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Technical Data Sheet

KA006-1

Thermal Stability Acrylic Adhesive used in PP, PE, TPO Inert Plastics

Product Description

KA006-1 is a two-component acrylic adhesive that cures at room temperature. No special surface treatment is required. This resin has excellent adhesion to many low surface energy materials after curing. Such as polypropylene (PP), polyethylene (PE), and thermoplastic polyolefin (TPO). In a long-term high temperature environment (high temperature of 80 °C, 14 days), the bonding strength did not significantly decline. It can replace screws, rivets, plastic welding and two-step processes, including of chemical etchants, primers or surface treatments in many applications.

Features

1. This product exhibits good operation property after mixing.
2. This product has adhesion on different substrates.
3. This product has excellent high temperature resistance/ chemical resistance/ water resistance.
4. This product can solve the structural adhesion of thermoplastic polyolefin elastomer (TPO).
5. No surface treatment is required.
6. Zero solvent formula, low odor, fully comply with environmental protection requirements.
7. Excellent thermal stability.
8. This product complies to the 2011/65/EU RoHS regulations.
9. This product complies to chlorine < 900ppm, bromine < 900ppm, chlorine + bromine < 1500ppm.

Typical Uncured Properties

	KA006-1A	KA006-1B
Appearance	Liquid	Liquid
Color	Blue	Light yellow
Viscosity 25°C, cps	1,800~3,000 S14 100rpm	12,000~13,000 S14 100rpm
Thixotropic Index	2.0~3.0	3.5~4.5
Specific Gravity	1.16~1.31	1.02~1.12

Typical Curing Properties

Mix Rate (A：B) by Weight	10：1
Mix Ratio (A：B) by Volume	10：1
Work Life, 25~33°C, 0.5g, min	8~10
Partially Cure Time, 25~33°C, hr	1.0~1.5
Full Cure Time, 25~33°C, hr	18~24

Direction of Use

1. When using this product, discard the front end of the A part and B part mixed adhesive, then coating the product (A part and B part mixed adhesive) on the substrate to achieve the best bonding performance.
2. It should be applied on a clean surface which is free of dirt, grease or mold release. In many cases, a simple solvent wipe is sufficient.
3. Mix thoroughly by weight 10：1 before use.
4. After mixing, it should be used within the pot life.
5. For maximum bonding strength apply adhesive evenly to both surfaces to be jointed.
6. The handling information of this product supplied in dual syringe cartridge can be obtained by requesting a copy of “Introduction for Adhesive Cartridge Dispenser”, F-06122201.

Typical Cured Properties*

Glass Transition Temp.,(MDSC)°C	90
Specific Gravity	1.27
Durometer Hardness, Shore D	60
Shear Strength, PP+PP, kgf/cm^2	45
Shear Strength, PP+PP, 80 °C *336hr,kgf/cm^2	46
Shear Strength, PA+PA, kgf/cm^2	40
Shear Strength, HDPE+HDPE, kgf/cm^2	58
Shear Strength, HDPE+HDPE, 70 °C *168hr, kgf/cm^2	52
Shear Strength, HDPE+HDPE, 70 °C Water*168hr, kgf/cm^2	50
Shear Strength, HDPE+HDPE, 5% Brine *168hr, kgf/cm^2	60
Shear Strength, HDPE+HDPE, 70°C*5% Brine *168hr, kgf/cm^2	60
Shear Strength, HDPE+HDPE, 10% Sodium hydroxide *168hr, kgf/cm^2	62
Shear Strength, HDPE+HDPE, Gasoline *168hr, kgf/cm^2	19
Shear Strength, HDPE+HDPE, Diesel fuel *168hr, kgf/cm^2	60
Shear Strength, HDPE+HDPE, Toluene *168hr, kgf/cm^2	< 10
Shear Strength, HDPE+HDPE, Acetone *168hr, kgf/cm^2	< 10
Low temperature shear strength, HDPE+HDPE, -30 °C, kgf/cm^2	45
Room temperature shear strength HDPE+HDPE, 25 °C, kgf/cm^2	45
High temperature shear strength HDPE+HDPE, 50 °C, kgf/cm^2	45
High temperature shear strength HDPE+HDPE, 80 °C, kgf/cm^2	45
Shear Strength, PE+PE, kgf/cm^2	40
Shear Strength, UHMWPE+ UHMWPE, kgf/cm^2	34
Shear Strength, LDPE+LDPE, kgf/cm^2	25
Shear Strength, ABS+ABS, kgf/cm^2	120
Shear Strength, PC+PC, kgf/cm^2	120
Shear Strength, PMMA+PMMA, kgf/cm^2	100
Shear Strength, PVC+PVC, kgf/cm^2	140
Shear Strength, FRP+,FRP, kgf/cm^2	150
Shear Strength, PTFE+PTFE, kgf/cm^2	< 20
Shear Strength, PS+PS, kgf/cm^2	45
Shear Strength, Glass+Glass, kgf/cm^2	60
Shear Strength, TPO+TPO, kgf/cm^2	45

Storage and Shelf Life

This product should be kept without any possibility of sunlight or ultraviolet exposure. Replace the lid immediately after use. Please keep the bottle mouth clean and avoid any contact with acid-base asubstance after open. Shelf life of this product is 1 year when stored below 2℃ ~13℃ in original, unopened containers.

Caution

Some findings indicate a lack of potential for carcinogenicity with the compositions of this product by long term recurrent application to the skin. However, contact with skin is likely to produce mild transient reddening. It is important to remove adhesive from skin with soap and water thoroughly. DO NOT use solvents for cleaning hands. This product is of moderate acute toxicity by swallowing. If swallowed, call a physician. Avoid contact with eyes. In case of contact, flush with water for at least 15 minutes and get medical attention immediately. For specific information on this product, consult the Material Safety Data Sheet.