AC770

PRODUCT DESCRIPTION

AC770 provides the following product characteristics:

Technology	Primer - Cyanoacrylate
Chemical Type	Aliphatic amine
Solvent	n-Heptane
Active Ingredient Concentration, %	0.07 to 0.13[LMS]
Appearance	Transparent to slightly hazy, colorless liquid[LMS]
Fluorescence	Positive under UV light[LMS]
Viscosity	Very low
Cure	Not applicable
Application	CA surface primer

AC770 is used to make polyolefin and other low energy surfaces suitable for bonding with cyanoacrylate adhesives. On such treated surfaces the cured performance of cyanoacrylate adhesives is generally similar to that described in the TDS for the relevant adhesive. It is only recommended for difficult to bond substrates which include polyethylene, polypropylene, polytetrafluoroethylene (PTFE) and thermoplastic rubber materials. AC770 Polyolefin Primer is not recommended in assemblies where high peel strength is required.

TYPICAL PROPERTIES

Specific Gravity @ 25 °C	0.68
Viscosity @ 20 °C, mPa·s (cP)	1.25
Drying Time at 20 °C, seconds	≤30
On Part Life, hours	≤8

Flash Point - See MSDS

TYPICAL PERFORMANCE

Fixture time and cure speed achieved as a result of using AC770 depend on the adhesive used and the substrate bonded.

Effect on Cure Speed of Cyanoacrylate Adhesives

AC770 also behaves as an activator and accelerates the cure speed of cyanoacrylate adhesives.

Fixturing time on most primed substrates is less than 5 seconds but 24 hours at room temperature (22 °C) should be allowed for adhesive to develop maximum bond strength.

Effect on Cured Properties of Cyanoacrylate Adhesives

Products CA1406, CA1496 and CA1460 are based on ethyl, methyl and ß-Methoxyethyl esters respectively. Other Longain liquid products based on these esters will behave in a similar fashion to these examples. AC770 is not recommended for use with gel products.

TYPICAL PERFORMANCE OF CURED MATERIAL

Performance Data

Substrates treated with AC770

After 24 hours @ 22 °C / 55% RH:

Lap Shear Strength, ISO 4587:

Polypropylene and CA1406	N/mm²	3 to 10
	(psi)	(440 to 1,450)
Polypropylene and CA1496	N/mm²	2 to 7
	(psi)	(290 to 1,015)
Polypropylene and CA1460	N/mm²	1 to 4
	(psi)	(145 to 580)
Thermoplastic Rubber and CA1406	N/mm²	2 to 6
	(psi)	(290 to 870)
Polytetrafluorethylene (PTFE) and CA1406	N/mm²	1 to 6
	(psi)	(145 to 870)

HDPE treated with AC770 to:

Mild steel (grit blasted) without primer and CA1406	N/mm²	4 to 10
	(psi)	(580 to 1,450)
Polypropylene treated with primer and CA1496	N/mm²	5 to 15
	(psi)	(725 to 2,175)

TYPICAL ENVIRONMENTAL RESISTANCE

Environmental Resistance of Cyanoacrylate bonds on substrates treated with AC770

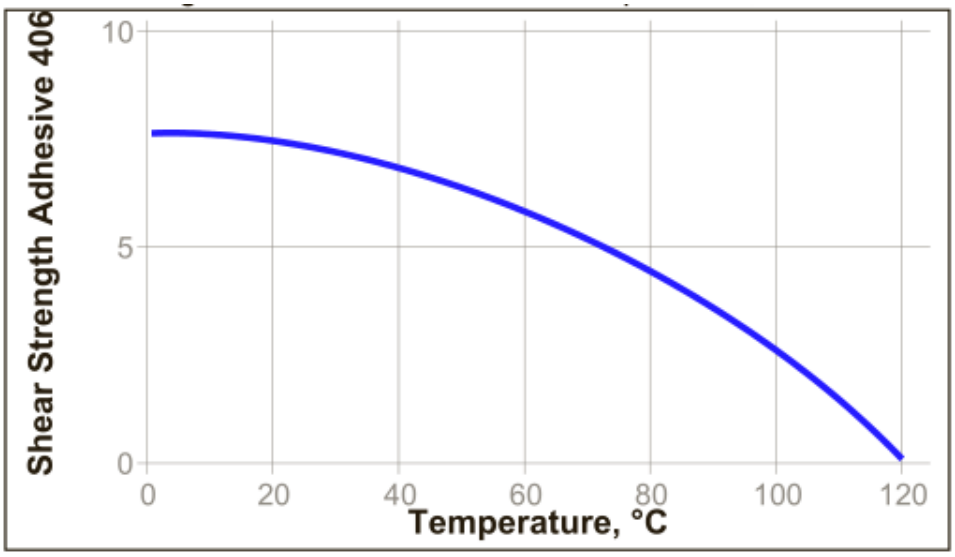
Cured for 24 hours:

