

	<u>SAFETY DATA SHEET (SDS)</u>		Revision Number	05
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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE SUPPLIER


Product Name: **Pioneer Mighty Bond Instant Glue**
Alternative Name/Variants: none
Product Description: **Mighty Bond** is a high strength, fast setting, and single component, solvent-free adhesive that forms strong bonds on a wide variety of substrates without the need for heat or added catalyst. It is a medium viscosity type which polymerizes easily in the presence of moisture or slightly basic surface.

Restrictions on Use: N/A

Manufacturer Name: **Pioneer Adhesives Inc.**
Address: LMS Complex, Carmelray Industrial Park 1, Calamba City, Laguna, 4028 Philippines

Telephone Number: +632 7918-1000
Emergency Hotline: +632 7918-1000
Website: www.pioneer-adhesives.com

SECTION 2: HAZARDS IDENTIFICATION

Hazard Class/Symbol	Hazard Category	Signal Word	Hazard Statement
 <p>Signal Word: DANGER</p>			
a. PHYSICAL HAZARDS			
Flammable liquid	Category 4	Warning	Combustible Liquid
b. HEALTH HAZARDS			
Acute Toxicity-Oral	Classification not possible		
Acute Toxicity-Dermal	Classification not possible		
Skin Corrosion/Irritation	Category 2	Warning	Causes skin irritation
Serious Eye Damage/Eye Irritation	Category 2B	Warning	Causes serious eye irritation
Respiratory/Skin Sensitization	Category 1	Warning	May cause an allergic skin reaction
Germ Cell Mutagenecity	Category 1B	Danger	May cause genetic effects
Carcinogenicity	Category 2	Warning	Suspected of causing cancer
Reproductive Toxicity	Category 1B	Danger	May cause fertility or the unborn child
STOT-Single exposure	Category 3	Warning	May cause respiratory irritation
STOT-Repeated Exposure	Not Classified	N/A	N/A
Aspiration Hazard	Not Classified	N/A	N/A
c. ENVIRONMENTAL HAZARDS			
Hazardous to the Aquatic Environment-Acute	Not Classified	N/A	N/A
Hazardous to the Ozone layer	Not Classified	N/A	N/A

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PRECAUTIONARY STATEMENTS:

PREVENTION

Keep/Store away from clothing and combustible materials.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing vapor.
Contaminated work clothing should not be allowed out of the workplace.
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Use only outdoors or in a well-ventilated area.

RESPONSE

In case of fire: Use carbon dioxide, regular dry chemical, regular foam for extinction.
If on skin or hair: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
If exposed or concerned: Get medical advice/attention.
If inhaled: Remove to fresh air and keep at rest in a position comfortable for breathing.

STORAGE

Store in a well-ventilated place. Keep cool.
Store locked up.

DISPOSAL

Dispose of contents according to local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name/Trade name/Brand name	Chemical Abstract Service (CAS) registry number/European Community (EC) number	Concentration (%) by mass/volume
Ethyl-2-cyanoacrylate	7085-85-0	80-90%
Polymethylmethacrylate	9011-14-7	10-20%
Hydroquinone	123-31-9	<0.2%

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SECTION 4: FIRST AID MEASURES

Description of necessary first aid measures

Eyes: If bonding to tissues occurs, wash with large amounts of warm water. Cover both eyes with sterile, dry bandages. The eye will open without further action. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention.

Skin: If bonding occurs, immerse the bonded surfaces in warm soapy water. Peel or roll the surfaces apart using a blunt edge, such as a spatula or spoon handle. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention, if needed.

Inhalation: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

Ingestion: Wet lips with water. Peel or roll the surfaces apart using a blunt edge, such as a spatula or spoon handle. Do not pull surfaces apart with a direct opposing action. If a lump forms in the mouth, turn head to side. If burns occur, treat as thermal burns. Get medical attention.

Most important symptoms/effects, acute and delayed

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Eye: Irritation, conjunctivitis.

Skin: Redness, inflammation.

Respiratory: Irritation, coughing, shortness of breath, chest tightness.

