

Security Sealant Systems

APPLICATION MANUAL

PRISONS

SCHOOLS

HOSPITALS

MUNICIPAL BUILDINGS

ANIMAL ENCLOSURES



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Why Use Security Sealants?

In the majority of building projects, sealants are used solely to protect the building. However, when the building is a daycare, hospital or prison, there is much more at stake. It's important that sealant can not be pulled from a joint and eaten by a small child, used by psychiatric patients to hurt themselves, or removed to expose a joint for an inmate to hide a weapon or illicit drugs. Security sealants contain the properties to prevent idle tampering and vandalism that can endanger children, patients and citizens.

In addition to safety, the use of security sealants present many benefits from an economic perspective:

- *Decreased risk of lawsuits*
- *Decreased maintenance costs*
- *Increased service periods of sealants*
- *Decreased replacement costs*

As budgets are cut for government run institutions, it becomes increasingly difficult for them to provide their fundamental services. This is exacerbated when funds are pulled away from public services because of maintenance costs or lawsuits that could have been prevented with security sealants.

Tamper Resistant and Tamper Proof Joint Sealants

Most caulking and construction materials are easily tampered with or “pickable”. Pickable meaning, the ability of the material to be interfered with to the point of removal, for uses other than what they were intended. Typical flexible sealants which are usually based on urethane or silicone chemistries can be pulled away to expose a joint.

Sometimes the vandalism can be as tame as a bored high school student pulling out sealant while waiting for the bus. But more threatening is the growing trend in today's prisons of inmates using various construction materials, including sealants, to cause bodily harm to themselves or others. Sealants have been removed by inmates to conceal dangerous weapons and illicit drugs, fashion weapons from the removed materials and to induce illness by ingesting or smoking them.

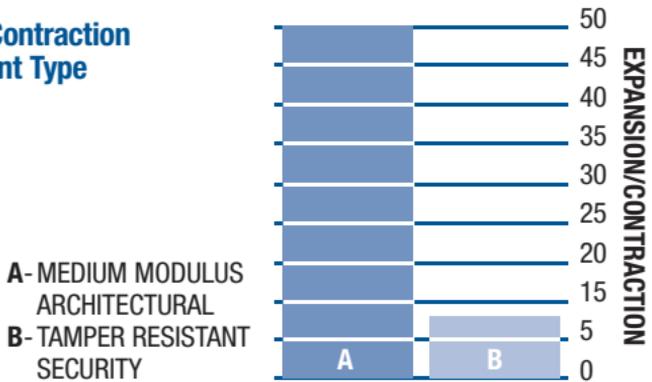
The problems associated with sealant materials that do not perform as tamper resistant or tamper proof present an important challenge to sealant manufacturers to provide materials that will solve this common type of vandalism. A “tamper proof” or “tamper resistant” sealant requires a Shore A hardness of up to 80+ and 50, respectively, to prevent them from being easily removed from a joint (Refer to Shore Hardness Scale on page 17). Typical architectural sealants are designed for weatherproofing, durability, and accommodating expansion joint movement. Properties deemed as desirable



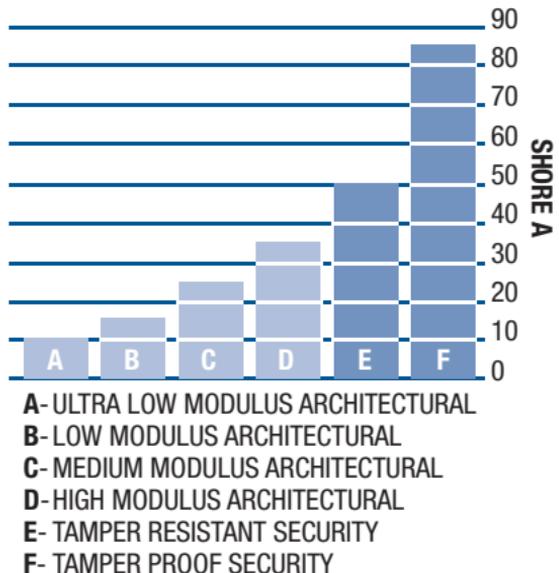
for architectural sealants like low modulus and high movement capability are unfortunately inadequate in many institutional settings. With the advent of security grade sealants and the focus on tamper resistance and tamper proof properties, some compromise is achievable. The primary concession created when switching from traditional architectural sealants to security grade sealant materials is the ability of the sealant to withstand high levels of joint movement. In the case of tamper proof sealants, the result is the loss of all movement capability.

Because no movement capability is sometimes unacceptable, but tamper “resistance” is still a requirement, a new class of sealants was needed. To fill the gap we have formulated materials which can be classified as tamper resistant as opposed to tamper proof. These products can be classified as having limited movement capability and can be used in properly designed joints performing as both a moving joint and providing an acceptable level of tamper resistance.

Expansion/Contraction by Sealant Type



Hardness by Sealant Type





Critical Properties of Security Sealants

CRITICAL PROPERTIES	TYPE ¹	CHEMISTRY	MIXING REQUIRED	STANDARD COLORS	TENSILE STRENGTH ASTM D-412
Dynaflex	TR	Urethane	YES ²	50 ³	375
Dynaflex SC	TR	STPU Hybrid	NO	3 ⁴	350
Dynapoxy EP-1200	TP	Epoxy	YES ²	50 ³	3530 ⁵
Dynatrol II	A	Urethane	YES ²	50 ³	110
CRITICAL PROPERTIES	MODULUS 100%	SHORE A HARDNESS	PRIMER REQUIRED ⁵	MOVEMENT CLASS	STANDARD PACKAGING
Dynaflex	175	55 ± 5	YES	12.5	1.5 Gal.
Dynaflex SC	170	55 ± 5	YES	12.5	Cartridge
Dynapoxy EP-1200	N/A	>90	NO	0	1.5 Gal.
Dynatrol II	20	20	NO	50	1.5 Gal.

