

RedLINE® 06 Waterproof Expansion Joint System

DESCRIPTION

RedLINE 06 waterproof expansion joint system is used for waterproofing expansion joints in structures, where there are small movements, typically building closure joints, concrete crack repair such as commercial and repair of splits in roofing and waterproofing membranes. RedLINE 06 is specifically designed to accommodate movements, up to 1/4" [6 mm]. RedLINE 06 is typically installed in an asphalt medium or epoxy resin.

RedLINE 06 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 flat profile of the RedLINE 06 joint also does not obstruct the flow of water to drainage resulting in the elimination of ponded water as well as its flat profile is unobtrusive to building finishes. RedLINE 06 is manufactured from a saturated elastomer which is chemically stable and has excellent resistance to the effects of weathering.

TYPICAL USES

RedLINE 06 waterproof expansion joint system is designed to be used for:

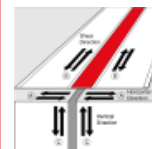
- Concrete Control Joints
- Prefabricated Panel Joints
- Repairing Roof Splits
- Waterproofing Concrete Saw Cut Joints
- Small Building Closure Joints
- Crack Control Joints



RedLINE 06 being installed

EXPANSION/CONTRACTION RANGE DATA

The RedLINE 06 waterproof expansion joint system is designed to accommodate 3 way movements concurrently:



Movement	RedLINE 06
Horizontal	± 1/4" [± 6 mm]
Vertical	± 1/8" [± 3 mm]
Shear	± 3/16" [± 5 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)	180 lbs/in [32.14 N/mm]
Puncture Test CGSB 37.56 M96 (minimum)	5 lbs [22 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 06
Thickness	0.071" [1.8 mm]
Roll Width	7" [175 mm]
Expansion Joint Gap Gauge Width	3/4" [15 mm]
Roll Length	Endless
Weight	0.15lb/ft [0.23kg/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 06 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 06 waterproof expansion joint material. Roll out the RedLINE 06 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 or gap with the centre line of the RedLINE 06 waterproof expansion joint material, and verify the RedLINE 06 conformance to site details prior to the application. Below is brief description of typical RedLINE applications.

Installation in Asphalt:

RedLINE 06 is installed typically in an asphaltic based medium. Apply the base coat of the asphaltic medium directly to the substrate and embed the RedLINE 06 waterproof expansion joint material, and making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 06 material into the hot asphalt material. Always lay the RedLINE 06 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 06 in cold asphalt. Spread an even coat of asphalt on the top surface of the RedLINE 06 expansion joint ensuring the top white polyester fleece is completely covered and strip in felt plys.

Installation in Modified Bitumen:

RedLINE 06 can be installed in a modified bitumen application. It is not recommended that a Modified Bitumen membrane be torched to RedLINE 06. The bottom surface of the RedLINE 06 can be mopped to a modified bitumen base sheet. The RedLINE 06 can be stripped in by mopping in the modified bitumen cap sheet. Mopping of the cap sheet is done in the conventional manner of mopping in stripping plys.

Installation in Epoxy Resin:

RedLINE 06 is frequently installed on a concrete substrate the preferred method is using a two part epoxy resin. The RedLINE material is laid down in a prepared bed of epoxy. The underside surface of the RedLINE is NOT coated. The RedLINE is pressed firmly into the epoxy, to wholly encapsulate the polyester fleece. Once the underside surface of the RedLINE has been laid into the epoxy resin bed, the top side fleece surface is coated. A uniform layer 1/16" [2 mm] thick is applied to the top side surface of the RedLINE, using the spatula. All the exposed fleece material must be covered. The epoxy must encapsulate wholly a minimum of 1 3/4" [40 mm] of the RedLINE fleece edging and extend a minimum of 3/4" [20 mm] onto the substrate.

