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Tel: 01621 828882

This Information Sheet is for products KIN LOCK

TECHNICAL DATA SHEET:

PRODUCT: KINLOK CYANOACRYLATE ADHESIVES AND SEALANTS

INDUSTRIAL APPLICATIONS:

KINCORA have developed a comprehensive range of Instant Bonding cyanoacrylate adhesives with various setting speeds and viscosities to satisfy even the most demanding user. Because it is possible to bond almost any material or combinations of dissimilar materials with these adhesives there are many kinds of application possibilities in nearly all branches of industry. For example, the following applications have been satisfied using performance cyanoacrylates from the Kinlok range.

Precision Engineering: including the manufacture of apparatus, measurement and control technology, optics and precision components.

- Industrial Manufacturing: including the automotive sector, aerospace, shipbuilding and volume manufactured articles.
- Electronics Manufacturing: including chipbonding, wiretacking and component housing manufacture.
- Medical Technology: including instrumentation and dental laboratories.
- Consumer Durables: including jewellery, household appliances, textiles and shoe manufacturing.
- Plastics and Rubber Component Manufacturing: including uPVC window manufacture, O rings, rubber seals and plastic mouldings.

ENGINEERING:

Anaerobic sealants provide a high performance solution to many engineering problems but are simple to apply and economical to use. They have been well proven by industry and are widely

established as proven solutions. Kincora anaerobic adhesives are solvent free, and are formulated to cure at room temperature giving structural bonds and seals with an optimal range of strengths. The cured product is resilient to shock, leakage and vibrational loosening and has high thermal stability. The comprehensive Kinlok range manufactured by Kincora satisfies the following applications:

- Threadlocking Anaerobics: used to secure and seal threaded fasteners against loosening from shock or vibration.
- Retaining Anaerobics: used to permit ease of retaining assemblies without resorting to close tolerance interference fits.
- Sealing and Gasketing Anaerobics: used to produce an almost unlimited range of shapes and sizes of gaskets and pipe seals without waiting.

MAINTENANCE:

The varied range of Kincora adhesives and sealants find many uses in the maintenance sector. The single part products have been formulated to be simple to use, with packaging designed to ensure economical and easy application. Some typical applications as maintenance products from the kinlok range include:

- Anaerobic Sealants: used in the traditional threadlocking, retaining and gasketing applications these products solve the maintenance engineer's requirement to work in-situ. For example in joining pipes and making gaskets, the versatile products mean speedy but durable repairs can be made in the workplace.
- Quick Metal: this retaining product effects very durable 'temporary' repairs to components by building up worn areas.
- Cyanoacrylate Adhesives: these instant adhesives offer the engineer an unbeatable combination of speed, strength and simplicity for almost all materials requiring permanent bonding.

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE MANUFACTURER:

- 1.1 Identification of the substance: CYANOACRYLATE ADHESIVE
- 1.2 Manufacturers information: kincora
Buffalo Court,
Kansas Avenue,
Salford, M5 2GL, UK.
Tel. 0161-873-7713
Fax. 0161-848-0552

2. PURPOSE OF USE:

Adhesive Bonding.

3. INFORMATION ON CHEMICAL COMPOSITION AND PROPERTIES:

3.1 Generic nature: Instant bonding adhesive which polymerises on exposure to air humidity or to alkaline reacting substances at room temperatures.

3.2 Chemical composition: This shows the identification of hazardous constituents plus other contents where this information is available. This product contains the following components in percentages LESS than shown

CAS	7085-85-0	Ethylcyanoacrylate	<90%
CAS	9011-14-7	Homopolymer based on Polyalkylmethacrylate	<0-20%
CAS	67762-90-7	Fillers / Stabilisers	<10%

3.3 Hazardous ingredients: Ethyl Cyanoacrylate Ester.

3.4 Hazard identification:

Description of dangers: Bonds skin and eyes in seconds, may cause skin and eye irritation. Use in well ventilated environment.

Special guidelines concerning dangers to humans and the environment: Irritating effect on mucous membrane, eyes, and nose.

The usual precautions for the usage of chemicals have to be obeyed.

Further information: Keep out of reach of children.

In case of very dry atmosphere, relative humidity should be increased to 50 - 60%

4. FIRST AID MEASURES:

4.1 Inhalation: On the scale of normal usage for these adhesives, problems with breathing are unlikely. Should there be breathing difficulty, provide patient with fresh air and seek medical advice.

4.2 Eye contact: Cyanoacrylates bond eyelids in seconds. In such a case irrigate thoroughly with water for 15 minutes. If the eyelid is bonded closed, release eyelashes with warm water by covering with wet pad. Cyanoacrylate will bond to eye protein causing lacrymatory effect which will help to debond the adhesive. Keep eye covered with wet pad until debonding is complete, usually within 1 - 3 days. Do not force eye open. Medical advice should be sought in case solid particles of cured cyanoacrylate trapped behind the eye cause any abrasive damage.

4.3 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. Consult doctor if infection occurs.

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

4.5 General information: On contact with the body, a noticeable local temperature rise will be experienced. This is perfectly normal and is due to the exothermic polymerisation reaction.