¹ TR = Tamper Resistant, TP = Tamper Proof, A = Architectural.

² Two component field tintable materials require mixing in the field before application with bulk caulking guns.

³ Use Pecora Universal Color Pack.

⁴ Available in Tru-white, Limestone and Bronze.

⁵ ASTM C-882, Bond Strength.

Product Descriptions

(Consult Specification Data Sheets for more detailed instructions.)

Pecora Dynaflex™

Pecora Dynaflex is a rugged but flexible sealant ideally suited for use in institutional and correctional complex security installations but performs equally well in other public buildings and facilities where ordinary sealants are easily damaged or torn out by idle tampering and acts of vandalism. It is a unique two-part, non-sag elastomeric polyurethane joint sealant with many of the strengths of an epoxy but with the flexibility and ease-of-application properties of a urethane. To achieve tamper resistant qualities, Pecora Dynaflex has tensile and tear strengths double that of a typical architectural sealant, and ultimate Shore A hardness of 55 while still withstanding 25% total joint movement.



Pecora Dynaflex™ SC

Pecora Dynaflex SC is a unique one part, non-sag, tamper resistant elastomeric STPU (silyl-terminated polyurethane) joint sealant with many of the strengths of the two-component Pecora Dynaflex but with the ease-of-application properties of a one-component sealant.

Pecora Dynapoxy™ EP-1200

Pecora Dynapoxy EP-1200's outstanding adhesion, particularly in concrete and metal, high abrasion resistance and "tamperproof" properties make it an excellent joint sealant for high security areas of prisons and other security areas. Dynapoxy EP-1200 is a rigid, two-part high-solids, high-modulus epoxy resin compound especially designed as a companion or alternative product to Pecora Dynaflex.

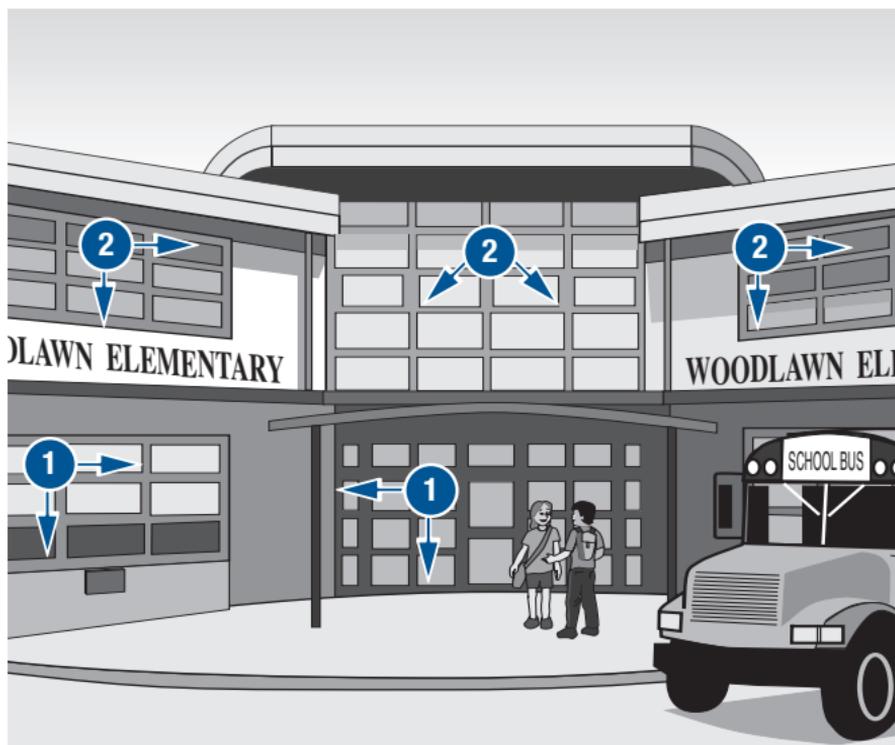
Pecora Dynatrol® II – General Purpose / Architectural

Pecora Dynatrol II is a general purpose, 2-component, non-sag, elastomeric sealant that creates a tenacious bond and watertight seal between materials of similar or dissimilar composition and thermal expansion coefficients. Pecora Dynatrol II is designed to accommodate joint movement up to 50% compressions and 50% expansion. Dynatrol II can be used wherever the need for a security sealant is not a requirement and accommodation of significant expansion and contraction is a requirement. Perfect for areas where building occupants cannot access the sealant joint on interior and exterior applications. Available in 50 standard colors affording flexibility in color selection, Dynatrol II is also paintable.



