

Neopor® GPS & Adhesives

Overview:

The Neopor GPS Plus continuous exterior insulation foam product, which is graphite enhanced and offers superior thermal performance compared to other insulation materials. Neopor is widely used in the United States, Canada and Europe in a variety of applications including insulated stucco, siding, concrete forms, roofing, slabs on grade, residential sheathing, and EIFS.

Code Compliance:

Neopor is manufactured under a stringent industry leading quality program in UL Evaluation Report UL ER5817-02 and ICC-ES Report ESR-3463.

Product Protection:

Like any building product material, Neopor insulation boards must be protected from the environment including reflection produced by the sun. Opaque covering is highly recommended such as white or blue tarps. Do not use clear stretch wraps. Please see storage and handling bulletin for additional information.

Several factors influence the selection of a suitable adhesive for the bonding of molded Neopor GPS to a given substrate:

Adhesive Selection:

1. Chemical compatibility of the adhesive with GPS
2. Surface wetting, tack and working time of adhesive
3. Flexibility and durability of the adhesive bond
4. Practicality and ease of application
5. Anticipated temperature and moisture exposures
6. Need for solvent or water venting to effect bonding
7. Need for pressure and/or heat to effect bonding

8. Application hazards and combustibility

9. In-plant vs. on-site applications

10. Cost of materials and labor

Thorough consideration of these factors will help ensure that the proper adhesive is selected for typical lamination of GPS to:

- Rigid roof insulations
- Reflective foils
- Kraft and corrugated products
- Rigid aluminum and steel paneling
- Poured and precast concrete
- Plywood, chipboard and flakeboard
- Gypsum board
- Roofing felts and plastic membranes
- Rigid urethane and phenolic foams

Evaporative or drying adhesives rely upon the evaporation or migration of a carrier liquid to achieve adhesive bonding. These adhesives are either solutions or dispersions of adhesive solids in a water, alcohol, or volatile solvent base. In general, adhesives of the water or alcohol based type are preferred due to the known effects of solvents on GPS. However, certain solvent based evaporative type adhesives have been successfully used for bonding GPS when applied via spray atomization, allowing solvent evaporation prior to contact with the foam.

Regardless of the type of liquid carrier involved, care must always be taken to allow adhesive drying after bonding, particularly when

the substrate is an impermeable material such as reflective foil laminates or rigid metal paneling. Very often the bulk of the carrier is force dried prior to substrate mating; strategic placement of adhesive “beads” or glue lines may allow vapor escape between the foam/substrate interface to achieve proper bonding.

Reactive adhesives, harden and bond due to chemical reaction within the adhesive itself, or with a second component. Depending upon the solvent content of the components and/or the by-products of the chemical reaction, some reactive adhesives, may fall into the evaporative category once applied, and provisions must be made to adequately vent the evaporative.

These adhesive types cure at differing rates depending upon such factors as component ratios, ambient

temperature and humidity conditions, and substrate types. Highly reactive systems may require substrate mating immediately following adhesive application. With slower reactive systems, parts may need to be held in contact by mechanical force until curing is effected.

Hot Melt adhesive are generally soft solids at room temperature, which are heated and subsequently applied in the molten state. Bonding occurs rapidly as the adhesive cools along the glue line and returns to the solid phase. Hot melts are typically applied at temperatures.

Adhesive Manufacturers:

The following list of manufacturers and products may be used as a reference guide for adhesive selection. In all cases, the manufacturer must be contacted to establish product suitability and practicality for a particular application. This list is not intended to be all-inclusive, but includes manufacturers offering products which may successfully be used for bonding GPS products.

Key: WB = Water Based Carrier
 SB = Solvent Based Carrier
 NC = No Carrier

NOTE: BASF Corporation obviously can neither recommend nor endorse any particular product or manufacturer, nor does it warrant or imply that an application using any product herein listed will be successful since the selection of, the manufacturing of, and the application of the adhesive is beyond the control of BASF Corporation.

Manufacturer	Product Name	Adhesive Type
BASF Master builder Solutions 889 Valley Park Drive Shakopee, MN 55379 800-433-9617 master-builder-solutions.BASF.US	Master Seal NP 1	High Performance Polyurethane
The W.W. Henry Company Ardex Engineered Cements 400 Ardex Park Drive Aliquippa, PA 15001 Tel: 800/232-4832 www.wwhenry.com	W.W. Henry 317	Rubber; WB- OK
Dap Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224 Tel: 410/675-2100 www.dap.com	Dap® Panel & Foam Construction Adhesive	Synthetic Rubber
Dow Corning Corporation www.dowcorning.com	Silastic 732-RTV	Reactive; Silicone; NC
	MorAd Moisture Curing Urethane Adhesives	Reactive; Urethane; Solvent-Free
Goodloe E. Moore, Inc. (GEMCO) 1019 Griggs Danville, IL 61832 Tel: 800/331-1164 www.gemcoinsulation.com	Tuffbond 9	Drying; Rubber; SB
Lord Corporation 2000 W. Grandview Blvd. Erie, PA 16514 Tel: 800/458-0434 https://www.lord.com/products-and-solutions/adhesives/lord-305-1305-2-epoxy-adhesive	Lord 301-1&2, 305-1&2, 309-1&2	Reactive; Epoxy
	Chemlok Rubber Adhesive	Drying; Rubber
Sauereisen 160 Gamma Drive Pittsburgh, PA 15238 Tel: 412/963-0303 www.sauereisen.com	Insa-Lute Adhesive Cement No. 1	Drying; Cement; WB
	Adhesive Paste 19	Drying; Cement; WB
Schwartz Chemical Co. 5001 2nd St. Long Island City, NY 11101 Tel: 718/784-7592 http://www.schwartzchem.com/plastic-adhesives/adhesive-rez-n-glue-1.html	Rez-N-Glue 164	Drying; Rubber; SB
	Rez-N-Glue 1	Drying; Resin; SB
	Rez-N-Glue WS-150	Drying; Rubber; WB
Royal Adhesives, Inc. 2001 W. Washington Street South Bend, IN 46628 John Schlacter 1-440-934-1287	Product (P) 1374206J	

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