

SAFETY DATA SHEET

Permabond 2050

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name Permabond 2050

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

Identified uses Adhesive.

1.3. Details of the supplier of the safety data sheet

Supplier Permabond Engineering Adhesives Ltd.
Wessex Way
Colden Common
Winchester
Hampshire. SO21 1WP
United Kingdom
Tel: +44 (0)1962 711 661
Fax: +44 (0)1962 711 662
info.europe@permabond.com

1.4. Emergency telephone number

UK +44 (0)1962 711 661 USA 0800 640 7599 Asia +86 (0)21 5773 4913

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) Xi;R36/37/38.

2.2. Label elements

Labelling



Irritant

Risk Phrases

R36/37/38

Irritating to eyes, respiratory system and skin.

Safety Phrases

S23

Do not breathe vapour/spray.

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.

P3

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

2.3. Other hazards

None under normal conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Permabond 2050

ETHYL 2-CYANOACRYLATE		60-100%
CAS-No.: 7085-85-0	EC No.: 230-391-5	
Classification (EC 1272/2008) Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335	Classification (67/548/EEC) Xi;R36/37/38	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

Move the exposed person to fresh air. Get medical attention if any discomfort continues.

Ingestion

On contact, immediate bonding of mouth could occur. Do not induce vomiting. Get medical attention.

Skin contact

On contact, immediate bonding of the skin will occur. No attempt should be made to remove material from skin or to remove contaminated clothing, as the bonded skin can be easily torn. Wash skin thoroughly with soap and water for several minutes.

Eye contact

Immediately flush with plenty of water or eyewash solution for up to 10 minutes. If adhesive bonds eyelids, flush with water and seek medical assistance. Do not attempt to force bonded skin apart. Cured adhesive will not bond well to surface of eye, but corneal damage from abrasion may result.

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

Inhalation.

Irritation of nose, throat and airway.

Ingestion

On contact, immediate bonding of mouth could occur.

Skin contact

Prolonged skin contact may cause redness and irritation.

Eye contact

Irritating and may cause redness and pain.

4.3. Indication of any immediate medical attention and special treatment needed

SKIN BONDING. Prise the skin apart slowly working from the edge of the bonded area. This can be eased by using warm soapy water.

EYE BONDING. DO NOT force eyelids apart. Apply a pad soaked in warm water and allow the eye to separate itself.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Extinguish with foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Decomposes upon heating to release toxic fumes of nitrogen oxides, carbon monoxide, carbon dioxide, and hydrogen cyanide.

Unusual Fire & Explosion Hazards

Cloths used to wipe up spills may cause rapid polymerization that could generate sufficient heat to ignite the cloth.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Avoid breathing fire vapours.

Protective equipment for fire-fighters

Use air-supplied respirator during fire fighting.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For personal protection, see section 8. Provide adequate ventilation.

6.2. Environmental precautions

Permabond 2050

Do not allow to enter drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Small spills: wipe up with cloth. Immediately soak cloth with water to polymerize the adhesive. Caution! Cloth containing adhesive may undergo autoignition if not soaked with water. Large spills: flood area with water. When cured, remove film with a scraper.

6.4. Reference to other sections

Collect and dispose of spillage as indicated in section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Ensure adequate ventilation of the working area. Avoid contact with skin and eyes. Always replace cap after use.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry and cool place. Keep upright.

7.3. Specific end use(s)

Adhesive.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
ETHYL 2-CYANOACRYLATE	WEL			0,3 ppm	1,5 mg/m ³	

WEL = Workplace Exposure Limit.

8.2. Exposure controls

Protective equipment



Engineering measures

Normal (mechanical) room ventilation should be adequate for small volumes. For higher volume activities, or if needed for worker comfort, local mechanical exhaust should be provided.

Respiratory equipment

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.

Hand protection

Nitrile rubber or Viton™ gloves are recommended. Cotton or other absorbent gloves should not be worn. Gloves should conform to EN 374.

