

RedLINE® 40 Waterproof Expansion Joint System

DESCRIPTION

RedLINE 40 waterproof expansion joint system is used for waterproofing expansion joints in structures, such as commercial and industrial buildings, parking garages, tunnels, etc. RedLINE 40 is specifically designed to accommodate building movements, up to 2" [50 mm]. RedLINE 40 can be installed in variety of roofing and waterproofing membrane systems, these include Built-Up-Roofing, Coal Tar Pitch, mopped Modified Bitumen, Hot Rubberized Asphalt, Spray Polyurethane Foam, Cold-applied adhesives and Epoxy Resin.

RedLINE 40 is supplied directly to the job site in a roll with all detail work done and seamed together by a proprietary vulcanizing process, which results in monolithic and elastic seamed joints. Seaming can also be done on site if required.

The advantages of using RedLINE 40 include the elimination of wood curbs, metal components such as metal flashing, nails and screws, caulked or glued seams resulting in significant labor savings. The flat profile of the RedLINE expansion joint also does not obstruct the flow of water to drainage resulting in the elimination of ponded water. RedLINE 40 is manufactured from a saturated elastomer which is chemically stable and has excellent resistance to the effects of weathering.

TYPICAL USES

RedLINE 40 waterproof expansion joint system is designed to be used for:

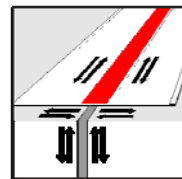
- Roof Expansion Joints
- Sub Grade (Waterproofing) Expansion Joints
- Plaza Deck Expansion Joints
- Parking Garage Expansion Joints
- Protected Roof Membrane Expansion Joints
- Tunnel Expansion Joints
- Vertical Wall Expansion Joints
- Bridge Expansion Joints
- Building Closure Joints
- Roof Control Joints



RedLINE 40 being installed in BUR.

EXPANSION/CONTRACTION RANGE DATA

The RedLINE 40 waterproof expansion joint system is designed to accommodate 3 way building movements concurrently.



Movement	RedLINE 40
Horizontal	± 2" [± 50 mm]
Vertical	± 3/4" [± 20 mm]
Shear	± 3/4" [± 20 mm]

TECHNICAL DATA

Property & Test Method	Results
Hardness Shore A ASTM D-2240	45 ± 5
Lap Joint Strength ASTM D-816	Same as base material
Low Temperature Flex ASTM D-746	-70°F [-57°C]
Ultimate Elongation ASTM D-412	500 %
Tear Resistance ASTM D-624 Die C (minimum)	220 lbs/in [38.52 N/mm]
Puncture Test CGSB 37.56 M96 (minimum)	10 lbs [45.35 N]
UV Exposure ASTM G-53 5000 hours	No Cracks or Cracking

Chemical Resistance to:
Acids, Alkalis, Polar Solvents
Saline Solutions

No effect

PHYSICAL DATA

Property	RedLINE 40
Thickness	0.087" [2.2 mm]
Roll Width	13½" [340 mm]
Expansion Joint Gland Width	2¼" [55 mm]
Roll Length	Endless
Weight	0.55 lb/ft [0.81 kg/m]
Color	Red

STORAGE

Store rolls on end, on original pallets or elevated platform. Protect from weather or store in an enclosed area. Do not allow the RedLINE 40 expansion joint fleece to get wet.

SURFACE PREPARATION

Refer to roofing/waterproofing manufacturer's guide specifications and recommendations for detailed roofing/waterproof membrane application information. All surfaces must be dry and clean of debris, prior to application.

APPLICATION

Identify the start installation location from the plan accompanying the roll of RedLINE 40 waterproof expansion joint material. Roll out the RedLINE 40 and allow it to relax prior to application. Make sure that the building expansion joint is clean and free of debris and has been packed with compressible batt insulation. Align the center line of the expansion joint gap with the centre line of the RedLINE 40 waterproof expansion joint material, and verify the RedLINE 40 conformance to site details prior to the application.

Installation in Asphalt:

RedLINE 40 is installed typically in an asphaltic based medium. Apply the base coat of the asphaltic medium directly to the substrate and embed the RedLINE 40 waterproof expansion joint material, and making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 40 material into the hot asphalt material. Always lay the RedLINE 40 expansion joint material only in lengths of 10 feet [3 m] or less to allow for contact with the hot asphalt material. Do not lay the RedLINE 40 in cold asphalt. Spread an even coat of asphalt on the top surface of the RedLINE 40 expansion joint ensuring the top white polyester fleece is completely covered and strip in felt plies.

Installation in Modified Bitumen:

RedLINE 40 can be installed with a modified bitumen membrane either by mopping or torching. Mopping is preferred, however on occasion torching may be required.

Mopping Application:

The bottom surface of the RedLINE is mopped to a modified bitumen base sheet with asphalt. The RedLINE can be stripped in by torching (see below) or by mopping in a modified bitumen cap sheet. Mopping of the cap sheet is done in the conventional manner of mopping in stripping plies.

Cold Application:

The bottom surface of the RedLINE is rolled in to a bed of cold-adhesive over the modified bitumen base sheet. Following this application, it is always recommended that the RedLINE be secured to the substrate with flat headed nails spaced (or a term bar and fastener) at 8" [200 mm] on center. This mechanical fixation is a temporary measure to allow for the curing of the cold adhesive and retain the RedLINE in place should any expansion or contraction movement take place during the curing adhesive process. Following the mechanical securement, the top fleece surface of the RedLINE material is coated with the cold adhesive and the roofing/waterproofing membrane plies are laid into the adhesive.

Installation in Hot Rubberized Asphalt:

Apply the first coat of Hot Rubberized Asphalt at the manufacturer's recommended minimum thickness, immediately embed the RedLINE 40 waterproof expansion joint material, making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 40 material into the hot asphalt. Always lay the RedLINE expansion joint material only in lengths which allow for immediate contact with the hot asphalt material. Do not lay the RedLINE in cold asphalt.

Spread an even coat of Hot Rubberized Asphalt on the top surface of the RedLINE 40 expansion joint ensuring the top white polyester fleece is completely covered; embed a reinforcing fabric mesh overlapping the edge of the RedLINE 40 by 2"-3" [50 mm to 75 mm] and ensuring full contact. Apply a second coat of Hot Rubberized Asphalt on top of the reinforcing fabric mesh at the manufacturer's minimum recommended thickness.

ADDITIONAL PROTECTION COURSE

RedLINE 40 can be additionally protected from mechanical damage by the installation of a 12" [300 mm] wide strip of modified bitumen cap sheet, secured by mopping or torching to one side of the expansion joint. Alternatively in the case of waterproofing a generic protection board can be used, and a variety of toppings or finishes applied, e.g. asphalt, concrete, stamped concrete.