Life Renovation!
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Technical Data Sheet for AXIA 254

AXIA 254 is designed for the assembly of difficult-to-bond materials which require uniform stress distribution and strong tension and/or shear strength. This product provides rapid bonding of a wide range of materials, including metals, plastics and elastomers.

Features of AXIA 254 before Cure

Main Chemical Name: Ethylcyanoacrylate
Apperance: Colorless, transparent liquid
Density (20 °C): 1.06
Viscosity (25℃, 60% RH): 80 cps
Solubility: Acetone soluble
Flash Point: See MSDS
Cure Speed: Fast

Cure Speeds and Strengths of AXIA 254 for Various Substrates.

Adherends	Set time (sec)	Shear strength (Kgf/cm^2)
Steel	17~37	200
Aluminium	17~37	130
Stainless steel	17~37	200
Copper	25~40	130
ABS	10~25	60*
Acryl	15~25	60*
Rigid PVC	17~37	90*
Phenol	5~15	90*
Polycarbonate	17~37	90*
Chloroplen	10~25	5*
NBR	15~25	20*

* Represents the fracture of the adherend
The specimen preparation and test conditions are complied by Korean Standard (KS). These values may be varied on different conditions and the amount of adhesives applied as well as the surface characteristics of substrates.

Typical Curing Performance

Under normal conditions, the atmospheric moisture initiates the curing reaction of cyanoacrylate adhesive between substrates. Although full functional strength is developed in a relatively short period, curing continues for at least 24 hours before full chemical/solvent resistance is developed.

Heat Resistance

Thermal resistance is excellent from -30°C to 90°C. Heating causes the adhesive to soften but strength is regained on cooling, provided 90°C is not exceeded for prolonged periods.

Chemical Resistance

When test specimens (single lap joint with sand blasted steels) are aged under 48Hrs in oil, gasoline, water, and alcohol bath and tested at 25°C, the strengths were rarely changed from the initial strengths.
This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

Direction for Use

Surface should be clean, dry and grease free prior to bonding. MEK and similar solvent can be used to degrease surfaces. For difficult or porous surface, try using activator like AXIA Spray Primer 802. When bonding polypropylene, polyethylene, PTFE, silicone, we would recommend priming first using AXIA 1502 or AXIA 2702. After the primer is dried, a drop or a few drops of the adhesive is applied on the surface of a substrate to be bonded and assembled with the other substrate. In some cases, two pieces of the substrates can be assembled first and the adhesive can be injected in between. After the correct assembly, holding the assembly with finger tip pressure in a few seconds is enough to spread the adhesive on the surfaces and to get suitable bond strengths. After 24 hours, the assembled parts can be used.

Package size

20g/50g/100g/Bottle

Storage

Store the product in the unopened bottle in a cool and dry place. Keep it out of direct sun light. Refrigeration to 5~10°C gives optimum storage stability. Material removed from the bottle may be contaminated during use. Do not return it to the original bottle. AXIA cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated.

Health & Safety in Use

Danger - It bonds skin and eyes in seconds. If accidental skin bonding happens, wash with warm soapy water, In case of eye contact, flush with plenty of water and seek for medical advice.

Inhalation: Remove to fresh air. If discomfort persists seek medical attention.

Skin contact: Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.

Ingestion: Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.

Notes to physician: Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

Disclaimer

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