Eye protection

Use approved safety goggles or face shield. Personal eye protection should conform to EN 166

Other Protection

Uniforms, coveralls, or a lab coat should be worn

Hygiene measures

When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Colourless.
Odour	Pungent.
Solubility	Hardens in contact with water. Insoluble in water Miscible with: Acetone
Initial boiling point and boiling range	>100°C
Melting point (°C)	Not applicable.
Relative density	1.05

Bulk Density

Not applicable.

Vapour density (air=1)

Not applicable.

Vapour pressure ~0.6 mbar

Evaporation rate

Not available.

pH-Value, Conc. Solution

Not applicable.

Viscosity ~1500 mPa.s

Decomposition temperature (°C)

Not available.

Flash point 83°C

Auto Ignition Temperature (°C)

Not available.

Partition Coefficient (N-Octanol/Water)

Not applicable.

Oxidising properties

Not applicable.

9.2. Other information

Not relevant

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

The product reacts with water and will generate heat.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Exothermic reaction with: Water Alcohol Alkalis. Amines.

10.4. Conditions to avoid

Do not add water directly to the product. It may cause a violent reaction.

10.5. Incompatible materials

Materials To Avoid

Water. Amines. Alkalis. Alcohols.

10.6. Hazardous decomposition products

High temperatures generate: Toxic gases/vapours/fumes of: Carbon dioxide (CO₂). Carbon monoxide (CO). Nitrous gases (NO_x). Hydrogen cyanide (HCN).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information

Under EU legislation the cyanoacrylates do not require classification as sensitisers and the rapid polymerisation caused on contact with moisture makes this unlikely. However the American Conference of Governmental Industrial Hygienists (ACGIH) has reported some limited evidence of skin and respiratory sensitisation. May cause allergic reactions in susceptible people.

Inhalation

Irritating to respiratory system.

Ingestion

On contact, immediate bonding of mouth could occur.

Skin contact

Irritating to skin. On contact, immediate bonding of the skin will occur.

Eye contact

Irritating to eyes. On contact, will bond eyelids together. Vapours are lachrymatory.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

No negative effects on the aquatic environment are known.

12.1. Toxicity

Acute Fish Toxicity

No information available.

Acute Toxicity - Aquatic Invertebrates

Not available.

Acute Toxicity - Aquatic Plants

Not available.

Acute Toxicity - Terrestrial

Not available.

12.2. Persistence and degradability

Degradability

No data available.

Biological Oxygen Demand

Not known.

Chemical Oxygen Demand

Not known.

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

Not applicable.

12.4. Mobility in soil

Mobility:

The product hardens to a solid immobile substance.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Waste disposal should be in accordance with existing Community, National and local regulations Empty containers may contain product residue; follow SDS and label warnings even after they have been emptied.

13.1. Waste treatment methods

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

Waste Class

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

SECTION 14: TRANSPORT INFORMATION

Road Transport Notes	Not Classified
Rail Transport Notes	Not classified.
Sea Transport Notes	Not classified.
Air Transport Notes	Applies only to inner containers > 2 litres.

14.1. UN number

UN No. (ICAO)	3334
----------------------	------

Permabond 2050

14.2. UN proper shipping name

Proper Shipping Name Aviation regulated liquid, n.o.s. (contains ethyl cyanoacrylate)

14.3. Transport hazard class(es)

ICAO Class/Division 9

Transport Labels



14.4. Packing group

ICAO Packing group III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

None under normal conditions.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Uk Regulatory References

Health and Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.

Environmental Listing

Rivers (Prevention of Pollution) Act 1961. Control of Pollution (Special Waste Regulations) Act 1980. Control of Pollution Act 1974.

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). Control of Substances Hazardous to Health.

Approved Code Of Practice

Classification and Labelling of Substances and Preparations Dangerous for Supply. Safety Data Sheets for Substances and Preparations.

Guidance Notes

Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG(108).

EU Legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Date 18/06/2012

Revision 1

Risk Phrases In Full

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

Hazard Statements In Full

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.