Critical Properties of Security Sealants

Schools/Day Care Facilities



1 FOR DOOR AND WINDOW PERIMETERS UP TO 10 FEET ABOVE GRADE - Pecora Dynaflex.

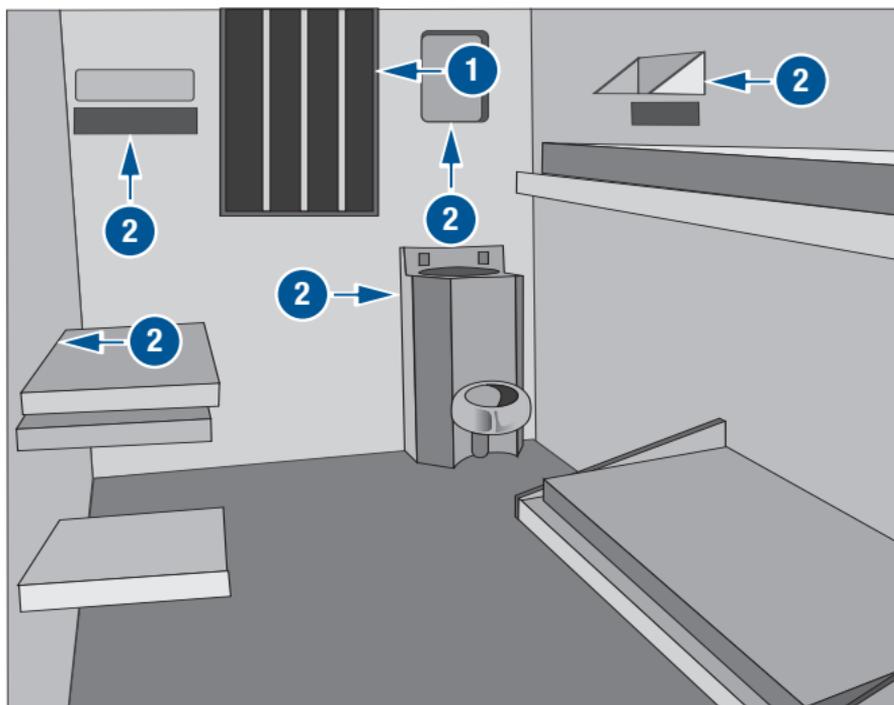
2 FOR DOOR AND WINDOW PERIMETERS OVER 10 FEET ABOVE GRADE - Pecora Dynatrol II.

In schools where idle “tampering” of a sealant can cause costly damage to a building and in day cares where the possibility exists of young children eating sealant pulled from a joint, security grade sealants are becoming an increasingly viable option to traditional caulks and sealants. All areas within reach of students, both interior and exterior, are potential locations where the use of tamper resistant and tamper proof sealants will result in significant life cycle cost savings. The use of security sealants on exterior expansion joints is specified in all joints up to ten feet above grade where sealant joints are susceptible to tampering and are within easy reach of pedestrians. All other expansion joints over ten feet above grade level can be sealed with traditional exterior expansion joint sealants such as Pecora Dynatrol II. Exterior applications are designed around tamper resistant sealants of class 12.5.



Prisons

In prisons and detention centers, safeguards are needed against inmates using construction materials to hurt themselves or others. Sealant has been “picked out” to be used as weapons, to expose joints for hiding contraband and weapons, and even to smoke. All interior joints and seams in areas where residents will be spending time in isolation should be specified with a tamper proof sealant such as Pecora Dynapoxy EP-1200. Common areas such as day rooms, exercise rooms, and cafeterias where supervision is present should be specified with a tamper resistant sealant such as Pecora Dynaflex SC or Pecora Dynaflex. Pecora Dynaflex SC is USDA approved for use in food processing and preparation areas although direct contact with food is not recommended. Exterior applications where residents spend extended periods of time should also be considered for a tamper resistant specification. Exterior applications are designed around tamper and tamper resistant sealants of class 12.5 such as Pecora Dynaflex or Pecora Dynaflex SC. All other expansion joints over ten feet above grade level can be sealed with traditional exterior expansion joint sealants such as Pecora Dynatrol II.



1 WINDOW PERIMETER - Pecora Dynaflex or Pecora Dynaflex SC.

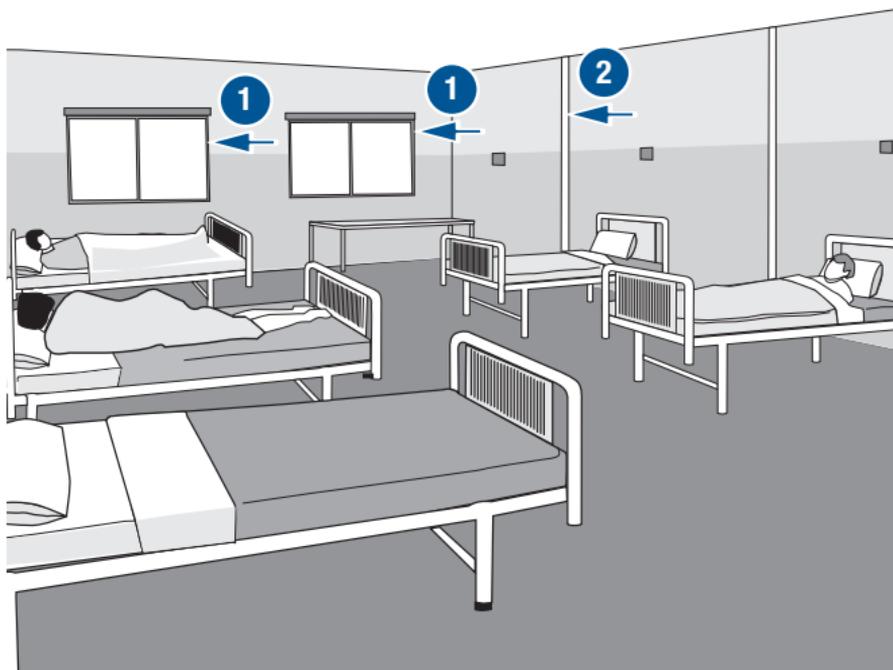
2 NON-MOVING FIXTURES - Pecora Dynapoxy EP-1200.



