



Pelmor
LABORATORIES INC.

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PELSEAL (TM)
(PLV-2012-C)

A FLUOROELASTOMER CAULK

I. Product Applications

A. Primary Application

PELSEAL is a caulking compound which provides a corrosion resistant seal when applied to the flanges of expansion joints installed in the ductwork of fossil fuel fired boilers.

B. Additional Application - PELSEAL has also been proven successful in the following areas:

- Seal strain gauges exposed to hydrofluoric acid fumes.
- Construction and installation of fluoroelastomer expansion joints. (The expansion joints are still functioning satisfactorily after 18 months continuous service at the Tennessee Valley Authority (TVA)).
- Sealant in construction of degreasing tanks.
- Replacement for silicone sealants in chlorinated environments.
- Repair of fluoroelastomer expansion joints during maintenance shut-downs.
- Form-in-place gaskets.

II. Product Description

PELSEAL is a two part fluoroelastomer base caulk. Upon addition of proprietary curing agent, the caulk is ready for application. The caulk will cure to form a tough, resilient seal which has excellent resistance to the corrosive flue gas condensate formed when the gas temperature cools to the dew point.

PELSEAL can be applied directly on a prepared metal surface, but improved adhesion is obtained when PLV-2000 (TM) is used as a primer.

PELSEAL contains methyl ethyl ketone (MEK) as a solvent. MEK has a flash point of 21°F and is considered highly flammable. The proprietary curing agent contains methanol, which is also flammable.

(SEE SECTION IV FOR HEALTH AND SAFETY INFORMATION)

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III. Product Data

A. Typical Properties (Uncured)

Color - Part A (PELSEAL)	Black
Color - Part B (Proprietary curing agent)	Clear Amber
Mixing Ratio: Part A : Part B	100 : 3.7 by weight

Ingredients	Pint	Quart	Gallon
PELSEAL (LBS.)	1.1	2.2	8.8
Curing Agent (FL. OZS.) (1 Fluid Oz. = 29.6 MLS.)	5/8	1.25	5.0
Total Solids (by weight)			65%
Viscosity (after mixing)			> 1 million centipois.
Tack free time			5 minutes @ 75°F

B. Typical Properties (Cured) : See Section V

Color	Black
Specific Gravity	1.92 +/- .05
Durometer Hardness	80 +/- 5
Compression Set : 70 hrs. @ 212°F	30.0%
Tensile Strength	1500 psi
Ultimate Elongation	100/150%
Tear Strength	200 LB./IN.
Adhesion, Shear Strength (ASTM D 429)	
1) Fluoroelastomer/Steel (sand blasted) (Method B, 45°)	>20/35 LBS./SQ. IN. (Cohesive failure)
2) Steel/Steel (sand blasted)	150/200 LBS./SQ. IN.
3) Alum./Alum. (sand blasted) (Method A)	130/200 LBS./SQ. IN.

Acid Immersion Test Data - The following volume swells were obtained on test samples of cured PELSEAL after 100% immersion:

	<u>20% Sulfuric Acid</u>	<u>20% Nitric Acid</u>
70 hrs. @ 75°F	+ 0.5%	+ 6.7%
1 week @ 75°F	+ 0.3%	+ 6.0%
2 weeks @ 75°F	+ 1.9%	+11.2%

IV. Health and Safety Information

Before using, read the enclosed OSHA material Safety Data Sheets for PELSEAL, proprietary curing agent and PLV-2000.

- Use extreme caution when working with the above materials.
- Do not use in the presence of heat or open flame.

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- Use adequate ventilation when working with these materials. Avoid prolonged or repeated breathing of vapor.
- Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes.
- If swallowed, do not induce vomiting. Call a physician immediately.

Compliance with the safety information given on the enclosed Safety Data Sheets is strongly recommended.

V. Instructions for Use:

A. Surface Preparation:

1) Cleaning - surface preparation is essential to obtain maximum adhesion. Use an oil-free solvent (ex: 1,1,1 trichloroethane) to remove dirt, oil and grease. Apply with a brush or an oil-free cloth. When degreasing fluoroelastomer surfaces, use methyl ethyl ketone (MEK) (CAUTION: Highly Flammable) or other low molecular weight ketones.

2) Primer Application - for maximum adhesive strength between PELSEAL and the metal substrate, the following surface preparations are required:

- a) Sandblast metal surface to remove loose scale and rust. Degrease as described under "Cleaning" above.
- b) Apply a coat of accelerated PLV-2000 (see PLV-672 Technical Bulletin) and allow to air dry for 15 to 30 minutes. (PLV-2000 may not always be necessary.) Keep primed metal surfaces free from dirt and grease.

B) Mixing Instruction for Two Part Kits:

Pour all of Part B (proprietary curing agent) into Part A (PELSEAL) container and mix thoroughly. Slow mixing by hand or a planetary mixer is recommended. A high speed mechanical mixer is not recommended because it will generate internal heat which reduces application life and will whip air into the mixture resulting in a porous material during curing.

C) Application Instructions:

PELSEAL can be applied using a trowel or a caulking gun. Its physical nature and adhesive properties permit application to overhead and vertical surfaces without sagging.

Apply accelerated PELSEAL within a four hour period. When applying PELSEAL between metal flanges, wait 1 hour, then bolt the metal flanges together within 8 hours.

A 1/2" diameter bead is suggested for application on the mating surfaces of the metal flanges. The PELSEAL will act as a seal between the joint and the metal flange. The bolt holes should also be surrounded with PELSEAL.

After applying PELSEAL, a waiting period of 48 hours to 72 hours is recommended before using to optimize physical properties. However, laboratory testing has shown that heating to elevated temperatures (up to 400°F) over an 8 hour time period will accelerate the cure and improve adhesion.

The test samples previously described were prepared and cured as follows:

48 hours	@ room temperature
3/4 hour	@ 125°F
3/4 hour	@ 175°F
3/4 hour	@ 225°F
3/4 hour	@ 275°F
3/4 hour	@ 325°F

Curing procedures can vary with the type of application. After application, the PELSEAL should be kept at room temperature for as long of a time period as possible before applying an extended step cure treatment to maximize permeation resistance and adhesion strength.

PLU 2000

DATED: April 30, 1985

by weight - 44 - 1

Pelmed P.G. -

100 - 3.7

by weight

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