	Acute/short term exposure - systemic effects		3,3 mg/kg	
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/m ³	
Hydroquinone 123-31-9	Workers	Inhalation	Long term exposure - local effects		1 mg/m ³	
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/m ³	
Hydroquinone 123-31-9	general population	Inhalation	Long term exposure - local effects		0,5 mg/m ³	

Biological Exposure Indices:
None**8.2. Exposure controls:**

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:
Suitable protective clothing

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid Colorless
Odor	irritating
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	> 149 °C (> 300.2 °F)
Flash point	80 - 93 °C (176 - 199.4 °F); None
Decomposition temperature	No data available / Not applicable
Vapour pressure	< 0,3 mbar
Vapour pressure (50 °C (122 °F))	< 700 mbar
Density (20 °C (68 °F))	1,1 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) (Solvent: Water)	Polymerises in presence of water.
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

No decomposition if used according to specifications.

10.5. Incompatible materials

See section reactivity

10.6. Hazardous decomposition products

carbon oxides.

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.

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

Sensitizing:

May produce an allergic reaction.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Ethyl 2-cyanoacrylate 7085-85-0	LD50	> 5.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Bis(2,4,6-Trimethylbenzoyl)phenyl phosphine oxide 162881-26-7	LD50	> 2.000 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 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(2,4,6-Trimethylbenzoyl)phenyl phosphine oxide 162881-26-7	LD50	> 2.000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

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

Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Hydroquinone 123-31-9	LOAEL= \leq 500 mg/kg	oral: gavage	14 days 5 days/week. 12 doses	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Hydroquinone 123-31-9	NOAEL= \geq 250 mg/kg	oral: gavage	14 days 5 days/week. 12 doses	rat	OECD Guideline 407 (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.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Hydroquinone 123-31-9	LC50	0,17 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydroquinone 123-31-9	EC50	0,29 mg/l	Daphnia	48 h	Daphnia magna	
Hydroquinone 123-31-9	EC50	0,335 mg/l	Algae	3 d	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 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 7085-85-0		aerobic	57 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Bis(2,4,6- Trimethylbenzoyl)phenylphos phine oxide 162881-26-7		aerobic	1 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Hydroquinone 123-31-9	readily biodegradable	aerobic	75 - 81 %	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Mobility:

Cured adhesives are immobile.

Bioaccumulative potential:

No data available.

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
Bis(2,4,6-Trimethylbenzoyl)phenylphosphine oxide 162881-26-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydroquinone 123-31-9	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:

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.

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

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 < 3 %
(1999/13/EC)**15.2. Chemical safety assessment**

A chemical safety assessment has 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:

- R22 Harmful if swallowed.
- 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.
- R53 May cause long-term adverse effects in the aquatic environment.
- R68 Possible risk of irreversible effects.
- 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.
- 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.

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.

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.