Factor II, Incorporated

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PRODUCT INFORMATION
A-321 BONDING ENHANCER

DESCRIPTION:

Factor II Inc. A-321 BONDING ENHANCER Silicone Primed Bonding Enhancer it is a transparent, two component dimethyl silicone elastomer, dispersed in A-840 CCH Fluid. A-321 BONDING ENHANCER is a system of medium viscosity liquids that blend easily in a convenient 1:1 ratio by weight or volume.

APPLICATIONS:

A-321 BONDING ENHANCER is very effective in bonding applications of Metal, Plastic, and Silicone Elastomers to produce a tenacious bond of silicone to various structures, it is effective in over molding silicone to silicone elastomers without the need of primer application.

MIXING:

The A-321 BONDING ENHANCER individual components should be thoroughly mixed just prior to their addition. Add equal parts of part A to part B and mix thoroughly. Trapped air added during; mixing should be removed by vacuum, (optional) but care should be exercised to prevent solvent loss during deairing. Additional dilution for thin film applications may be accomplished by the addition of appropriate solvent followed by mixing and deairing.

TYPICAL PROPERTIES AS SUPPLIED:

Color.....clear
Solids content, wt.%..... 15
Solvent ..... A-840 CCH Fluid
Viscosity, cps. 5000
Working time, at 25°C, hours. 24
Mix ratio 1:1
Cure system.....Pt Addition

TYPICAL CURED PROPERTIES:

Appearance ..... clear, LV Elastomer
Specific gravity at 25°C (77F).....1:14
Refractive index at 25°C(77F) 1.41
Durometer..... 50
Tensile Strength, psi.....1750
Elongation, % 3900 Tear Strength, ppi, Die B 300
Modulus,100%, psi.....100

TECHNIQUE

A-321 Bonding Enhancer: it is a 2 part very thin primer enhanced dispersed elastomer which is simple to use, mix A: B; 1:1, by weight or volume!
Apply a thin coat to the cured Elastomer, or other structure,
Allow solvent to evaporate 10-15 minutes. Apply platinum silicone directly over the 321 Bonding Enhancer.
Place in dry heat oven @ room temp to 130 F and allow to set for 10 mins.
Elevate temp to 150 F allow to temp again soak for 10+ mins
Raise temp to 180 F allow to reach temp again soak for 10+ minutes
Raise temp to 200 F/ Max of 250 F and allow to set for 30 to 60 mins
Allow to return to room temperature in oven slowly.
You will achieve one very tenacious bond

The time and temps can be adjusted to your ideal situation
All depends on size and shape or molded part
Options: pressure pot A-321 enhancer @ 30 psi for 10 minutes minimum or vacuum evacuate A-321 to remove air, these are optional.

The overall concept that must be followed is to drive off the solvent in the Bonding Enhancer by raising temperature incrementally
What you want to avoid is for the solvent to boil before you make it evaporate, generating air bubbles in the surface.

TYPICAL CURE SCHEDULE:

(Following Solvent evaporation)

A-321 BONDING ENHANCER is designed to cure at elevated temperatures following the removal of the solvent. The following table illustrates the effects of temperature cure time.
Between each coat solvent must be allowed to evaporate. Minimum of 20 minutes should be allowed between each coat. Build up to desired thickness (after buildup) cure slowly at following temperatures

30 minutes	**@ room temperature (after buildup)**
30 minutes	**@ 135°F**
30 minutes	**@ 165°F**
60 minutes	**@ 180 F to 212 F (depending on mold if any)**

This material can be cured from 180°F to 250°F. Blistering will occur if solvent has not been eliminated.
Times can be adjusted but the gradual driving off of the solvent is what is imperative

MOLD &SUBSTRATE CONSIDERATIONS:

A-321 BONDING ENHANCER will cure in contact with most materials. Exceptions include butyl and chlorinated rubbers, some RTV silicones, and unreacted residues of some curing agents.

Mold	Mold Release
GYPSUM	F-901 Separating film
EPOXY	A-801 Polyvinyl Alcohol (PVA)
SILICONE	A-801 Polyvinyl Alcohol (PVA)
METAL	A-801 Polyvinyl Alcohol (PVA)

STORAGE AND SHELF LIFE:

Factor II will warrant products for six months from the date of shipment when stored at room temperature in the original unopened containers. REFRIGERATION MAY EXTEND THE SHELF LIFE, BUT CARE SHOULD BE TAKEN TO WARM THE MATERIAL TO AMBIENT TEMPERATURE BEFORE OPENING THE CONTAINER.

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