ADDITIONAL PROTECTION COURSE

RedLINE 06 can be additionally protected from mechanical damage by the installation of a strip of modified bitumen cap sheet, secured by mopping or torching to one side of the expansion joint. Alternatively in the case of application over a concrete substrate light gauge metal flashing can be used.



908 Niagara Falls Boulevard, # 688
 North Tonawanda, NY 14120-2060
USA

Phone: (416) 622-0253 • Fax: (416) 620-9715
 Toll Free: 1-888-4-SITURA (474-8872)
 E-Mail: situra@situra.com • Web site: www.situra.com

2 Bloor Street West, Suite 100-304
 Toronto, ON M4W 3E2
CANADA

RedLINE® 20 Waterproof Expansion Joint System

DESCRIPTION

RedLINE 20 waterproof expansion joint system is used for waterproofing expansion joints in structures, such as commercial and industrial buildings, parking garages, tunnels, etc. RedLINE 20 is specifically designed to accommodate building movements, up to 1" [25 mm]. RedLINE 20 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 20 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 20 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 20 is manufactured from a saturated elastomer which is chemically stable and has excellent resistance to the effects of weathering.

TYPICAL USES

RedLINE 20 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 20 being installed

EXPANSION/CONTRACTION RANGE DATA

The RedLINE 20 waterproof expansion joint system is designed to accommodate 3 way building movements concurrently:

Movement	RedLINE 20
Horizontal	± 1" [± 25 mm]
Vertical	± 5/8" [± 15 mm]
Shear	± 3/8" [± 10 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 20
Thickness	0.087" [2.2 mm]
Roll Width	10½" [270 mm]
Expansion Joint Gap Gauge Width	1½" [35 mm]
Roll Length	Endless
Weight	0.45 lb/ft [0.67 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 20 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 20 waterproof expansion joint material. Roll out the RedLINE 20 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 20 waterproof expansion joint material, and verify the RedLINE 20 conformance to site details prior to the application. Below is brief description of typical RedLINE applications.

Installation in Asphalt:

RedLINE 20 is installed typically in an asphaltic based medium. Apply the base coat of the asphaltic medium directly to the substrate and embed the RedLINE 20 waterproof expansion joint material, and making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 20 material into the hot asphalt material. Always lay the RedLINE 20 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 20 in cold asphalt. Spread an even coat of asphalt on the top surface of the RedLINE 20 expansion joint ensuring the top white polyester fleece is completely covered and strip in felt plys.

Installation in Modified Bitumen:

RedLINE 20 can be installed in a modified bitumen application. It is recommended that the polyester fleece on both sides of the RedLINE 20 be primed with an asphaltic primer prior to the torching application of the modified bitumen membrane. The bottom surface of the RedLINE 20 can be mopped to a modified bitumen base sheet or alternatively rolled in to a torch liquefied modified bitumen base sheet. Caution and care must be taken so as not to expose the RedLINE directly to the torch open flame. The RedLINE 20 can be stripped in by torching or mopping in the modified bitumen cap sheet. When torching the modified cap sheet, the modified bitumen cap sheet must be rolled into the primed RedLINE fleece, without directing the torching flame on to the RedLINE. Mopping of the cap sheet is done in the conventional manner of mopping in stripping plys.

Installation in Hot Rubberized Asphalt:

Apply the first coat of Hot Rubberized Asphalt at the manufacturer's recommended minimum thickness, immediately embed the RedLINE 20 waterproof expansion joint material, making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 20 material into the hot asphalt. Always lay the RedLINE 20 expansion joint material only in lengths of 10 feet [3 m] or less to allow for contact with hot asphalt material. Do not lay the RedLINE 20 in cold asphalt.

Spread an even coat of Hot Rubberized Asphalt on the top surface of the RedLINE 20 expansion joint ensuring the top white polyester fleece is completely covered; embed a reinforcing fabric mesh overlapping the edge of the RedLINE 20 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 20 can be additionally protected from mechanical damage by the installation of a 12" [350 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.



