



PUR 40 FC

Fast Cure, Multi-purpose
One-part Polyurethane
Sealant/Adhesive

Technical Data Sheet

DESCRIPTION

BONDAFLEX PUR 40 FC is a one-component, fast cure, high-performance, non-sag, multi-purpose elastomeric, polyurethane sealant and adhesive. Meets the requirements of ASTM C-920, Type S, Grade NS, Class 25, Use NT, T, M, G, A, O; TT-S-00230C, Type II, Class A; CAN/CGSB-19.13-M87 and California Air Resources Board 2003 requirements for Volatile Organic Compound content.

WHERE TO USE

Industrial Application

- Lap seams
- Subfloor to metal
- Sealing rivets/fastener heads
- Bonding door gaskets
- Body to cab joints

Construction Application

- Perimeter sealing of windows, doors and skylights
- Expansion joints
- Parapets/flashing/fascia
- Precast/tilt-up
- Curtain wall internal joints

OEM

- Auto/truck/trailer/bus/train
- RV
- HVAC

Structures

- Metal buildings
- Buildings/schools/stadiums/prisons

Locations

- Horizontal and vertical
- Interior and exterior
- Above and below grade

Substrates

- Concrete, masonry, brick, aluminum, wood, steel, extruded PVC, FRP, SMC, RIM, galvanized, aluminized steel, many plastics and composites, painted metals, glass and natural stones

FEATURES

- One-component
- Joint movement $\pm 25\%$
- Fast tack free time
- Excellent adhesion
- Paintable and sandable
- Non-staining
- Tack free surface
- Superior gunning and tooling
- High abrasion and tear strength
- Provides shock resistance
- Primerless for most substrates
- Resistant to road salts
- 12 month shelf life

BENEFITS

- Ready to use, labor cost reduction
- Excellent flexibility for dynamic joint movement
- Fast curing, same day painting
- Bonds to most substrates without priming
- Resemble contour of parts
- Improved aesthetics
- Low dirt pick-up
- Speed and ease of application
- Wide range of applications
- Vibration damping
- Saves application steps
- Ideal for vehicular applications
- A minimum of 6 months longer than competition

TYPICAL PROPERTIES

Cured 7 days @ 75°F (24°C) and 50% RH

PROPERTY	VALUE	TEST METHOD
Movement Capability, %	± 25	ASTM C-719
100% Modulus, psi (MPa)	110 (0.76)	ASTM D-412
Hardness, Shore A	40 \pm 5	ASTM C-661
Tensile Strength, psi (MPa)	350 (2.4)	ASTM D-412
Tear Strength, lbf/in (kN/m)	70 (12.25)	ASTM D-624
Elongation at Break, %	950	ASTM D-412
Peel Strength, pli	30	ASTM C-794
Bond Durability on glass, aluminum and concrete	$\pm 25\%$	ASTM C-719
Accelerated Weathering	passes	ASTM C-793
Staining	passes	ASTM C-510

Uncured

Skin-Over Time	50 mins.	MNA Method
Tack-Free Time	1.5 hrs.	ASTM C-679
Cure Rate	1/8 inch/2 hrs.	MNA Method
Extrusion Rate g/min 1/8" orifice @ 90 psi	330	ASTM C-1183 (modified)
Slump of Sealant	nil	ASTM D-2202
Rheological, Vertical @ 120°F (49°C)	non-sag	ASTM C-639
Volatile Organic Content	3.86 % by wt.	
Service Temperature	-40° to 180° F -40° to 82.2°C	

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

PACKAGING

- 10.1 fl. oz (300 ml) disposable cartridges
- 600 ml sausage packs
- 4.5 gal (17 L) in a 5 gal pail
- 52 gal (197 L) in 55 gal drum

Special packaging available upon request – ask your local Representative for more information.

STORAGE/SHELF LIFE

When stored in the original, unopened containers at or below 75°F (24°C), shelf life is one year. A product skin may form in pails and drums, remove prior to use.

COLORS

Black, Gray and White. Custom colors are available upon request – ask your local Representative for more information.

EXPANSION JOINT DESIGN

1. The number of joints and the joint width should be designed for a maximum of ± 25% movement at time of installation.
2. The depth of the sealant should be 1/2 the width of the joint. The maximum depth is 1/2 inch (13mm) and the minimum is 1/4 inch (6mm).
3. To control joint depth, use closed cell polyethylene or non-gassing polyolefin backer rod. If joint depth does not allow for backer rod, use polyethylene bond breaker tape to prevent three-sided adhesion.
3. Closed cell backer rod should be 25% larger than joint width; do not compress more than 40%.

SURFACE PREPARATION

The substrate must be clean, dry, frost free, sound and free of any oils, greases or incompatible sealers, paints or coatings that may interfere with adhesion.

