

### Product name: Aron Alpha Type 803

#### FEATURES

No blooming for better finish for multiple bonding applications.  
No odor is good for working environment.  
Standard, high viscosity type.

#### PROPERTIES

		803
Liquid State (Before curing)	Appearance	Colorless, Transparent
	Base Monomer	Ethoxyethyl 2-Cyanoacrylate
	Viscosity (cps)	1500
	Specific Gravity (d <sup>20</sup> )	1.07
	Flash Point (Closed cup, °C/°F)	112/234
	Freezing Point (°C/°F)	-22/-7

		803
Solid State (After curing)	Appearance	Colorless, Transparent
	Specific Gravity (d <sup>20</sup> )	1.17
	Hardness (Rockwell M)	55
	Softening Point (Vicat: °C/°F)	60/140

#### PERFORMANCE

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

##### Setting time

Material	Setting Time (sec)
Rigid PVC	15
Polymethylmetacrylate	30
ABS	45
Polycarbonate	60
Aluminum	30
Steel	30
Stainless Steel	30
Rigid PVC/Steel	30
Aluminum/ABS	45
Stainless Steel/FRP	120

##### Bonding strength Tension

Material	Bond Strength in Tension (psi)
Rigid PVC	4600
Polymethylmetacrylate	3700
ABS	2600
Polycarbonate	3300
Aluminum	3800
Steel	4400
Stainless Steel	3700
Rigid PVC/Steel	2100
Aluminum/ABS	2000
Stainless Steel/FRP	3100

##### Bonding strength Shear

Material	Bond strength in Shear (psi)
Rigid PVC	1000*
Polymethylmetacrylate	700*
ABS	700*

Polycarbonate	570
Aluminum	1700
Steel	2400
Stainless Steel	2400
Rigid PVC/Steel	1000*
Aluminum/ABS	700*
Stainless Steel/FRP	2300

##### 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

#### 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.

#### OPTIMUM 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. On the basis of the value of 5 mg/cm<sup>2</sup>, 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 32°F and 40°F.

##### Sunlight

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

Other

Never store Aron Alpha with an accelerator.

**WARNING**

**Warning**

Eye and Skin irritant. Bonds skin instantly. *Combustible* – keep away from heat and flames. For safe handling information on this product, consult the Safety Data Sheet (SDS) before using.

**Disclaimer**

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

It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof.

Material removed from original containers may be contaminated during use. Do not return product to the original container. Toagosei cannot assume responsibility for product which has been contaminated or stored under conditions other than previously indicated.

If additional information is required, please contact your Toagosei Technical Department or Customer Service Representative at 614-718-3855 or 1-800-338-5192 or via email at [sales@toagosei.net](mailto:sales@toagosei.net)