908 Niagara Falls Boulevard, # 688
 North Tonawanda, NY 14120-2060
USA

Phone: (416) 622-0253 • Fax: (416) 620-9715
 Toll Free: 1-888-4-SITURA (474-8872)
 E-Mail: situra@situra.com • Web site: www.situra.com

2 Bloor Street West, Suite 100-304
 Toronto, ON M4W 3E2
CANADA

RedLINE® 20G Waterproof Expansion Joint System

DESCRIPTION

RedLINE 20G waterproof expansion joint system is used for waterproofing expansion joints in structures, such as commercial and industrial buildings, parking garages, tunnels, etc. RedLINE 20G is specifically designed to accommodate building movements, up to 1" [25 mm] under hydrostatic pressure. RedLINE 20G 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 20G 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 20G 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 20G is manufactured from a saturated elastomer which is chemically stable and has excellent resistance to the effects of weathering.

TYPICAL USES

RedLINE 20G waterproof expansion joint system is designed to be used for:

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

HYDROSTATIC HEAD

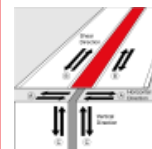
RedLINE 20G can withstand 134 ft [41 m] head of water while sustaining an expansion of 1" [25 mm].



RedLINE 20G being installed

EXPANSION/CONTRACTION RANGE DATA

The RedLINE 20G waterproof expansion joint system is designed to accommodate 3 way building movements concurrently under a hydrostatic head



Movement	RedLINE 20G
Horizontal	± 1" [± 25 mm]
Vertical	± 5/8" [± 15 mm]
Shear	± 3/8" [± 10 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 Cracking
Chemical Resistance to: Acids, Alkalis, Polar Solvents, Saline Solutions	No effect

PHYSICAL DATA

Property	RedLINE 20G
Thickness	0.118" [3.0 mm]
Roll Width	10½" [270 mm]
Expansion Joint Gap Gauge Width	1½" [35 mm]
Roll Length	Endless
Weight	0.60 lb/ft [0.90 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 20G 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 20G waterproof expansion joint material. Roll out the RedLINE 20G 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 20G waterproof expansion joint material, and verify the RedLINE 20G conformance to site details prior to the application. Below is brief description of typical RedLINE applications.

Installation in Asphalt:

RedLINE 20G is installed typically in an asphaltic based medium. Apply the base coat of the asphaltic medium directly to the substrate and embed the RedLINE 20G waterproof expansion joint material, and making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 20G material into the hot asphalt material. Always lay the RedLINE 20G 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 20G in cold asphalt. Spread an even coat of asphalt on the top surface of the RedLINE 20G expansion joint ensuring the top white polyester fleece is completely covered and strip in felt plys.

Installation in Modified Bitumen:

RedLINE 20G can be installed in a modified bitumen application. It is recommended that the polyester fleece on both sides of the RedLINE 20G be primed with an asphaltic primer prior to the torching application of the modified bitumen membrane. The bottom surface of the RedLINE 20G can be mopped to a modified bitumen base sheet or alternatively rolled in to a torch liquefied modified bitumen base sheet. Caution and care must be taken so as not to expose the RedLINE directly to the torch open flame. The RedLINE 20G can be stripped in by torching or mopping in the modified bitumen cap sheet. When torching the modified cap sheet, the modified bitumen cap sheet must be rolled into the primed RedLINE fleece, without directing the torching flame on to the RedLINE. Mopping of the cap sheet is done in the conventional manner of mopping in stripping plys.

Installation in Hot Rubberized Asphalt:

Apply the first coat of Hot Rubberized Asphalt at the manufacturer's recommended minimum thickness, immediately embed the RedLINE 20G waterproof expansion joint material, making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 20G material into the hot asphalt. Always lay the RedLINE 20G expansion joint material only in lengths of 10 feet [3 m] or less to allow for contact with hot asphalt material. Do not lay the RedLINE 20G in cold asphalt.