Critical Properties of Security Sealants (continued)

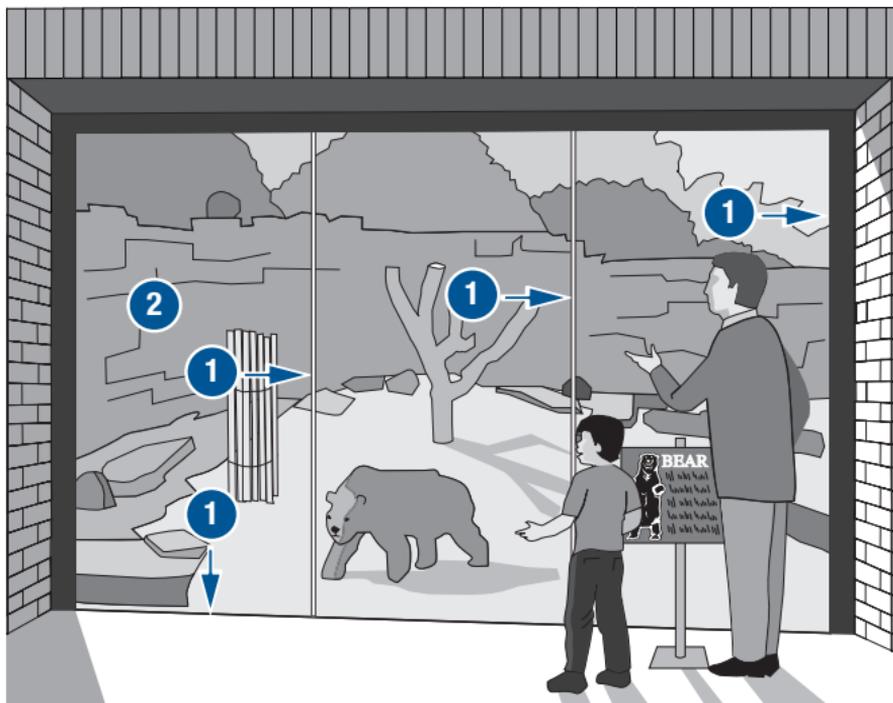
Hospitals/Psychiatric Units

It is imperative in a psychiatric unit of a hospital for patients not to have access to materials that can be used to injure themselves or others. Patient safety as well as costs associated with vandalism and litigation require the non-tamper properties associated with security sealants. All interior joints in areas where residents will be spending time in isolation should be specified with a tamper proof sealant such as Pecora Dynapoxy EP-1200. Common areas such as day rooms, exercise rooms, and cafeterias should be specified with a tamper resistant sealant such as Pecora Dynaflex SC or Pecora Dynaflex. Pecora Dynaflex SC is USDA approved for use in food processing and preparation areas although direct contact with food is not recommended. Exterior applications where residents spend extended periods of time should also be considered for a tamper resistant specification. Exterior applications are designed around tamper resistant sealants of class 12.5 such as Pecora Dynaflex or Pecora Dynaflex SC. All other expansion joints over ten feet above grade level can be sealed with traditional exterior expansion joint sealants such as Pecora Dynatrol II.



