



3246 PenJoint Polyurea

Description: Expansion Joints

3246 PenJoint is a “Slow Set Aromatic Polyurea” designed for use in concrete Expansion Joints in parking structures, bridges, airfields, etc. 3 to 5 minute gel time, flexible 1:1 polyurea system. This two part expansion joint product is 100% solids and designed to be self-leveling for exterior moving joints. 3246 is machine dispensed using the ASTC LS 1:1 application machine or similar machine. A hand mix version of the 3246 PenJoint is available.

3246 is used for any exterior expansion joint as well as for rapid installations where short down-time is important and the environmental temperatures limit the use of other polymer products. The product can be driven over in 30 minutes after installation.

Cold Temperature Applications: 3246 may be used in cold temperature applications well below zero °F. Set times change very in cool temperatures and flexibility is maintained.

3246 exhibits excellent resistance to moisture, chemicals and abrasive conditions.

Cold Applications:

When using the 3246 in cold conditions keep the product and equipment warm before and during use.

Color:

Black, Dark Gray, Tan & Non-pigmented

Note: Aromatic systems will shift color from exposure to UV. Dark color resists color change more than light colors. Aliphatic top coats are often used to provide stable color.

Advantages

- HIGH DENSITY POLYUREA
- ELONGATION EXCELLENT IN COLD CONDITIONS
- MEETS USDA REQUIREMENTS INTERMITTENT CONTACT
- MEETS FAA P605 – AIRFIELD JOINTS
- 100% POLYUREA,
- RAPID APPLICATIONS & SET TIMES
- “DRIVE-OVER” IN 30 TO 45 MINUTES
- STAYS FLEXIBLE IN COLD CONDITIONS ☑ NON-FLAMMABLE
- -5 MINUTE GEL TIME @ 77OF
- SELF-LEVELING
- 100% SOLIDS, NO VOC’s, NO ODOR
- EXCELLENT ABRASION RESISTANCE
- HIGH IMPACT RESISTANCE
- CHEMICAL RESISTANT

Use Areas

- EXPANSION JOINTS – EXTERIOR CONCRETE
- BRIDGES
- PARKING STRUCTURES
- AIRFIELDS, MEETS FAA P605
- DECKS
- LOADING DOCKS
- MOVING EXPANSION JOINTS
- COLD STORAGE THRESHOLDS

General Physical Characteristics

Solids	100%
Gel Time	3-5 min.
Shelf Life	1 year
Hardness	ASTM D2240 Shore A 30-40
Mix Ratio	1:1
Tack Free	n/a
Tensile	ASTM D412 450
Tear Strength, pli	ASTM 624-C 200 psi
Elongation	ASTM D124 >600%
Processing Temperature	70°F
Viscosity @ 25°C cps, A 450, B 400	
VOC Content	0gms/1 or 0.0 lbs/gal

Preparation:

Concrete must have a minimum 28 day cure prior to application. Use a dry diamond saw, saw/abrade both sides of the joint walls. Assure that the joint is properly abraded and cleaned to full depth. Remove any curing agent, form release materials, oils, wax, moisture or any material that may affect bonding. Clean, vacuum and wash to remove dust from the walls of the joint. An acetone joint side wall wash down is suggested for best bonding after vacuuming. No Backer rod is used in control joints, only in construction joints to control depth. *Areas of high moisture vapor may be pre-treated with CMW (see data sheet) to reduce moisture vapor pressure in the joint area.

Primer

Use ASTC PenPrime 7001. Consult ASTC for the best primer for your application. All moving joints require a primer before application of the 3246. Prime 1-2 hours before application of the 3246. For best bonding results apply the joint product as soon as possible over the primer when the solvent in the primer has flashed. See data sheets on the above primer.

**Joint Size and Movements:**

Expansion joints should be designed with a maximum of +/- 25% movement. The overall movement of a joint should be measured at the temperatures extremes that are normal for the structure. Measure the opening of the joint at the coldest temperature and at the highest temperature and multiply by 4. If a joint opens and closes 1/4 inch the joint width should be 1 inch and the fill depth should also be approximately 1 inch.