Spread an even coat of Hot Rubberized Asphalt on the top surface of the RedLINE 20G expansion joint ensuring the top white polyester fleece is completely covered; embed a reinforcing fabric mesh overlapping the edge of the RedLINE 20G 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 20G can be additionally protected from mechanical damage by the installation of a 12" [350 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.



908 Niagara Falls Boulevard, # 688
 North Tonawanda, NY 14120-2060
USA

Phone: (416) 622-0253 • Fax: (416) 620-9715
 Toll Free: 1-888-4-SITURA (474-8872)
 E-Mail: situra@situra.com • Web site: www.situra.com

2 Bloor Street West, Suite 100-304
 Toronto, ON M4W 3E2
CANADA

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, Modified Bitumen, Hot Rubberized Asphalt, Spray Polyurethane Foam 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:

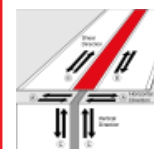
- Roof Expansion Joints
- Sub Grade (Waterproofing) Expansion Joints
- Plaza Deck Expansion Joints
- Parking Garage Expansion Joints
- Protected Roof Membrane Expansion Joints
- Tunnel Expansion Joints
- Vertical Wall Expansion Joints
- Bridge Expansion Joints
- Building Closure Joints
- Roof Control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



RedLINE 40 being installed

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 Gap Gauge 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. Below is brief description of typical RedLINE applications.

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 plys.

Installation in Modified Bitumen:

RedLINE 40 can be installed in a modified bitumen application. It is recommended that the polyester fleece on both sides of the RedLINE 40 be primed with an asphaltic primer prior to the torching application of the modified bitumen membrane. The bottom surface of the RedLINE 40 can be mopped to a modified bitumen base sheet or alternatively rolled in to a torch liquefied modified bitumen base sheet. Caution and care must be taken so as not to expose the RedLINE directly to the torch open flame. The RedLINE 40 can be stripped in by torching or mopping in the modified bitumen cap sheet. When torching the modified cap sheet, the modified bitumen cap sheet must be rolled into the primed RedLINE fleece, without directing the torching flame on to the RedLINE. Mopping of the cap sheet is done in the conventional manner of mopping in stripping plys.

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 40 expansion joint material only in lengths of 10 feet [3 m] or less to allow for contact with hot asphalt material. Do not lay the RedLINE 40 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" [350 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.



908 Niagara Falls Boulevard, # 688
 North Tonawanda, NY 14120-2060
USA

Phone: (416) 622-0253 • Fax: (416) 620-9715
 Toll Free: 1-888-4-SITURA (474-8872)
 E-Mail: situra@situra.com • Web site: www.situra.com

2 Bloor Street West, Suite 100-304
 Toronto, ON M4W 3E2
CANADA

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 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 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 40G is manufactured from a saturated elastomer which is chemically stable and has excellent resistance to the effects of weathering.

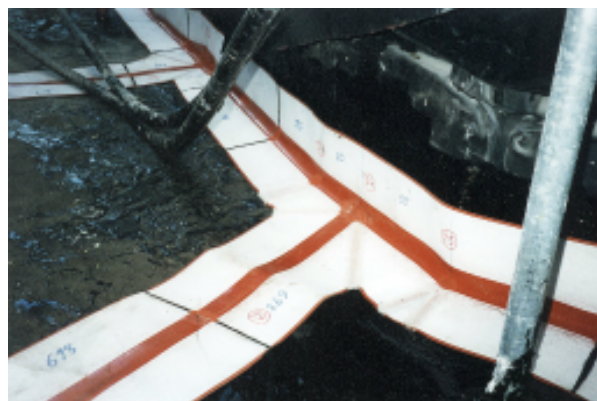
TYPICAL USES

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

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

HYDROSTATIC HEAD

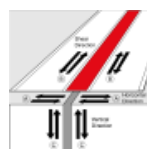
RedLINE 40G can withstand 134 ft [41 m] head of water while sustaining an expansion of 2" [50 mm].