5. FIRE FIGHTING MEASURES:

5.1 Suitable extinguishing media: Dry Powder, foam, carbon dioxide. Water

5.2 Particular danger from combustion products: Trace amounts of toxic fumes may be released on incineration and the use of breathing apparatus is recommended.

5.3 Special protective equipment: Fire fighting and breathing apparatus is considered necessary.

5.4 Additional information: Non Flammable product (flash point is greater than 80C)

6. ACCIDENTAL RELEASE MEASURES:

6.1 Personal precautionary measures: Gloves are recommended, eye protection should be used where there is a risk of splashing. Adequate ventilation is required.

6.2 Measures for environmental protection: Polymerise before disposal.

6.3 Procedure for cleaning / absorption: Ventilate area, do not use cloths for mopping up.

Polymerise with water and scrape up.

6.4 Additional information: None.

7. HANDLING AND STORAGE:

7.1 Handling: Ventilation is recommend for large or continuous use. With fume extraction recommended if the odour becomes apparent. Gloves are recommended at all times when in contact with the product.

7.2 Storage: Store in original containers at 5-25°C and do not return used product to containers as impurities will reduce the shelf life of the product. Keep out of the reach of children. Store containers out of direct sunlight.

7.3 Additional information: None

8.EXPOSURE CONTROLS/PERSONAL PROTECTION EQUIPMENT:

8.1 Components with workplace related limits to be monitored: Ensure adequate ventilation to remove vapour, the Cyanoacrylicmethyl ester bears the danger of sensitisation by inhalation, this fact cannot be excluded for the Cyanoacrylicethyl ester.

8.2 Personal protective equipment:

A. Measures for general protection and hygiene: Normal hygiene and cleanliness precautions should be used when using these products.

B. Respiratory protective equipment: Adequate ventilation or fume extraction at point of use.

C. Hand protection: Polypropylene or polyethylene gloves should be used when applying these products.

D. Eye protection: Eye protection should be used when large volumes are being handled or where there is a risk of splashing. A full face mask should be worn when pouring large quantities.

E. Body Protection: Overalls should be worn which should be removed and laundered in the event of splashing.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Consistency:	Liquid to gel viscosities.
Colour:	Clear to straw colour.
Odour:	Characteristic, Pungent.
Viscosity:	Various. (see Technical data Sheet)
Specific gravity @20°C:	1.1gm/ml approx.
Relative vapour density: (air = 1)	3
Melting point – °C:	>-10
Product flash point – °C: (closed cup)	87°C
Product explosive limits: at 25°C (%vol in air)	Lower: N.A. Upper: N.A.
Autoignition temperature – °C:	N.A.
Product vapour pressure: (mmHg at 20°C)	0.2-0.5mm Hg
Boiling point / Range °C:	>100
Additional information:	None.

10. STABILITY AND REACTIVITY:

10.1 Conditions to be avoided: Adhesives will polymerise in contact with water.

10.2 Substances to be avoided: Water and amines.

10.3 Additional guidelines: None.

11. TOXICOLOGICAL INFORMATION:

11.1 Toxicity:

LD/LC 50 values relevant for classification

LD50 (oral rat) >5000mg/kg

LD50 (dermal rabbit) >2000mg/kg

Cyanoacrylates are considered to have relatively low toxicity. They are almost impossible to swallow as they polymerise in the mouth.

11.2 Primary irritate effect: In dry atmosphere with <50% relative humidity vapours may irritate the eyes and respiratory system. Prolonged exposure to high concentrations may lead to chronic sensitising effects in sensitive individuals.

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

12. ECOLOGICAL DATA:

12.1 Data on elimination (persistence and degradability): Material is biodegradable.

12.2 Mobility and bioaccumulation potential:

Eco-toxic effects: The material is of low ecotoxicity effect.

Aquatic toxicity: N.D.

13. DISPOSAL CONSIDERATIONS:

Product: Polymerise adhesive by slowly adding water (10: 1, Adhesive: Water). Dispose of solid residue according to local regulations.

Contaminated packaging: Polymerise residues of adhesive by slowly adding water. Dispose of according to local regulations.

Other considerations: The product does not contain substances listed in the Montreal protocol.

14. TRANSPORT INFORMATION:

Substance identification number / UN no: N.A.

IATA class: N.A.

UN Packing group: N.A.

IMDG number: N.A.

IMDG class: N.A.

ADR/RID Class & item number: 3/32C

ADR/RID Hazard identification number: 2301

Chemical abstracts service registry number (CAS)

Proper shipping name: None Hazardous Adhesive

Transport / Further information: Not restricted for transportation.

15. REGULATORY INFORMATION:

R-Phrases: Danger ; Cyanoacrylate adhesive Bonds skin and eyes in seconds Keep out of reach of children.

S-Phrases: None

Supply risk symbol: None

16. OTHER INFORMATION:

The data presented in this sheet corresponds to the present level of our knowledge and experience and is intended to describe our product with respect to possible safety demands. We imply with this however no guarantee of properties or description of qualities, it remains the customers responsibility to ensure safe working practices. Attention is drawn to the possible hazards from improper use of the product.

Neither Kincora or their distributors accept any liability for loss or damage arising directly or indirectly from the use of this product. Customers should satisfy themselves by appropriate trials that each product is suitable for its intended use.