1 WINDOW PERIMETERS - Pecora Dynaflex or Pecora Dynaflex SC.

2 PANEL JOINTS - Pecora Dynaflex or Pecora Dynaflex SC.



1 GLAZING JOINTS - Pecora Dynaflex or Pecora Dynaflex SC.

2 NON-MOVING FEATURES - Dynapoxy EP-1200.

Animal Enclosures

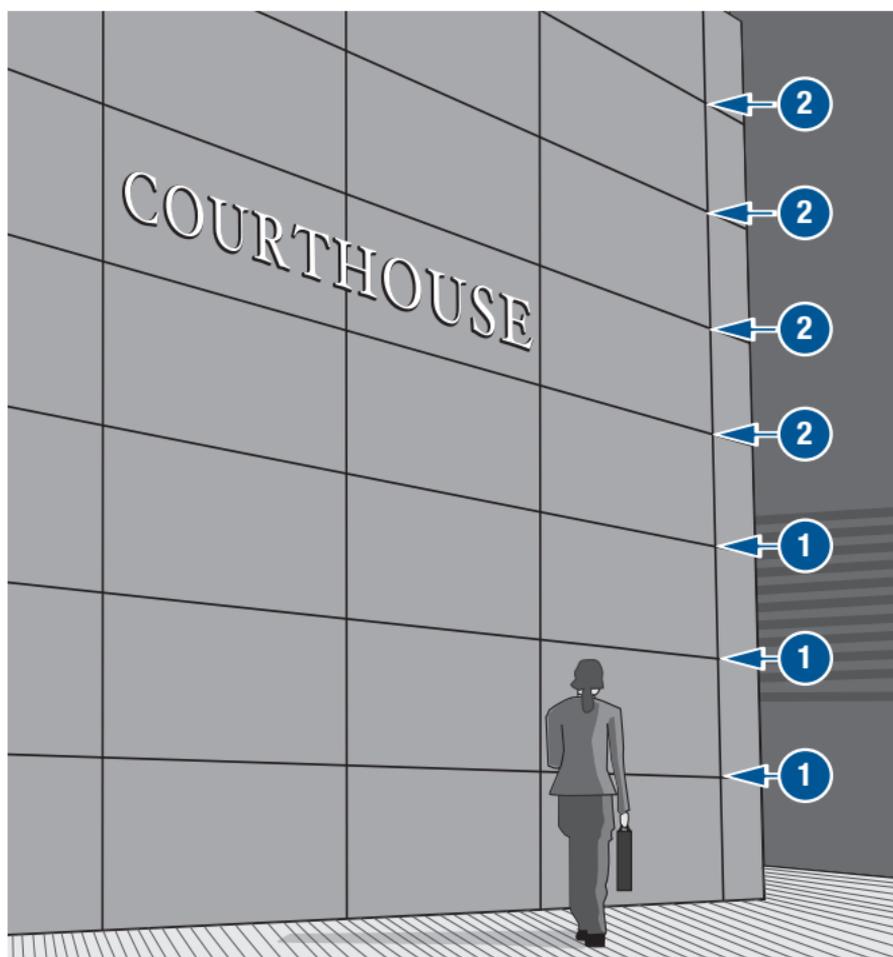
Animals, especially primates, will occasionally attempt to remove sealants and ingest them causing serious illness. To ensure their health and the safety of spectators, security sealants are used for the wet glazing of viewing panels on the interior side of animal enclosures. Application of tamper proof materials such as Pecora Dynapoxy EP-1200 are specified in this application. Traditional or tamper resistant sealants such as Pecora Dynaflex SC or Pecora Dynaflex are specified on the exterior wet glazing to ensure any thermal movement is accommodated.



Critical Properties of Security Sealants (continued)

Municipal Facilities

Public buildings and facilities are also candidates for security sealants. Sealants in buildings and facilities open to the public are easily damaged by idle tampering and by vandalism. Interior seams should be specified with a tamper resistant sealant such as Pecora Dynaflex or Pecora Dynaflex SC. In the case where a court or a local police station contains a holding cell, a tamper proof sealant such as Pecora Dynapoxy EP-1200 should be specified. All other expansion joints over ten feet above grade level can be sealed with traditional exterior expansion joint sealants such as Pecora Dynatrol II.



1 FOR JOINTS UP TO 10 FEET ABOVE GRADE - Pecora Dynaflex.

2 FOR JOINTS OVER 10 FEET ABOVE GRADE - Pecora Dynatrol II.



Typical Applications

1. Change in plane expansion and contraction joints:

- A. Floor to wall
- B. Head of wall
- C. Inside corners

2. **Fixture perimeters:** lights, mirrors, sinks, etc.

3. **Door perimeters:** Frame to wall, gypsum, concrete block

4. **Window perimeters:** Frame to wall, gypsum, concrete block

5. **Glazing:** Glass to frame / Laminated Lexan or Plexiglass to frame

6. **Exterior expansion joints in building facades:** Masonry, Pre-cast, Block, Concrete

7. **Interior seams:** Steel, Stainless Steel, Masonry, Window Frames, Fixtures



Application Instructions

1) Surface Preparation

When installing security sealants, surface preparation becomes of utmost importance in contributing to the overall tamper resistance and tamper proof properties associated with security sealants. If bonding to the substrate is compromised in any way the physical properties of the security sealant which contribute to tamper resistance become ineffective.

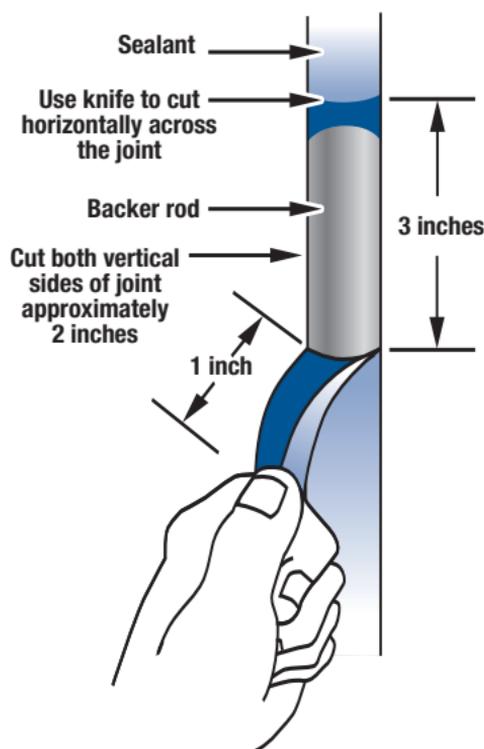
All surfaces must be clean, sound and free of surface water. Remove laitance, curing compounds, coatings, oil, grease, rust, waxes, and other bonding inhibiting substances. Application over paints or coatings is not recommended unless the paint or coating can be relied upon to impart adhesive properties equal to the sealant/virgin concrete bond and maintain the security properties needed.

The use of primers is required in security applications utilizing Pecora Dynaflex or Pecora Dynaflex SC. Use Pecora P-75 or P-150 on porous surfaces such as concrete block, pre-cast, and brick. Use Pecora P-

120 on non-porous surfaces such as stainless steel or coated metal. Pecora P-200 two part epoxy primer can be used on all surfaces and generally provides tenacious adhesion with all security sealant / substrate combinations. Pecora Dynatrol II does not require priming on most building surfaces.