RedLINE 40G being installed

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	± ¾" [± 20 mm]
Shear	± ¾" [± 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 Cracking
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 Gap Gauge 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. Below is brief description of typical RedLINE applications.

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 plys.

Installation in Modified Bitumen:

RedLINE 40G can be installed in a modified bitumen application. It is recommended that the polyester fleece on both sides of the RedLINE 40G be primed with an asphaltic primer prior to the torching application of the modified bitumen membrane. The bottom surface of the RedLINE 40G can be mopped to a modified bitumen base sheet or alternatively rolled in to a torch liquefied modified bitumen base sheet. Caution and care must be taken so as not to expose the RedLINE directly to the torch open flame. The RedLINE 40G can be stripped in by torching or mopping in the modified bitumen cap sheet. When torching the modified cap sheet, the modified bitumen cap sheet must be rolled into the primed RedLINE fleece, without directing the torching flame on to the RedLINE. Mopping of the cap sheet is done in the conventional manner of mopping in stripping plys.

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 40G expansion joint material only in lengths of 10 feet [3 m] or less to allow for contact with hot asphalt material. Do not lay the RedLINE 40G 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" [350 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.



908 Niagara Falls Boulevard, # 688
 North Tonawanda, NY 14120-2060
USA

Phone: (416) 622-0253 • Fax: (416) 620-9715
 Toll Free: 1-888-4-SITURA (474-8872)
 E-Mail: situra@situra.com • Web site: www.situra.com

2 Bloor Street West, Suite 100-304
 Toronto, ON M4W 3E2
CANADA

RedLINE® 240 Waterproof Expansion Joint System

DESCRIPTION

RedLINE 240 waterproof expansion joint system is used for waterproofing expansion joints in structures, such as commercial and industrial buildings, parking garages, tunnels, etc. RedLINE 240 is specifically designed to accommodate large building movements, up to 10" [250 mm]. RedLINE 240 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 240 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 240 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 240 is manufactured from a saturated elastomer which is chemically stable and has excellent resistance to the effects of weathering.

TYPICAL USES

RedLINE 240 waterproof expansion joint system is designed to be used for:

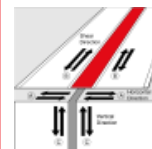
- Plaza Deck Expansion Joints
- Parking Garage Expansion Joints
- Protected Roof Membrane Expansion Joints
- Tunnel Expansion Joints
- Vertical Wall Expansion Joints
- Bridge Expansion Joints
- Seismic and Large Movement Joints



RedLINE 240 being installed

EXPANSION/CONTRACTION RANGE DATA

The RedLINE 240 waterproof expansion joint system is designed to accommodate 3 way building movements concurrently under a hydrostatic head



Movement	RedLINE 240
Horizontal	± 10" [± 250 mm]
Vertical	± 4" [± 100 mm]
Shear	± 4" [± 100 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 Cracking

Chemical Resistance to: Acids, Alkalis, Polar Solvents Saline Solutions	No effect
---	-----------

PHYSICAL DATA

Property	RedLINE 240
Thickness	0.118" [3.0 mm]
Roll Width	22" [540 mm]
Expansion Joint Gap Gauge Width	10" [250 mm]
Roll Length	Endless
Weight	0.54 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 240 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 240 waterproof expansion joint material. Roll out the RedLINE 240 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 240 waterproof expansion joint material, and verify the RedLINE 240 conformance to site details prior to the application. Below is brief description of typical RedLINE applications.

Installation in Asphalt:

RedLINE 240 is installed typically in an asphaltic based medium. Apply the base coat of the asphaltic medium directly to the substrate and embed the RedLINE 240 waterproof expansion joint material, and making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 240 material into the hot asphalt material. Always lay the RedLINE 240 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 240 in cold asphalt. Spread an even coat of asphalt on the top surface of the RedLINE 240 expansion joint ensuring the top white polyester fleece is completely covered and strip in felt plys.