POROUS SUBSTRATES – clean by mechanical methods to expose a sound surface free of contamination and laitance.

NON-POROUS SUBSTRATES – for cleaning non-porous substrates, use two rag wipe method using xylene or an approved commercial solvent. Allow solvent to evaporate prior to sealant application.

PRIMING

BONDAFLEX PUR 40 FC is designed to obtain adhesion without the use of a primer; however, certain substrates may require a primer. Test by applying the sealant and/or primer sealant combination to confirm results and proposed application methods. Refer to Technical Data Sheet for primers **BONDAFLEX PUR 1000** or **BONDAFLEX PUR 1500** and contact Technical Service for additional information.

APPLICATION

Expansion Joint

1. Ready to use, apply using a professional caulking gun. Do not open product container until preparation work has been completed.
2. Apply sealant using consistent, positive pressure to force sealant into the joint.
3. Tool sealant to create a concave joint shape and maximum adhesion. Dry tooling is recommended. DO NOT use soapy water or other liquids when tooling.
4. For cold or hot weather application, condition material to 65-75°F (18.3-24°C) prior to use.

Adhesive Joint

1. Apply by caulking gun, dispensing equipment or trowel.
2. Use sufficient quantity of adhesive to one or both substrates to provide designed contact area.
3. Surfaces may be moved up to 1 hour after application without loss of adhesive strength.
4. If needed, use fastener to hold substrates until adhesive has cured.
5. Cure times vary with temperature, humidity and porosity of joined substrates.
6. For cold or hot weather application, condition material to 65-75°F (18.3-24°C) prior to use.

CLEAN UP

Remove excess sealant from substrate while uncured using a commercial solvent, such as xylene. Cured sealant may be removed by mechanical means.

LIMITATIONS

- Do not allow sealant to come in contact with alcohol or solvent during cure.
- Do not allow sealant to come in contact with neutral curing silicones during cure.

- Immersed joint should be primed and cured (one week) before exposure.
- Sealant may be applied below freezing temperatures if substrates are completely dry, frost free and clean. Contact Technical Service for more information.
- Maximum depth of sealant must not exceed 1/2 inch (13mm); minimum depth 1/4 inch (6mm).
- Minimum thickness of adhesive joint must not be less than 0.010 inches.
- White sealant may discolor when exposed to UV light, this does not affect performance.
- Maximum application temperature 120°F (49°C).
- Do not apply to damp or wet substrates.
- Do not apply when vapor-transmission may cause sealant bubbling.
- Lower temperatures and humidity will extend tack free and cure rates.
- Allow treated wood to age 6 months before application.

FIRST AID

In case of eye contact, flush thoroughly with water for at least 15 minutes. SEEK IMMEDIATE MEDICAL ATTENTION. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION. Refer to Material Safety Data Sheet (MSDS) for further information.

PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN. Use only with adequate ventilation. Keep container closed. Prevent contact with skin, eyes and clothing. Wash thoroughly after handling. DO NOT take internally. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations. All label warnings must be observed until container is commercially cleaned or reconditioned.

May National Associates, Inc.
995 Towbin Ave.
Lakewood, NJ 08701

Ph: 800-641-0234
Fax: 973-473-4222
www.bondaflex.com

MAY NATIONAL ASSOCIATES, INC. (MNA) PRODUCTS ARE WARRANTED TO BE FREE OF MANUFACTURING DEFECTS AND TO MEET MNA'S PUBLISHED TYPICAL PHYSICAL PROPERTIES WHEN APPLIED IN ACCORDANCE WITH MNA'S DIRECTIONS AND TESTED IN ACCORDANCE WITH ASTM AND MNA'S STANDARDS. SHOULD THERE BE MANUFACTURING DEFECTS OF ANY KIND, THE EXCLUSIVE REMEDY OF THE USER WILL BE TO RETURN ALL MATERIALS ALLEGED TO BE DEFECTIVE, FREIGHT PREPAID, TO MNA FOR REPLACEMENT. THERE IS NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED, RELATING TO THE GOODS BEING SOLD, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE IN CONNECTION WITH THIS PRODUCT. MNA'S LIABILITY IS LIMITED TO REPLACEMENT OF DEFECTIVE MATERIAL AND MNA SHALL NOT BE LIABLE FOR DAMAGES OF ANY SORT, INCLUDING PUNITIVE, ACTUAL, CONSEQUENTIAL, INCIDENTAL OR REMOTE DAMAGES, RESULTING FROM ANY CLAIMS OF BREACH OF CONTRACT, BREACH OF WARRANTY, WHETHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR FROM ANY OTHER CAUSE WHATSOEVER, REGARDLESS OF LEGAL THEORY.