

MATERIAL SAFETY DATA SHEET

This safety data sheet has been prepared in accordance with the requirements of EC Directive 91/155/EEG (and other related directives), and provides information relating to the safe handling and use of the product.

1 PRODUCT AND COMPANY IDENTIFICATION

Product code: SM-002, SM-012
Trade name: Smart Bond Instant Adhesive
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2 COMPOSITION / INFORMATION ON INGREDIENTS

Nature Cyanoacrylate adhesive

Hazardous components in product for EC

Component name	EINECS	%	R Phrases	S Phrases	Classification
CAS no.	ELINCS				
Ethyl Cyanoacrylate 7085-85-0	230-391-5	70-90	R36/37/38	S(2)-23-24/25-26	Xi

3 HAZARD IDENTIFICATION

Bonds skin and eyes in seconds. Highly reactive to water. Irritating to eyes, respiratory system and skin. (See Section 4 on first aid)

4 FIRST AID MEASURES

First Aid - Inhalation

Remove affected person to fresh air and if still feeling unwell seek medical attention.

First Aid - Skin

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

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4 FIRST AID MEASURES (continued)

and pressure from saliva in the mouth. Peel or roll lips apart. Do not try to pull the lips apart with direct opposing action.

First Aid - Eyes

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.

First Aid - 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)

5 FIRE FIGHTING MEASURES

Suitable extinguishing media:

Foam, extinguishing powder, carbon dioxide, fine water spray.

Special protection equipment for firefighters:

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

Hazardous combustion products:

Oxides of carbon, oxides of nitrogen, irritating organic vapors.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions:

Ensure adequate ventilation.

Environmental precautions:

Do not let product enter drains.

Clean-up methods:

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.

7 HANDLING AND STORAGE

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.

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Storage

For optimum shelf life store in original containers under refrigerated conditions at 2 C to 8 C.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Elements with work-related limits of value that need surveillance

Substance	ppm	mg/m ³	Type	Category	Remarks
Etyl-2-cyanoakrylat 7085-85-0	2	10	Level of limit of value.		SWO
	4	20	Short-time value		SWO
				Listed	SWO
				Medical control necessary when handling the substance	SWO

Respiratory protection

Provide for adequate ventilation.

Hand/ skin protection

Polyethylene or polypropylene gloves are recommended when using large volumes.
Do not use PVC, rubber, cotton or nylon gloves.

Eye protection

Use protective goggles.

General protective- and hygienic measures

Provide for good industrial hygiene.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Viscous liquid
Colour:	Clear, Colourless
Odour:	Sharp, Characteristic
pH:	Not applicable
Boiling Range/Point (°C):	Boils above 100
Flash Point (CC) (°C):	Exceeds 80
Specific Gravity:	1.1 g/ccm at 20° C
Solubility in Water (kg/m ³):	Immiscible. Polymerises in contact with water.
Solubility in Acetone:	Soluble
Vapour Pressure (mmHg at 25° C):	Less than 0.5 at 25°C
Explosion Limits (%):	N/A
VOC- content	<3%

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10 STABILITY AND REACTIVITY

Use and store product under normal and stable conditions.

Avoid contact with the following substances:

Polymerisation will occur in the presence of moisture. May polymerise if exposed to heat, alkalis, acids, catalysts, peroxides, free radical initiators and alcohols.

11 TOXICOLOGICAL INFORMATION

Inhalation

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

Skin

This product is classified as a skin irritant. 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 not considered possible.

Eyes

This product is an irritant to the eyes. Liquid product will bond eyelids. In a dry atmosphere (RH < 50%) vapours may cause irritation and lachrymatory effect.

Ingestion

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.

12 ECOLOGICAL INFORMATION

Biodegradable product of low ecotoxicity. Does not contain and is not manufactured with any of the substances listed on the Montreal protocol. Nevertheless do not dispose of the product into sewerage, surface water or groundwater.

Cured binding agents are immobile.

13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with local and national regulations.

Polymerise by adding slowly to water (10:1). Dispose of as water insoluble non-toxic solid chemical in authorised landfill or incinerate under controlled conditions.

Waste code (EWC): 08 04 09 remnants of binding and sealing agents which contain organic solvents and other dangerous substances.

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14 TRANSPORT INFORMATION

Sea (IMDG and ADN):	Not classified
Road (ADR)/Rail (RID):	Not classified
Air (IATA):	
Class:	9
Packaging instruction (passenger and cargo):	906
UN-nr:	3334
Warnings:	9
Proper shipping name:	Aviation regulated liquid n.o.s. (cyanoacrylate ester).

15 REGULATORY INFORMATION



Contains:	Cyanoacrylate Danger: bonds skin and eyes in seconds Keep out of the reach of children
Labelling Information	Irritant
R phrases:	R36/37/38. Irritating to eyes, respiratory system and skin.
S phrases:	S23. Do not breathe vapour. S24/25. Avoid contact with eyes and skin. S26. In case of contact with eyes, rinse immediately with plenty of water and seek medical advise.

16 OTHER INFORMATION

MSDS first issued	December 1, 1997
MSDS data revised	February 28, 2005
MSDS data revised	April 30, 2010

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Further information may be obtained from:

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Göran Steen, April 30, 2010