

General Purpose DOT Non-Corrosive (GPNC) Adhesive – K-013

Description:

GPNC- ADHESIVE is an all-purpose epoxy used for bonding construction materials and general industrial use. GPNC-ADHESIVE is a DOT non-corrosive epoxy system that has been specifically formulated to address environmental, workplace safety, and shipping concerns. GPNC-ADHESIVE is a two-component, 100 % solids, BGE[†] and VOC-free, epoxy resin system specifically formulated to bond a variety of materials. The paste-like consistency allows for easy application, including vertical surfaces. GPNC-ADHESIVE can be used to bond metal, wood, glass, concrete, fiberglass, plastic, and ceramic tiles.

Handling Properties:

COLOR	Light Gray	
CONSISTENCY	Non-Sag Paste	
SPECIFIC GRAVITY, g/cm ³	1.38	ASTM D 792
WORKING TIME, min	45	
GEL TIME, min	60	ASTM D 2471
CURE TIME, h	4	

Physical Properties:

COMPRESSIVE STRENGTH, psi (MPa)	12,900 (89)	ASTM D 695
TENSILE STRENGTH, psi (MPa)	4,200 (29)	ASTM D 638
ELONGATION @ BREAK, %	2.5	ASTM D 638
TENSILE SHEAR STRENGTH, psi (MPa)	2,500 (17)	ASTM D 1002
MAXIMUM CONTINUOUS SERVICE TEMPERATURE, °F (°C)	150 (66)	
HARDNESS @ 72 °F (22 °C), Shore D	82	ASTM D 2240
WATER RESISTANCE, %	0.56	ASTM D 57

Curing Procedures:

The working time (the time you have before it sets) of GPNC-ADHESIVE will vary according to the air temperature. The average working time at 70 °F (21 °C) will be 45 minutes for approximately 1 pint (0.5 l) of mixed material. In cooler weather, you will have more time to work with the material, and in hotter weather you will have less time.

The cure time (the time before the parts can be used) will also depend on the air temperature and the temperature of the parts themselves. The average cure time from the last application to start-up at 70 °F (21 °C) will be 4 to 5 hours. Preheating the parts will accelerate the cure time. Do not heat parts hotter than 100 °F (38 °C).

Surface Preparation:

Preparation of Concrete: Remove all oil, grease, or contaminated concrete. Chip the surface down to sound aggregate. The concrete must be **dry** and have no standing water. Acid etching surface preparation procedures may result in poor bond and should be avoided. Do not prime or seal concrete surfaces.

Preparation of Metal: Metal surfaces should be sand blasted to a "white metal" condition. If it is impossible to apply GPNC-ADHESIVE within 24 hours of sand blasting, the surfaces should be primed with Copps K-049 Primer. Do not use porch and deck enamel or red-lead primer.

[†]Butyl Glycidyl Ether. The EPA (SARA Title III, section 312) lists BGE as "Toxic" (per ANSI Z129.1) by skin absorption and an immediate health hazard.

Mixing:

GPNC-ADHESIVE is packaged in two-gallon pre-measured kits of resin and hardener. To use, simply mix the resin and hardener in a 1:1 ratio by volume and apply. GPNC-ADHESIVE is color coded for mixing convenience and control. Unmixed material remaining in the cans may be resealed for future use.

Uncured GPNC-ADHESIVE can be removed from tools and equipment with non-flammable Copps Enviro Kleen, isopropyl alcohol, xylol or ketones.

Packaging:

K-013-22: 1.9 Gallon = 442. in.³

SAFETY PRECAUTIONS

Avoid breathing of vapors. Forced local exhaust is recommended to effectively minimize exposure. NIOSH approved, organic vapor respirators and forced exhaust are recommended in confined areas, or when conditions (such as heated polymers, sanding) may cause high vapor concentrations. **DO NOT WELD, BURN OR TORCH NEAR OR ON, ANY EPOXY MATERIAL. HAZARDOUS VAPOR IS RELEASED WHEN AN EPOXY IS BURNED.** Avoid skin or eye contact. Wash skin with soap and water if contact occurs. If eye contact occurs flush with water of 15 minutes and obtain medical attention. Read and understand all cautions on can labels and safety data sheets before using this material.

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