

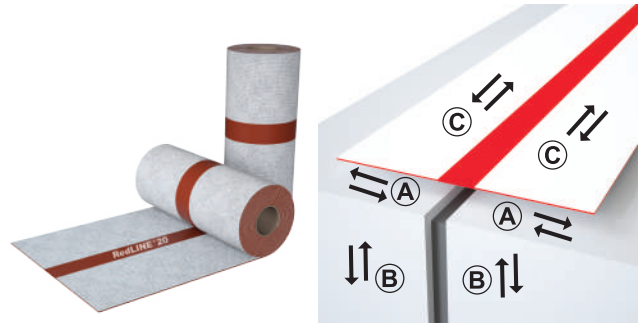
# RedLINE® 20

RedLINE® family of Waterproof Expansion Joints is used for waterproofing expansion joints in large commercial and industrial structures. Specifically designed to accommodate building movements concurrently, in the three principal axial directions and is installed with a wide variety of roofing and waterproofing applications; liquid (hot or cold) or colloidal (paste-like) membrane systems, such as traditional Built-Up-Roofing, mopped Modified Bitumen, Hot Rubberized Asphalt, Polyurethanes (sprayed or liquid applied), Epoxy Resins, PMMA's and with structural adhesives; Single-Ply such as; EPDM, PVC and TPO. RedLINE can also be used as a tie-in between two dissimilar, non-compatible membrane types. Factory fabricated, under stringent quality control and supplied directly to the project site in a continuous roll, with all detailing complete, ready for site installation. Site conditions can require that RedLINE joints be supplied in distinct segments, using SITURA's portable vulcanizing machine, joint connections can easily and independently be done on-site, by the installer. Advantages of using RedLINE include the elimination of wood curbs, metal flashing, nails and screws, caulked or glued seams, all contributing to lower life cycle costs and significant labor savings. The flat profile of RedLINE does not obstruct the flow of water to drainage, limiting water ponding. RedLINE is manufactured from a saturated elastomer which is chemically stable and proven to have excellent resistance to weathering and climate change-related effects RedLINE is VOC free.

## TYPICAL USES

RedLINE 20 Waterproof Expansion Joint product 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
- Blindside Waterproofing Expansion Joints
- Vertical Wall Expansion Joints
- Bridge Expansion Joints
- Roof Control Joints
- Building Closure Joints



RedLINE 20 Waterproof Expansion Joint

## EXPANSION/CONTRACTION RANGE DATA

The RedLINE 20 Waterproof Expansion Joint product is designed to accommodate 3-way building movements simultaneously, which are as follows:

### MOVEMENT

(A) Horizontal	± 1 3/8" [± 35 mm]
(B) Vertical	± 1" [± 25 mm]
(C) Shear	± 1" [± 25 mm]

All movement values are based on limiting the gland elongation to 100%, well below the material's ultimate elongation of 500%. All movement is restricted to the joint gland only, with the polyester fleece selvage edges providing a stable and nondeformative surface for encapsulation. RedLINE joints have no length creep and are true to measure.

### PHYSICAL DATA

PROPERTIES	VALUE
Thickness	0.080" [2.00 mm]
Roll Width	10 5/8" [270 mm]
Expansion Joint Gland Width	1 3/8" [35 mm]
Roll Length	Endless
Weight	0.33 lb/ft [0.49 kg/m]
Color	Red Gland, White Fleece
Identification Marks	Topside imprinted mark "RedLINE® 20"
Inservice Lifespan	20 years plus

### TECHNICAL DATA

PROPERTY & TEST METHOD	RESULTS
Hardness "Shore A" ASTM D-2240	45 ± 5
Lap Joint Strength ASTM D-81	Same as base material
Low Temperature Flex ASTM D-746	-70°F [-57°C]
Ultimate Elongation ASTM D-412	> 500%
Puncture Test - CGSB 37.56 (min.)	10 lbf. [44.5 N] min.
UV Exposure ASTM G-53	No Cracks or Cracking 5000 hours
Chemical Resistance to:	
Acids, Alkalis, Polar Solvents, Saline Solutions	No effect
Vegetative FLL "Procedure for Investigating Resistance to Root Penetration at Green Roof Sites" ANSI/SPRI VR-1 2018	
Test for Root Penetration	Pass - No Invasion

