Product name: Aron Alpha Type 201

FEATURES

General purpose adhesive for multiple bonding applications.
Standard, low viscosity type.

PROPERTIES

Physical properties of monomer (Liquid state – before curing)
- Appearance: Colorless, transparent liquid
- Base Monomer: Ethyl 2-cyanoacrylate
- Viscosity: 2 cps
- Specific Gravity 1.050
- Flash Point (C.O.C.-°F): 181
- Freezing Point (°F): -21

Physical properties of polymer (Solid State – after curing)
- Appearance: Colorless, transparent solid
- Specific Gravity: 1.2483
- Hardness (Rockwell M): 85
- Softening Point (Vicat: °F): 293

PERFORMANCE

Setting time (sec), bond strength in tension and shear (psi); note:* indicates material failure.

Setting time

Material	Setting Time (sec)
Rigid PVC	5
Polymethylmetacrylate	10
ABS	15
Polycarbonate	20
Natural Rubber	5
Steel	15
Copper	3
Phenolic Resin	5
Rigid PVC/Steel	15
Aluminum/ABS	15
Phenolic Resin/Copper	5
Neoprene Rubber/Steel	10
Neoprene Rubber/ABS	20

Bonding strength Tension

Material	Bond Strength in Tension (psi)
Rigid PVC	5000
Polymethylmetacrylate	5000*
ABS	3600*
Polycarbonate	5000
Natural Rubber	360*
Steel	4600
Copper	5000
Phenolic Resin	5000*
Rigid PVC/Steel	2600
Aluminum/ABS	2100
Phenolic Resin/Copper	3600
Neoprene Rubber/Steel	360*
Neoprene Rubber/ABS	360*

Bonding strength Shear

Material	Bond strength in Shear (psi)
Rigid PVC	1000*
Polymethylmetacrylate	710*
ABS	710*
Polycarbonate	1000*
Natural Rubber	70*
Steel	2840
Copper	3000
Phenolic Resin	1000*
Rigid PVC/Steel	1000*
Aluminum/ABS	710*
Phenolic Resin/Copper	1000*
Neoprene Rubber/Steel	70*
Neoprene Rubber/ABS	70*

Test conditions—Test specimen
- Tensile strength: 0.5 x 0.5 x 1.5 inch; bonded area 0.25 sq. inch
- Tensile shear strength: for plastic/rubber 0.1 x 1.0 x 4.0 inch; bonded area 0.5 sq. inch for metal 0.064 x 1.0 x 4.0 inch; bonded area 0.5 sq. inch
- Bonding atmosphere: 72-75°F, 58-62% relative humidity
- Test Methods: ASTM D2095, D3164, D1002

REGULATION

Military Specification: Mill-A-46050C Type II Class 1
Medical assembly: US Plastics Class VI

HOW TO APPLY ARON ALPHA

Clean the surfaces to be bonded and then apply Aron Alpha. Be sure to apply Aron Alpha to only one of the surfaces to be bonded, preferably the smaller surface, the surface on which the Aron Alpha set time is longer, or the surface looking upward.

A common error in applying Aron Alpha is to apply an excessive quantity of Aron Alpha or to apply too small of a quantity of Aron Alpha in a wide thin film. In the former case, it is waste of Aron Alpha as well as damaging to the appearance of the bonded materials. This may also bring about chlorosis or solvent cracks. In the latter case, the Aron Alpha monomer may harden before the actual bonding starts and this will reduce the bond strength to a great extent. This is particularly the case with rubber materials.

Therefore, make sure that the nozzle of the Aron Alpha container is touching the surface to be bonded so that you can apply an optimum quantity of Aron Alpha from the container. Immediately after that, mate the two surfaces and let the Aron Alpha monomer spread between the two surfaces. It is not necessary to spread the monomer by using a rubbing motion.

Aron Alpha monomer, if kept in the form of a mound on the surface, does not harden for 5 to 10 minutes and retains sufficient bond strength.

OPTIMIUM QUANTITY OF ARON ALPHA

With Aron Alpha bonding, the thinner the film of the Aron Alpha monomer on the surface to be bonded, the greater is the resulting bond strength. An excessive quantity of Aron Alpha never helps increase the bond strength. On the contrary, it may bring about chlorosis, solvent cracks, or erosion by the Aron Alpha monomer of the surface to be bonded. Test results indicate that with Aron Alpha the optimum quantity to be applied at one time is 0.004 - 0.006 g/cm2 or 0.03 - 0.05 mm in terms of film thickness. On the basis of the value of 5 mg/cm2, you can obtain standard bond strengths as shown in the tables above.

STORAGE

Conditions to consider when storing Aron Alpha

Humidity
- Avoid moist, humid storage conditions.
- Fasten cap tightly to avoid exposure to moisture.

Store with desiccant.

Temperature
Avoid storing at a high temperature.
When storing Aron Alpha for an extended period, refrigerate between 40°F and 50°F.

Sunlight
Avoid direct exposure to ultraviolet light (keep in light-proof packaging).

Other
Never store Aron Alpha with an accelerator.

WARNING
Eye and Skin irritant. Bonds skin instantly. Combustible – keep away from heat and flames. Please read adhesive MSDS before using.

Disclaimer:
Please be advised that test results are those which were prepare at Toagosei America's laboratory. The results may vary under actual application conditions.

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