RedLINE® 40G Waterproof Expansion Joint System

DESCRIPTION

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

RedLINE 40G 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 40G include the elimination of wood curbs, metal components such 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 40G is manufactured from a saturated elastomer which is chemically stable and has excellent resistance to the effects of weathering.

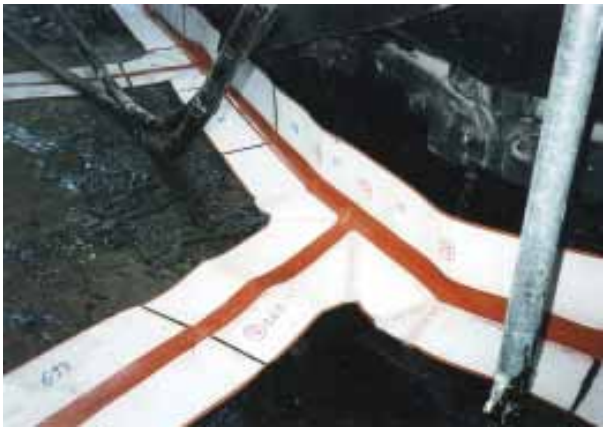
TYPICAL USES

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

- Protected Roof Membrane Expansion Joints
- Tunnel Expansion Joints
- Vertical Foundation Wall Expansion Joints
- Joints in Fluid Containment Structures
- Waterproofing Joints under Hydrostatic Pressure

HYDROSTATIC HEAD

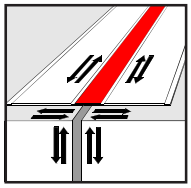
RedLINE 40G can withstand 134 ft [41 m] head of water while sustaining an expansion of 2" [50 mm].



RedLINE 40G installed for a hydrostatic application.

EXPANSION/CONTRACTION RANGE DATA

The RedLINE 40G waterproof expansion joint system is designed to accommodate 3 way building movements concurrently under a hydrostatic head.



Movement	RedLINE 40G
Horizontal	± 2½" [± 60 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)	250 lbs/in [44.64 N/mm]
Puncture Test CGSB 37.56 M96 (minimum)	15 lbs [68.10 N]
UV Exposure ASTM G-53 5000 hours	No Cracks or Crazing
Chemical Resistance to: Acids, Alkalis, Polar Solvents Saline Solutions	No effect

PHYSICAL DATA

Property	RedLINE 40G
Thickness	0.118" [3.0 mm]
Roll Width	13½" [340 mm]
Expansion Joint Gland Width	2¼" [55 mm]
Roll Length	Endless
Weight	0.81 lb/ft [1.20 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 40G 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 40G waterproof expansion joint material. Roll out the RedLINE 40G 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 40G waterproof expansion joint material, and verify the RedLINE 40G conformance to site details prior to the application.

Installation in Asphalt:
RedLINE 40G is installed typically in an asphaltic based medium. Apply the base coat of the asphaltic medium directly to the substrate and embed the RedLINE 40G waterproof expansion joint material, and making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 40G material into the hot asphalt material. Always lay the RedLINE 40G 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 40G in cold asphalt. Spread an even coat of asphalt on the top surface of the RedLINE 40G expansion joint ensuring the top white polyester fleece is completely covered and strip in felt plies.

Installation in Modified Bitumen:
RedLINE 40G 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.

Torching Application:
The bottom surface of the RedLINE is rolled in to a torch liquefied modified bitumen base sheet. The RedLINE can be stripped by torching the modified bitumen cap sheet. For torching application the polyester fleece on the top surface of the RedLINE must be primed with a glaze coat of asphalt prior to the torching. When torching the modified cap sheet, the modified bitumen cap sheet must be torched to the asphalt primed RedLINE fleece, without directing the torching flame on to the RedLINE gland. The "torch and flop" technique is recommended.

Installation in Hot Rubberized Asphalt:
Apply the first coat of Hot Rubberized Asphalt at the manufacturer's recommended minimum thickness, immediately embed the RedLINE 40G waterproof expansion joint material, making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 40G 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 40G expansion joint ensuring the top white polyester fleece is completely covered; embed a reinforcing fabric mesh overlapping the edge of the RedLINE 40G 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 40G 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.

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