Indication of immediate medical attention and special treatment needed, if necessary

In the case of lung irritation: Primary treatment using corticoide spray, eg. Auxiloson spray, Pulmicort-dosage-spray. (Auxiloson and Pulmicort are registered trademarks).

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing media: carbon dioxide, regular dry chemical, regular foam, water

Unsuitable Extinguishing media: High volume water jet.

Specific Hazards Arising from the Chemical: In the event of fire the following can be released: Nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO₂).

Advice for fire fighters: Move container from fire area if it can be done without risk.

Cool containers with water spray until well after the fire is out. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, protective equipment and emergency procedures for non-emergency personnel

Use personal protective clothing.

Personal Precautions, protective equipment and emergency procedures for emergency responders

Ensure adequate ventilation. Avoid contact with eyes or skin.

Environmental precautions

If leakage occurs, dam up. Resolve leaks if this possible without risk. Prevent surface and ground-water infiltration, as well as ground penetration. Prevent from entering drainage system. If accidental entry into drainage system occurs, inform responsible authorities.

Methods and materials for containment and cleaning up

Do not use cloth for clean up. Flood with water to complete polymerization and scrape up the polymer. Solid material can be disposed as non-hazardous waste.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Recommendations: Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mists. Wash thoroughly after handling. Avoid contact with fabric and paper goods. Contact with these may cause polymerization that can generate smoke and strong irritating vapors, and can cause thermal burns.

Advice on general

occupational hygiene: Wash hands and face before eating.

Conditions for safe storage, including any incompatibilities

Keep in a cool, well-ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. Incompatible products: Do not store together with alkalis.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ETHYL CYANOACRYLATE:

0.2 ppm ACGIH TWA

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles with a face shield.

Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing. **GLOVES:** Wear appropriate chemical resistant gloves.

PROTECTIVE MATERIAL TYPES: polyethylene, do not use cotton

RESPIRATOR: Wear any chemical cartridge respirator with organic vapor cartridge(s).

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance (<i>physical state, color, etc</i>)	Clear, colorless to pale yellow liquid	Upper/Lower Flammability or Explosion Limits	Not available
Odor	Pungent	Vapor Pressure	1 Pa @ 25°C
Odor Threshold	Not available	Vapor Density	>1 (Air=1)
pH	Do not apply	Relative Density	0.90-1.10
Melting/Freezing Point	Not available	Solubility	Insoluble in water
Initial Boiling Point/Boiling Point Range	>190°C	Partition co-efficient (n-octanol/water)	Not available
Flash Point	>80°C	Auto-ignition temperature	Not available
Evaporation Rate	Not available	Decomposition temperature	Not available
Flammability	Not available	Viscosity	210-350 cps

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Rapid exothermic polymerization will occur in the presence of water, amines, alkalis, oxidizing agents and alcohols. Stable under recommended storage conditions.
Chemical Stability:	The product is in compliance with the storage and processing conditions, chemically stable.
Possibility of Hazardous Reactions	Danger of polymerization. Polymerization with evolution of heat.
Conditions to Avoid	Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.
Incompatible Materials	Amines, bases, combustible materials, peroxides
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide. Nitrous oxides (NOx).

SECTION 11: TOXICOLOGICAL INFORMATION

VARIOUS TOXICOLOGICAL HEALTH EFFECTS

ETHYL CYANOACRYLATE:

TOXICITY DATA: LD50 >5ml/kg oral-rat

LOCAL EFFECTS: Irritant: skin, eye

ACUTE TOXICITY LEVEL:

Toxic: dermal absorption, ingestion

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: eye disorders, respiratory disorders, skin disorders and allergies.

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HEALTH EFFECTS:

INHALATION:

ACUTE EXPOSURE:

ETHYL CYANOACRYLATE: The maximum time for which no deaths were reported in rats exposed to saturated vapors was 8 hours. High concentrations of acrylic monomers may cause marked irritation, salivation, and pulmonary edema. Cyanoacrylate vapors may cause pneumonitis or other pulmonary complications including chemical bronchitis. Sensitization reactions, including asthma, have been reported in previously exposed persons.

