

**Description**

CEILCOTE EJ11 joint sealant system is a two component, chemical-resistant fluorelastomer compound designed as an expansion joint for linings and floorings as well as for sealing joints and cracks in concrete.

It has excellent resistance to strong acids such as 98% sulfuric acid, 60% nitric acid, concentrated phosphoric and hydrochloric. The CEILCOTE EJ11 system can be chemically cured at an ambient temperature to form a tight fitting, elastomeric joint.

When thinned, CEILCOTE EJ11 can be used as a fluoroelastomer coating with excellent acid and shock-resistance.

**Typical Uses**

- Expansion joint for monolithic linings
- Expansion joint for seamless floors
- Expansion joint for acid proof brick floors
- Concrete joint sealing compound

**Advantages**

- Excellent splash/spill resistance to strong chemicals including:
  - 98% Sulfuric
  - 60% Nitric
  - Concentrated Phosphoric
  - Concentrated Hydrochloric
  - 5% Sodium Hypochlorite
  - Aromatic and Chlorinated Hydrocarbons
- Cures at ambient temperature to form a bonded elastomeric joint
- Flexible at low temperatures

**Chemical Resistance**

Information on the chemical resistance properties will be furnished on request.

**Substrate**

Refer to Ceilcote concrete specification CPT-1 for concrete.

**Surface Preparation Preparation**

**Concrete** – Abrasive blasting or scarification to remove laitance and surface contaminants is recommended. Concrete must be thoroughly cured, free of oils, curing solutions and form release agents, dust and must be dry at time of application. Use ASTM D 4263 (plastic sheet test method)

to ensure concrete is moisture free. If moisture is detected, re-test until dry. Alternately test per ASTM 1869 for maximum 3 lbs./24hrs., 1000.ft<sup>2</sup> (92.9 m<sup>2</sup>)

**Joint Design**

For optimum performance the distance allowed between expansion joints should be engineered to prevent sealant elongation or compression in excess of 15% during extreme temperature fluctuations. Both maximum and minimum temperatures should be taken into consideration. As the movement at expansion joints increase, the width of the joint should also be increased proportionally

The maximum depth should not exceed the width of the joint. Best results will be obtained when the sealant depth is equal to ½ of the joint width.

To insure proper performance of the sealant in an expansion joint, it is necessary to have a backing material installed in the joint at the desired depth prior to applying the sealant. This backing material may consist of any compressible material, which will not bond to either the sealant or the joint walls. Some commonly used backing materials are closed cell, sponge or polyethylene foam. A suitable material is Ethafoam SB Brand, Dow Chemical, USA.

**Application**

CEILCOTE EJ11 consists of a two-component bondcote and elastomeric joint compound. The elastomer and its bondcote have been unitized and short-packed to aid in measurement and mixing.

**Mixing Ratio**

	By Weight	By Volume
EJ11 Resin	24	15
EJ11 Hardener	1	1

**Note:** Overlap the base coat of the polymer topping/lining into the joint. Abrade its surface and then apply Bondcote.

CEILCOTE EJ11 Bondcote is required to enhance the initial bonding of CEILCOTE EJ11. CEILCOTE EJ11 Bondcote is brush applied at 10 to 20 mils (250-500 microns) wet thickness over the clean, abraded surface in the joint prior to the addition of the polyethylene backer rod.

After the CEILCOTE EJ11 Bondcote has cured 16 to 24 hours at 70° F to 80° F (21° C to 27° C) the polyethylene rod is put in place.

Mix both components thoroughly before combining. A four-blade beater whip is useful for mixing the elastomer. Care should be taken to avoid heating the elastomer, via mixing shear, beyond 100° F (38° C) since its working time will be reduced.

Slow mixing by hand or a low speed mechanical mixer is recommended. A high speed, mechanical mixer is not recommended. It will whip air into the mixture, resulting in a porous material during cure.



Make sure the hardener is blended thoroughly in the elastomer; one minute mixing at approximately 100 rpm should be sufficient.

Working time is approximately 40 minutes at 75 °F (24 °C) and shorter at higher temperatures. Be prepared to work fast.

Pour the CEILCOTE EJ11 into the joint. It may be necessary to pour additional material into the joint after 24-48 hours to compensate for shrinkage.

**Note:** Add .5 gal (18.92 liters) V#1 powder to each ½ gal (1.89 liters) unit of Ceilcote EJ11 for Vertical applications.