Field adhesion testing should be performed to ensure an adequate bond to the surface being sealed. Refer to Pecora Corporation Technical Bulletin # 55 for specific instructions on performing field adhesion testing.

Please visit www.pecora.com to view technical bulletins





Primer Recommendations

2) Sealant Mixing

Pecora Dynaflex, Dynapoxy EP-1200, and Dynatrol II require mixing in the field. Base and activator are furnished in exact ratios equal to the total unit volume of the particular product utilized. Thorough mixing is essential to obtain optimum performance. Use a variable speed drill with a mixing paddle. Mix the entire unit content plus a Pecora Universal Color Pack (if applicable) at a low speed until the components are evenly blended. Mixing generally takes a minimum of six minutes. Do not dilute or alter the mix in any way.

3) Colors

Pecora Universal Color Packs may be used with Pecora Dynaflex, Dynapoxy EP-1200 and Dynatrol II. There are 50 standard colors to choose from with color cards available from Pecora Customer Service or by accessing our web site at www.pecora.com. Pecora Dynaflex SC is offered in Tru-white, Limestone and Bronze.

4) Joint Configuration

Security sealants used in non-moving joints do not have a requirement related to width to depth configurations. In fact, when installing security sealants in non-moving joints, tamper resistance and tamper proof properties are improved when a greater volume of sealant is installed in the joint. In general, security sealants should be applied to a greater depth than typically recommended for a moving or dynamic joint. The table (on page 14), gives some general guidelines with respect to joint configurations for moving joints.



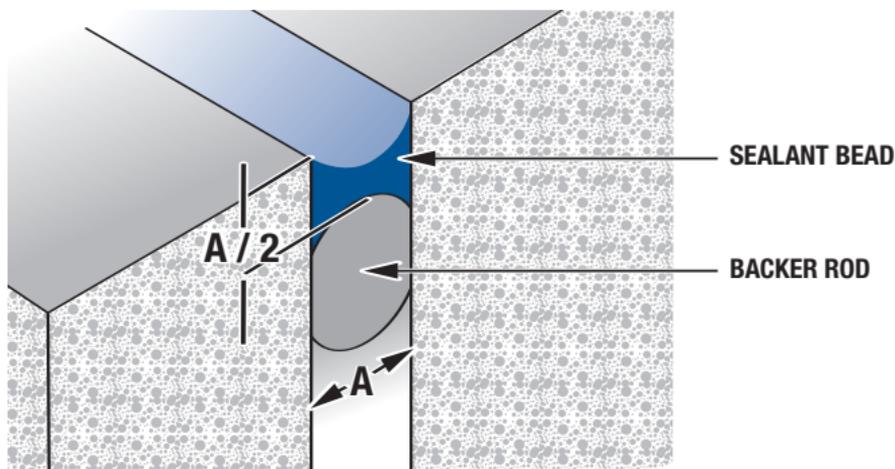
4) Joint Configuration (continued)

Width to depth ratio guidelines for moving joints:

Purpose: Maximize sealant performance

Vertical Joints

- Joints up to 1/2" wide: 1:1 width to depth
- Joints up to 1" wide: 2:1 width to depth
- Joints > 1": Max 1/2" depth



Typical joint configuration for a moving or dynamic expansion joint

5) Tooling

Without proper tooling, sealants will not adhere properly to a substrate or allow for the greatest movement capabilities within a joint. Tooling should create an hourglass configuration through concave inner and outer surfaces. The inner concavity is formed by cylindrical backer rod while the outer concavity is supplied by a rounded edge spatula utilized during tooling. Although functionality is most important, the craftsman must also create an aesthetically pleasing “line” on the construction surface.

To ensure a smooth, neat sealant joint appearance as well as to help maintain clean tools, applicators often use slicking agents. Keep in mind that “dry” tooling is generally preferred by the manufacturer in the interest of eliminating the possibility of a contaminant being deposited onto the sealant surface. However, “slicking” agents such as uncontaminated mineral spirits are often used and can be beneficial in achieving improved appearance.



6) Cure Speed

The cure speed of security sealants becomes very important when working in occupied areas and when “out of service” times are a factor. Pecora security sealants are designed with minimal downtime within the practical limitations of the sealant chemistry. The following tables illustrate effects of environmental conditions on various sealant chemistry types (Table #1), as well as typical work life/skin times (Table #2) of Pecora Corporation security sealants.

TABLE 1

CONDITIONS ▶	HIGHER TEMPERATURE	LOWER TEMPERATURE	HIGHER HUMIDITY	LOWER HUMIDITY
CURE TYPE ▼	EFFECTS OF CURE SPEED			
Chemical Cure- Two Component	Reduces Cure Time	Increases Cure Time	Little Effect	Little Effect
Moisture Cure- One Component	Reduces Cure Time	Increases Cure Time	Reduces Cure Time	Increases Cure Time
Drying- Solvent Evaporation	Reduces Cure Time	Increases Cure Time	Little Effect	Little Effect
Drying- Moisture Evaporation	Reduces Cure Time	Increases Cure Time	Increases Cure Time	Reduces Cure Time

TABLE 2

SEALANT	CURE TYPE	WORKLIFE/SKIN TIME ¹ 75°F/50% RH	CURE SPEED ² @ 75°F
Dynaflex	Chemical/Two Component	2 Hours	48 Hours
Dynaflex SC	Moisture/One Component	25 Minutes	48 Hours
Dynapoxy EP-1200	Chemical	75 Minutes	48 Hours
Dynatrol II	Chemical	3 Hours	48 Hours

¹ Typical joint size of 1/2" X 1/2"

² Cure time before placing into service

7) Safety

Use all sealant materials in well ventilated areas. Contact with uncured sealant may result in eye or skin irritation. Flush eyes with water for fifteen minutes and seek medical attention if irritation persists. Sealant materials may be harmful if taken internally. Solvents used for cleaning processes may be toxic and/or flammable. Refer to solvent manufacturer’s instructions and Material Safety Data Sheets for more specific solvent safety information.