CHRONIC EXPOSURE:

ETHYL CYANOACRYLATE: Exposed workers have reported upper respiratory symptoms such as stuffy nose and irritated or sore throats.

SKIN CONTACT:

ACUTE EXPOSURE:

ETHYL CYANOACRYLATE: Sensitization reactions, both dermatitis and asthmatic, may occur in previously exposed persons. Contact with ethyl cyanoacrylate has caused bonding of the skin. Some liquid cyanoacrylates may cause thermal burns.

CHRONIC EXPOSURE:

ETHYL CYANOACRYLATE: Some acrylic monomers may cause severe tissue damage.

EYE CONTACT:

ACUTE EXPOSURE:

ETHYL CYANOACRYLATE: Irritation was rated 8 out of 10 in rabbit eyes. Contact with ethyl cyanoacrylate has caused bonding of the eye. Some acrylates and cyanoacrylates may cause irritation, lacrimation, double vision, chemosis, corneal abrasion, and severe tissue damage. Some acrylic monomers may cause conjunctival congestion.

CHRONIC EXPOSURE:

ETHYL CYANOACRYLATE: Repeated or prolonged contact with irritants may result in conjunctivitis.

INGESTION:

ACUTE EXPOSURE:

ETHYL CYANOACRYLATE: Contact may cause bonding of the mouth and lips. Some acrylic monomers may cause collapse, severe respiratory difficulties, and central nervous system stimulation.

CHRONIC EXPOSURE:

ETHYL CYANOACRYLATE: No data available.

Irritating to eyes. Liquid product will bond eyelids. In a dry atmosphere (RH<50%) vapor may cause irritation and lachrymatory effect.

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SECTION 12: ECOLOGICAL INFORMATION

Handling Spills: Refer to section 6
Waste Treatment Practices: Refer to section 13.
Summary for Toxicity and other adverse effects

Information on toxicity data from tests performed on aquatic and/or terrestrial organisms and relevant data on both acute and chronic aquatic toxicity

Test Results on persistence and degradedability: Not available
Test Results on bioaccumulative potential: Not available
Information on Mobility from Related Mobility data: Not available
Adverse effects on the environment

SECTION 13: DISPOSAL CONSIDERATION

Waste treatment containers:
Dispose according local, province/state, country’s governmental regulations.
Appropriate methods of waste treatment of substance:
Cured adhesive: Disposal of as water insoluble non-toxic solid chemical in authorized landfill or incinerate under controlled conditions.
Appropriate methods of waste treatment of packaging:
After use, tubes, cartons, and bottles containing residual product should be disposed of as chemically contaminated waste in an authorized legal land fill site or incinerated. Disposal must be made according to official regulations.
Sewage disposal: Dispose according local, province/state, country’s governmental regulations.
Special precautions: Not available.
Relevant community/national/regional provisions: Not available.

SECTION 14: TRANSPORT INFORMATION

CLASSIFICATION ADR/RID
UN Number Not classified
UN Proper Shipping Name N/A
Transport Hazard Class N/A
Packing Number N/A
Marine Pollutant: N/A
Environmentally Hazardous: N/A

CLASSIFICATION IATA
UN Number Not classified
UN Proper Shipping Name N/A
Transport Hazard Class N/A
Packing Number N/A
Marine Pollutant: N/A
Environmentally Hazardous: N/A

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SECTION 15: REGULATORY INFORMATION

Chemical Control Order List (CCOs): Not listed
Priority Chemical List (PCL): Not listed
Chemical Control Order List (CCOs): Not listed

SECTION 16: OTHER INFORMATION

The information contained in this SDS is based on our present knowledge. It is obtained from a variety of sources and is believed to be accurate and current at the stated version date. This data is provided without warranty for the use of this information, application or processing described in this SDS. Users should note the possibility of hazards occurring due to improper use of the product.

Date of preparation of the latest revision of SDS	October 16, 2023
Summary of changes from last revision:	Revision of contact details under Section I
Department issuing SDS:	Research and Development Department
Contact	Marketing Department

-end of SDS-