CEILCOTE EJ11 can be used as a chemical-resistant coating as well. As with other coatings, substrate must be properly mechanically abraded with a minimum of a 2 mil anchor pattern and have a clean, dry, uncontaminated surface. For use as a coating, add 10 oz (296ml) of toluene to the 1/2 gal (1.89 liter) container of CEILCOTE EJ11 Elastomer. Mix well for at least two minutes. Please note CEILCOTE EJ11 Bondcote should be used as primer prior to application of the EJ11 Elastomer. Allow Bondcote to cure for at least 16 hours @ 70°F.

CEILCOTE EJ11 is applied with a brush or roller at a wet mil thickness of 15 to 25 mils (375-625 microns).

For some applications, Ceilcote EJ3/EJ4 is applied as first layer followed by EJ11. Do not use the EJ11 Bondcoat in between the EJ3/4 and EJ11. Use EJ3 Primer as bonding agent in between EJ#4 and EJ11. Allow the EJ3/4 to cure prior to applying the EJ3 Primer. For application of EJ3/4 refer to its Technical Data sheet.

**Handling Properties**

Temp.	Working Time	Set to touch
60°F (16°C)	40 min	10 to 15 min
75°F (24°C)		
90°F (32°C)		

**Cure Times**

Temp	acids	solvents
75°F (24°C)	2 days	7 days
90°F (32°C)		

**Coverage**

CEILCOTE EJ11 Bondcote Coverage  
750 in<sup>2</sup>/unit (4800 cm<sup>2</sup>)

CEILCOTE EJ11 Elastomer Coverage  
55 in<sup>3</sup>/unit (900 cm<sup>3</sup>)

**Joint Size**

<u>W x D</u>	<u>Lineal Feet/1/2 gal unit*</u>
½" x ¼" (1.3 x .64 cm)	30 (9 m)
¾" x 3/8" (1.9 x .97 cm)	14 (4.3 m)
1" x ½" (2.6 x 1.3 cm)	8 (2.5 m)

Estimates do not take into consideration material losses during mixing and application.

\* These use rates are for round backer rods. For flat backer material, multiply by 1.2.

**Packaging**

CEILCOTE EJ11 1/2 gal unit consists of the following:  
 CEILCOTE EJ11 Elastomer 5 lb 5 oz (1 gal can)  
 CEILCOTE EJ11 Hardener 3 oz.  
 (4 oz bottle packed in 1 qt can)  
 CEILCOTE EJ11 Bondcote 7.25 oz. (1 pt. can)  
 CEILCOTE EJ11 Bondcote Hardener  
 0.1 oz. (1 oz. bottle packed in 1 pt. can)

**Storage**

Store in a cool, dry [50°- 90° F (10° - 32° C)] and covered location away from fire hazards and direct sunlight. Minimum shelf life at 70°F (21°C) is 18 months. Higher temperatures will shorten the shelf life of these products.

**Safety**

The components of this sealant are combustible. Hardener contains a toxic ingredient, which is sufficiently diluted after mixing with Resin to permit use of the final mixture with reasonable precautions.

During application it should be used with adequate ventilation. Prolonged and repeated breathing of concentrated vapor is harmful and should be avoided. Prolonged contact with skin is harmful and should be avoided.

The components and mixture are harmful or fatal if swallowed. In the event, do not induce vomiting. Call a physician immediately.

While handling Component B during mixing, the following equipment is recommended: organic vapor cartridge respirator, protective goggles, rubber apron and gloves. The vapor should not be inhaled. It may cause allergic respiratory reaction, may cause skin or eye irritation. If material is splashed on skin-wash with large quantities of soap and water. If splashed in eyes-flush with water for 15 minutes and call a physician.

A concerted effort is made to be aware of the latest chemical toxicological information and to apply this knowledge in a responsible manner to insure product safety.

Observe safe storage practices by separating resins from hardeners, by keeping solvents in a cool area, free of sources of ignitions.

Product Material Safety Data Sheets are available and should be consulted when handling products.

**Maintenance**

Periodically inspect the applied material and repair localized areas as needed. Consult your CEILCOTE representative for additional information.


**Technical and Physical Data**

	Test Standard	Unit	Value
Color			black
Ultimate Elongation 7 day cure post cured	ASTM D 412	%	600 200
Tensile Strength	ASTM D 412	psi (Mpa)	400 (2.8)
Tear Resistance	ASTM D 6381	lb/in. (kg/cm)	76 (14)
Hardness, Shore A			38-48
Percent Solids	by weight	%	55
Shelf Life			18 months

**Important Note**

*The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to law) any loss or damage arising out of the use of the product. WE HEREBY DISCLAIM ANY WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local International Paint representative that this data sheet is current prior to using the product.*

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