Material Safety Data Sheets for all Pecora Corporation sealant materials are easily accessible at www.pecora.com.



Application Tips

- Optimum application temperature for Pecora Security grade sealants is 70°F and 50% relative humidity. When temperature is below 40°F or over 100°F, please consult with Technical Services.
- Dry tooling is preferred with mineral spirits being the recommended slicking or tooling agent.
- Always clean tools such as bulk caulking guns, mixing blades, and application spatulas thoroughly during and after use with mineral spirits.
- Do not handle caulking equipment with gloves covered in sealant residue. Gloves are worn for personal safety and are not a replacement for working in a clean and organized manner.
- Always check application for proper adhesion and cure the day after application. Follow surface preparation instructions and field testing procedures to ensure quality application.
- Always calculate the linear feet of sealant joint prior to mixing of a two component sealant to avoid waste due to work-life limitations (Refer to chart below).

Coverage Chart

Package Specific Sealant Coverage/Total Linear feet for 3/8" x 3/8" expansion joint.

PACKAGE ► SEALANT ▼	BULK CAULKING GUN	SAUSAGE	CARTRIDGE	1.5 GALLON UNIT	2 GALLON UNIT
Dynaflex	34	N/A	N/A	200	N/A
Dynaflex SC	N/A	21	12	N/A	N/A
Dynapoxy EP-1200	34	N/A	N/A	200	N/A
Dynatrol II	34	N/A	N/A	200	N/A

For other joint sizes please visit us on the web at www.pecora.com to use our sealant coverage calculator.



Shore Hardness (ASTM D-2240)

Shore hardness is a relative measure of exactly what the term implies - hardness. The test methods employed vary greatly from a field applied test to a very controlled laboratory test. Any testing carried out as well as their results are dependent on the sample configuration with a completely flat surface being a necessity. Testing should be performed by an experienced individual and generally in cooperation with a manufacturer's field representative. Field measuring devices are available from various suppliers. Contact Pecora's Technical Services for sourcing of Shore hardness gauges.

Shore Hardness Scale

SHORE DUROMETER CONVERSION TABLE	
SHORE A	SHORE D
100	58
95	46
90	39
85	33
80	29
75	25
70	22
65	19
60	16
55	14
50	12
45	10
40	8
35	7
30	6
25	
20	
15	
10	
5	

TAMPER PROOF SEALANTS

TAMPER RESISTANT SEALANTS



Testing Procedures

Because durometers measure hardness by relating the penetration of an indenter into a specimen, and since the indenter travel may reach .100", it follows that a specimen must be of sufficient thickness to ensure a proper, sensitive test. Generally, samples to be tested should not be less than 1/4" (6mm) thick. Exceptions may be made for harder materials because the indenter is at less than half stroke. For example, a material that checks near 80 durometer points can be as thin as .118" (3mm), because the indenter will only extend out .020" during testing. ***What must be avoided is a specimen so thin that the indenter may sense the hardness of the underlying surface.*** This will give a false reading due to the "anvil effect". When testing flat specimens too thin to give accurate readings, the specimens may be stacked to provide the required thickness.

In addition to sufficient thickness for testing, sufficient material around the sides of the indenter must be present. With soft materials, a minimum 1/4" (6mm) is recommended.



Typical indentation shore hardness gauge for field use.



Technical Services

Pecora Corporation offers product and project support through our Technical Service Group, which operates from our Harleysville, PA corporate headquarters. Our staff of committed professionals is ready to provide timely and accurate information to aid in the successful use of our products. Apart from real time help desk service for product recommendations and application advice, our technical group offers a wide range of technical and laboratory support. Among these services are complimentary construction substrates testing for adhesion, compatibility, and stain development. All testing is performed according to industry accepted American Standard Test Methods. This complimentary testing is just one part of the help Pecora will provide in the total project submittal process. We also provide product certification, product technical data, product test reports, and sample warranties to aid in a successful submittal process. **The use of web based resources at www.pecora.com will provide you with the most current technical data and technical bulletins as well as contact information when consulting directly with a live representative is necessary.**



Product Limitations

- Tamper resistant sealant joints should not experience movement greater than +/- 12.5%.
- Tamper proof sealant joints should experience no movement.
- Exposure to strong chemicals, solvents, acids, and caustics is not recommended.
- Do not use in areas when sealant will come into contact with food.
- Do not use in areas subject to constant water immersion.
- Do not use on friable surfaces subject to physical degradation.
- Do not use over paints or coatings lacking an adhesive bond equal to or greater than the security sealant material.
- In joints greater than 1.5" in width, consult Pecora Corporation Technical Services.

Warranties

Pecora provides written material warranties which are project specific and issued upon substantial completion of the project. An online warranty application can be found at www.pecora.com with an online submittal process for prompt processing of your warranty. Specific warranty terms and periods are determined on a project basis in compliance with project specifications. For further information contact Pecora Corporation Technical Services at 1-800-523-6688.