Maximum Depth:

Areas of higher movement, standing water and deicing chemicals should have joint depth of 2 times the width with a bond breaker at the bottom of the fill. In areas of moderate movement and pneumatic tire traffic the depth of fill may be appropriate at 1 to 1.5 times the width. Structures such as bridges, airfields or parking structures that are exposed to wide thermal cycle swings and a high movement potential may exert excessive compression and expansion (pulling) forces on the joint material. Better applications for joints in high movement structures are applications with increased depth of the fill material in the joint over a backer rod with the backer rod placed at normal depth. The configuration of the backer rod should be round allowing for the added depth on the sides of the fill.

Minimum Depth:

Shallow fill applications have a greater potential for loss of adhesive bond and damage. Moving joints should not be filled less than 75% of the width unless using round fitted backer rod with joint primer.

Application:

Use a 1:1 positive displacement (cylinder) application machine or ASTC LS pump. Pre-condition 3246; Make sure the product is 72°F before beginning the machine application. Warm the product in the containers as needed to proper working temperature for this product. Use ONLY the ASTC recommended static mixing units for this product. Make sure the product is over 72°F before beginning the machine application. Warm the product in the containers as needed to pre-condition as required.

When using Duplex Cartridges of the 3246 PenJoint, keep cartridges warm and follow all application instructions for cartridge use.

Bond Breaker:

A bond breaker is often used at the bottom of an expansion joint to allow for greater movement of the product filling the joint. Use a bond breaker on deep joint fills as needed.

Filling:

Fill the joint from the bottom of the joint up. fill to slightly below grade. The product is self-leveling and quick to set, avoid overfilling.

Always mix the part B before using.

*Note: The 3246 is very adhesive and stays "tacky" on the surface allowing for top coating when used on deck joints. Top coat the surface of the 3246 not more than 1 hour after application in joints on surfaces that will have a finish coat.

*For aesthetic appearance around buildings and structures and to stop environmental dust from sticking to the new 3246 surface "remove" the surface tack on standard expansion joints by using fine sand or tack removal powder as supplied by ASTC. Dusting the surface while the product is fresh provides a fresh, clean finish and appearance.

Below Finished Grade:

Keep the installation of the product slightly below the finished surface grade. Install the product when the joint area is cool and the joint is open.

Cold Conditions:

Pre-condition the product to 80F or above the day before it is intended to be used in a cold application. Place the dispensing machine, generator and product on a cart and cover the pump unit to protect from the cold. Insulate the application hoses from the pump to the gun. Change static mixers every 20 gallon or as needed to avoid built up inside the static mixing units. Use only the ASTC recommended static mixer for this product. Failure to use the proper static mixer may result in improperly mixed product.

Static Mixer Metal Tip:

Use ASTC provide metal tip tracker for the end of the static mixer.

Note: Concrete Cure & Shrinkage

Although standard engineering practices call for a minimum 28 day cure on concrete, a longer cure is advisable. Concrete will continue to shrink after the 28 day time frame. Less shrinkage begins to occur after 60 days and 90 days. Although a 60 day and 90 day cure waiting period may not be available to the applicator or owner, the longer the concrete cures the less shrinkage will occur. Filling joints at or before a 28 day cure can produce some evidence of concrete shrinkage that may be visible in the joint fill area. A shore hardness of Shore A 30 to 450 with an elongation of greater than 400% is the expected standard for expansion joints.



Limitations:

Keep out of direct sunlight and store at room temperature on wood pallets. Protect from cold when using in the cold. Warm or pre-condition product kits on pallets before using in cool conditions below 70F. 3246 Polyurea exhibits good chemical resistance to motor pool fluids, aviation fluids, i.e. hydraulic fluid, diesel fuel and JP4 and cleaning solutions for short periods of time. To maintain proper joint integrity clean up chemical spills soon. Submersion of product or continued water ponding over product - may result in a low skid resistance condition, hazardous working condition or slip hazard. Chemicals, oils, soaps etc. should be removed from the surface as a normal part of cleaning and maintenance. Part A is moisture sensitive, keep away from compressed air units that may dispense moisture near the part A, avoid exposing the pail/container to humidity. Observe appearance of part A in humid conditions.



This product is for use by professional applicators only. Wear Protective Clothing and gloves as the product bonds very well to fabrics. Read MSDS before using this product. DOT/Flash Point – Non-flammable Liquid Classification, not regulated. Warranty: See ASTC Polymers, Inc. Warranty data sheet. (2-13) Product data sheets subject to change without notice. © 2010 ASTC Polymers, Inc .