Lap Shear Strength, ISO 4587

Hot Strength

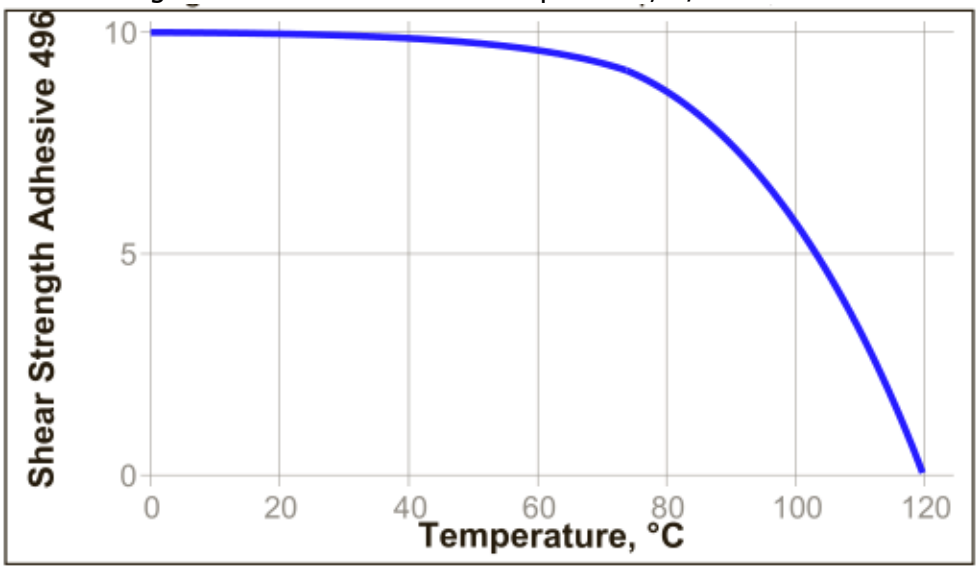
Polypropylene to Polypropylene

Shear strength measured at elevated temperature, N/mm²



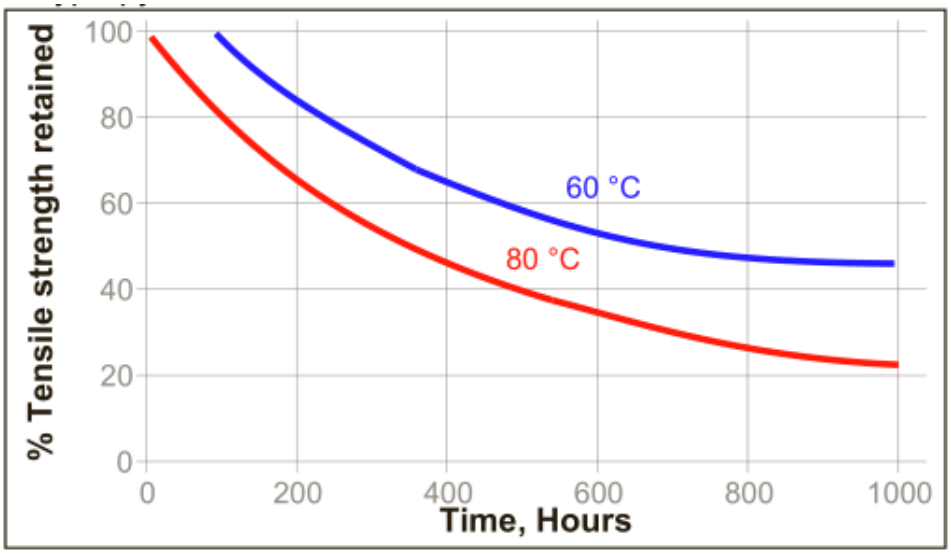
Grit Blasted Mild Steel to Polypropylene

Shear strength measured at elevated temperature, N/mm²



Heat Aging

Polypropylene treated with AC770



Chemical/Solvent Resistance

On Isopropyl Alcohol wiped Polypropylene, treated with AC770. (For effect of other solvents see TDS for relevant adhesive)

		% of initial strength		
Environment	°C	100 h	500 h	1000 h
95% RH	40	100	100	100

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected with a sealant for chlorine or other strong oxidizing materials.

Directions for use

Primer may be applied by spraying, brushing or dipping at ambient temperature. Excess primer should be avoided.Presence of primer may be detected by means of a UV inspection lamp (365 nm). If polyolefin and more active or easier to bond materials are involved, apply the primer to the polyolefin only.

Handling precautions

Primer must be handled in a manner applicable to highly flammable materials and in compliance with relevant local regulations. The solvent can affect certain plastics or coatings.It is recommended to check all surfaces for compatibility before use.

Storage

Store product in the unopened container in a dry location.Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Longain Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Note:

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