Maintenance

Depending on the type of sealant applied as well as environmental conditions, sealants will break down at varying rates over time.

The first step in any sealant maintenance process is to assess the condition and type of the existing sealant. The primary reason for replacing an existing sealant is performance failure. Performance failure is indicated by cracks within the sealant or at the sealant / substrate interface that penetrate the entire thickness of the sealant. Such cracks and adhesion loss will compromise the efficiency of security sealants.

The existing sealant type is important in selecting the type of replacement sealant to be used. Pecora can assist with sealant identification utilizing state of the art laboratory analysis at no cost. Once the existing sealant type has been identified, a Pecora representative can assist in selection of an appropriate replacement sealant.

After an appropriate replacement sealant is identified the removal of existing sealant and appropriate substrate preparation can proceed. In most cases the sealant should be cut out of the joint and completely removed. The exposed substrate should then be cleaned thoroughly to expose a fresh surface. The cleaning method employed will be dependent on the substrate involved.

Surface Preparation Guidelines

SUBSTRATE	RAZOR CUT AS CLOSE TO SUBSTRATE AS POSSIBLE ¹	MECHANICAL ABRASION ²	BLOW OUT JOINT WITH OIL FREE HIGH PRESSURE AIR ³	SOLVENT WIPE ⁴
Metal	Yes	Yes	Yes	IPA
Natural Stone	Yes	Yes	Yes	IPA
Masonry Pre-cast CMU	Yes	Yes	Yes	IPA
Coatings	Yes	No	Yes	IPA
Glass	Yes	No	Yes	IPA

¹ In cases where existing sealant is adhered well to substrate and the sealant restoration system recommended will adhere to the existing sealant, a 1/8 inch thick bead should be left remaining on the substrate.

² Mechanical abrasion can consist of wire brushing (power or hand), saw cutting, or abrasive grinding.

³ When wet sawing is employed to abrade and clean joint, it may be necessary to use a pressure washer to remove residual masonry material.

⁴ It is sometimes necessary to use a mild abrasive cloth such as Scotchbrite® along with a cleaning solvent to remove residual sealant. Always follow solvent manufacturers safe handling recommendations and local, state, and federal regulations regarding solvent usage.

Scotchbrite® is a registered trademark of 3M Corporation.



UL Fire Rated Systems

Pecora Dynaflex security sealant when used in combination with Ultra Block® fire safing may be used in fire rated walls and floors to achieve a two hour fire rating. The following two systems are listed by Underwriters Laboratories for use in concrete construction in expansion joints up to 2 inches in width. Pecora Corporation Technical Services group offers drawing reviews and an engineering judgment process for assistance in providing a joint sealant system to meet your specific requirements.

System # 1

Floor-to-Floor Joint Systems

System No. FF-S-0017

August 11, 1995

Assembly Rating — 2 Hr

Joint Width — 2 In. Maximum

1. **Floor Assembly** Min. 4-1/2 in. thick reinforced lightweight or normal weight (100 - 150 pcf) structural concrete.
2. **Joint System** Max. width of joint is 2 in. The joint system shall consist of the following:

A. **Forming Material*** A nom 9 in. width of forming material shall be folded in half and firmly packed into opening as a permanent form. Forming material to be recessed from top surface of floor as required to accommodate the required thickness of fill material. See manufacturer's installation instructions for size and configuration of forming material.

BACKER ROD MFG., INC. — ULTRA BLOCK

B. **Fill, Void or Cavity Material*** Prior to the installation of the caulk material into the joint, the interior surfaces of the concrete slab shall be treated with the primer as specified below. The primer shall be applied in accordance with the installation instructions accompanying the primer. Min. 1/2 in. thickness of fill material applied within the joint, flush with each surface of floor.

PECORA CORP — Pecora Dynaflex (installed in conjunction with Pecora Primer P-200, Parts A and B) or Dynatred™ (installed in conjunction with Pecora Primer P-75).

*Bearing the UL Classification Mark

Ultra Block® is a registered trademark of Backer Rod Mfg., Inc.



System # 2

Wall-to-Wall Joint Systems

System No. WW-S-0021

July 29, 1995

Assembly Rating — 2 Hr

Joint Width — 2 In. Max

(Limited to Fire Exposure on Interior Face Only)

1. **Wall Assembly** Min. 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified Concrete Blocks*.

See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Joint System** Max. width of joint is 2 in. The joint system shall consist of the following:

A. **Forming Material*** A nom 9 in. width of forming material shall be folded in half and firmly packed into opening as a permanent form. Forming material to be recessed from exterior face of wall as required to accommodate the required thickness of fill material. See manufacturers installation instructions for size and configuration of forming material.

BACKER ROD MFG., INC. — ULTRA BLOCK

B. **Fill, Void or Cavity Material*** Prior to the installation of the caulk material into the joint, the interior surfaces of the concrete slab shall be treated with the primer as specified below. The primer shall be applied in accordance with the installation instructions accompanying the primer. Min. 1/2 in. thickness of fill material applied within the joint, flush with exterior face of wall.

PECORA CORP — Pecora Dynaflex (installed in conjunction with Pecora Primer P-200, Parts A and B) or Dynatred (installed in conjunction with Pecora Primer P-75).

*Bearing the UL Classification Mark



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Our staff of committed professionals in Pecora's Technical Services Department are ready to provide timely and accurate information to aid in the successful use of our products. They are available to answer any questions, offer product recommendations and application advice, as well as provide a wide range of technical and laboratory support.

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