

# PHYXALL CORP

## Material Safety Data Sheet

### 1- Chemical Product and Company Identification:

Product Name: **PHYXALL**  
Date revised: 02/28/03

Product Type: Cyanoacrylate Ester

### 2- Composition/Information on Ingredients:

<u>Hazardous Component</u>	<u>CAS Number</u>	<u>%</u>
Ethyl-2 Cyanoacrylate	7085-85-0	80-95
Poly Methyl Methacrylate	9011-14-7	5-10

<u>Exposure Limits (TWA)</u>	<u>ACGIH (TLV)</u>	<u>OSHA (PEL)</u>	<u>OTHER</u>
Ethyl-2 Cyanoacrylate	0.2 ppm	None	None

### Exposure Limits (STEL)

### 3- Hazards Identification:

Toxicity: Skin contact may cause burns. Bonds rapidly and strongly to skin. Skin and eye irritant. Estimated oral LD50 more than 5000mg/kg.

Primary routes of Entry: Inhalation

Signs of exposure: Vapor is irritating to eyes and mucous membranes above TLV. Prolonged and / or repeated overexposure to vapors may produce symptoms of non-allergic asthma in sensitive individuals.

### 4- First Aid Measures:

Ingestion:	Ingestion is unlikely. See supplemental section for emergency action.
Inhalation:	Remove to fresh air. If symptoms persist, obtain medical attention.
Skin contact:	Soak in warm water. See supplemental section for emergency action.
Eye contact:	Flush with warm water. See supplemental section for emergency action.

### 5- Fire Fighting Measures:

Flash Point:	150-200F, Tag Closed Cup
Extinguishing Media:	Foam, Dry Chemical or Carbon Dioxide
Unusual Fire or Explosion Hazards:	Vapors exceeding the flash point will ignite when exposed to flame.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus.

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## 6-Accidental Release Measures

Steps to be taken in case of spill or leak: Flood with water to polymerize. Soak up with inert absorbent.

## 7- Handling and Storage:

Safe storage: Store away from heat and direct sunlight to maximize shelf life. Store inside in a dry location.

Handling: Keep container tightly closed. Avoid contact with skin. Avoid breathing vapors.

## 8- Protective Equipment:

Ventilation: Local exhaust ventilation is recommended to maintain vapor level below TLV.

Respiratory protection: Not applicable with good local exhaust.

Skin: Polyethylene or non-reactive gloves. Do not use cotton or wool. See supplemental page for more information.

Eye protection: Safety glasses or goggles with side shields.

## 9- Physical and Chemical Properties:

Appearance: Clear liquid  
Odor: Sharp, pungent  
Boiling Point: Greater than 300F  
Vapor Pressure: Less than .2mmHg @20C  
Vapor Density: Approximately 3 (Air =1)  
Evaporation rate: Not applicable  
Specific Gravity: 1.06  
Solubility in water: Negligible. Polymerized by water.

## 10- Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Incompatibility: Polymerized by contact with water, alcohols, amines, and alkalis.

## 11- Toxicological Information

See Section 3

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## 12-Ecological Information

No Data

## 13- Disposal Considerations:

Spill or accidental release: Flood with water to cure (harden) adhesive. Soak up with an inert absorbent.  
Disposal procedures: Incinerate or dispose of in an approved landfill in accordance with local and EPA regulations. Not a RCRA hazardous waste.

## 14- Transportation Information:

Domestic Ground Transport:  
Proper shipping name: Unrestricted (not more than 450 liters)  
Combustible liquid, n.o.s. (more than 450 liters)  
Hazard class or division: Unrestricted (Not more than 450 liters)  
Combustible liquid (more than 450 liters)  
Identification number: None (Not more than 450 liters)  
NA 1993 (More than 450 liters)  
Marine pollutant: No

## 15- Regulatory Information

CA Proposition 65: No information

## 16- Other Information

<u>Hazard</u>	<u>NFPA Hazard Code®</u>	<u>HMIS Hazard Code®</u>
Health	2	2
Fire	2	2
Reactivity	1	1
Specific Hazard	No water	Personal protection: See Section 8

NFPA is a registered trademark of the National Fire Protection Association  
HMIS is a registered trademark of the National Paint and Coatings Association

# THE PHYXALL CORP

## Technical Data Sheet

### PHYXALL CORP

#### Product Description

**PHYXALL** a single component low viscosity cyanoacrylate adhesive. It is a fast setting adhesive ideal for bonding all types of rubbers and preassembled parts.

#### Physical Properties

##### Monomer (Liquid)

Base Compound	Ethyl Cyanoacrylate
Appearance	Colorless Liquid
Viscosity (cP @ 68°F)	18 cP
Specific Gravity (g/cc)	1.06
Flash Point (TCC)	185°F
Shelf Life @40°F	1 year unopened

##### Military Specifications

Mil-A-46050C  
Type II, Class 1

##### Curing Properties

Ambient surface moisture will initiate the hardening process. Handling strength is reached in a short period of time and varies depending on environmental conditions and substrates being bonded. Product will continue to cure for at least 24 hours before full strength and resistances are developed.

##### Setting Time (68°F, 65% R.H.)

Steel	5 to 8 seconds
Aluminum	7 to 12 seconds
Neoprene	< 5 seconds
ABS	3 to 5 seconds
Polycarbonate	5 to 9 seconds
PVC	4 to 8 seconds

##### Curing Performance

The gap of the bond line will affect set speed. Smaller gaps tend to increase the speed. Activators can be applied to improve set speed but may also impair overall adhesive performance.

##### Polymer (Cured)

Appearance	Colorless Solid
Service Temperature Range	-65°F to 225°F
Softening Point	322°F
Refractive Index (ND 20)	1.49
Full Cure Time	24 Hours
Dielectric Strength (KV/mm)	11.6
Dielectric Constant (@ 1Kc)	5.4
COE (in./in./F)	.000114
Tensile Strength (steel/steel)	2700 psi
Solubility	Nitromethane, Acetone, Dimethylformamide

##### Performance of Cured Materials

Tensile Shear strength after 48 hours at 20° to 25°C	
Substrate	Range in N/mm2
Blasted Steel	16 to 22
Etched Aluminum	13 to 20
Neoprene	> 10
ABS	> 6
Polycarbonate	> 5
PVC	> 6

##### Temperature Resistance

Shear Strength on steel after 1 week at 22 °C