## **SUSTAINABILITY & ENVIROMENTAL PRODUCT DECLARATION (EPD)**

SITURA products are manufactured and fabricated with a commitment towards environmental and social consciousness. All RedLINE products are manufactured, fabricated and shipped with this credo in mind. A verifiable Environmental Product Declaration (EPD under ISO 21930) for RedLINE 20 is available from SITURA – establishing the product's carbon foot print from cradle to grave.

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## **WARRANTY ACCEPTANCE**

RedLINE 20 qualifies for the following warranties (up to 15 years) when used as a single layer in conjunction with the appropriate membrane type installation detail.

- Material Only Warranty
  - Material & Labour Warranty
  - Specific NDL and OEM Manufacturers' Warranties
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## **STORAGE**

Store RedLINE rolls on end, on original pallets or elevated platform. Protect from weather or store in an enclosed area. Do not allow the RedLINE fleece to get wet, if wet, it must be thoroughly dried prior to installation.

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## **SITE MEASUREMENTS**

Each RedLINE joint is fabricated to exact site measurements. Each project is unique and requires that the expansion joint system, on a project-by-project basis, is site measured, surveyed and designed, for proper fit and longterm performance prior to material order. Proper joint layout and configuration are critical to a successful RedLINE installation. Consult with SITURA as to your particular project requirements.

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## **SURFACE PREPARATION**

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

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## **GENERAL APPLICATION GUIDELINES**

The RedLINE product can be installed in a wide variety of roofing and waterproofing applications, liquid (hot or cold) or colloidal (paste-like) membrane systems, and with the help of structural adhesives in single ply roof systems. Consult SITURA and the membrane manufacturer for the specific application types and for detailed application requirements and guidelines. The following are generalized installation steps which do vary for specific membrane types. Identify the installation start location from the layout plan accompanying the roll of RedLINE waterproof expansion joint material. Roll out the RedLINE, with the RedLINE markings facing up, and allow the material to relax prior to application, as the material was in tension when supplied in a roll. Make sure that the building expansion joint is clean and free of debris and has been packed with compressible batt insulation or a 30% compressed backer rod has been placed in the joint cavity. Align the center line of the expansion joint gap with the center line of the RedLINE expansion joint material, and verify the RedLINE® compliance to site details and layout prior to starting the application. RedLINE is installed typically in a liquid (hot or cold) or colloidal (paste-like) membrane encapsulating medium. Generously, apply the base coat of the medium directly to the substrate and embed the RedLINE expansion joint material in it, making sure that the bottom polyester fleece is in full complete contact and saturated with the encapsulating medium. Press the RedLINE material into the medium. Always lay the RedLINE expansion joint material only in lengths of 10 feet [3 m] or less to allow for proper and thorough contact with the waterproofing medium. Do not lay the RedLINE in sporadic and uneven segments. Spread an even coat of the waterproofing medium on the top surface of the RedLINE expansion joint ensuring the top white polyester fleece is completely and fully covered, while keeping clear of the red gland. In certain circumstances; the installation may require additional stripping plies and/or mechanical fixation. Always consult with SITURA as to the recommended installation guidelines and requirements for each type of waterproofing membrane.

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## **ADDITIONAL PROTECTION COURSE**

RedLINE 20 can be additionally protected from mechanical damage by the installation of a 12" [300 mm] wide strip of sacrificial 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. Available from SITURA is SacriSeal™, as a form of a protective sacrificial membrane layer. Consult with SITURA with respect to the use of this material. Note; a protective layer maybe a warranty requirement in certain installations.

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