Installation in Modified Bitumen:

RedLINE 240 can be installed in a modified bitumen application. It is recommended that the polyester fleece on both sides of the RedLINE 240 be primed with an asphaltic primer prior to the torching application of the modified bitumen membrane. The bottom surface of the RedLINE 240 can be mopped to a modified bitumen base sheet or alternatively rolled in to a torch liquefied modified bitumen base sheet. Caution and care must be taken so as not to expose the RedLINE directly to the torch open flame. The RedLINE 240 can be stripped in by torching or mopping in the modified bitumen cap sheet. When torching the modified cap sheet, the modified bitumen cap sheet must be rolled into the primed RedLINE fleece, without directing the torching flame on to the RedLINE. Mopping of the cap sheet is done in the conventional manner of mopping in stripping plys.

Installation in Hot Rubberized Asphalt:

Apply the first coat of Hot Rubberized Asphalt at the manufacturer's recommended minimum thickness, immediately embed the RedLINE 240 waterproof expansion joint material, making sure that the bottom polyester fleece is in full contact with the hot asphalt. Press the RedLINE 240 material into the hot asphalt. Always lay the RedLINE 240 expansion joint material only in lengths of 10 feet [3 m] or less to allow for contact with hot asphalt material. Do not lay the RedLINE 240 in cold asphalt.

Spread an even coat of Hot Rubberized Asphalt on the top surface of the RedLINE 240 expansion joint ensuring the top white polyester fleece is completely covered; embed a reinforcing fabric mesh overlapping the edge of the RedLINE 240 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 240 can be additionally protected from mechanical damage by the installation of a 12" [350 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.



908 Niagara Falls Boulevard, # 688
 North Tonawanda, NY 14120-2060
USA

Phone: (416) 622-0253 • Fax: (416) 620-9715
 Toll Free: 1-888-4-SITURA (474-8872)
 E-Mail: situra@situra.com • Web site: www.situra.com

2 Bloor Street West, Suite 100-304
 Toronto, ON M4W 3E2
CANADA

RedLINE® Tie-in for Single Ply Membranes

DESCRIPTION

RedLINE Tie-in is a dual roof membrane tie-in system. It effectively solves the problem detail of single ply roof membrane connection to other incompatible roof systems. The RedLINE Tie-in material is specially formulated to provide a long term performance solution to cross roofing system compatibility, specifically Built-Up-Roofing, Coal Tar Pitch, Modified Bitumen, Hot Rubberized Asphalt, Spray Polyurethane Foam and Epoxy Resin.

The RedLINE Tie-in is comprised of a continuous material strip which is compounded of a specially formulated elastomer with polyester fleece embedded in the salvage edge on one side. RedLINE Tie-in 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 Tie-in 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 Tie-in also does not obstruct the flow of water to drainage resulting in the elimination of ponded water. RedLINE Tie-in is manufactured from a saturated elastomer which is chemically stable and has excellent resistance to weathering.

ADVANTAGES

RedLINE Tie-in is designed to be used for:

- No restrictions as to ponding water or direction of water flow against seam laps
- Flat profile
- Waterproof, vulcanized seams
- Any detailing and unique shapes possible
- Compatible with single ply membranes along with either Built-Up-Roofs (BUR), Modified Bitumen, Coal Tar Pitch or Sprayed Polyurethane

MATERIAL DATA

The RedLINE Tie-in is used to connect two incompatible roof membrane assemblies

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 Tie-in
Thickness	0.118" [3.0 mm]
Roll Width	16" [400 mm]
Adhesive Tie-in width	6" [150 mm]
Roll Length	Endless
Weight	0.54 lb/ft [0.80 kg/m]
Color	Red

TYPICAL USES

The RedLINE Tie-in can be used in variety of situations, when incompatible materials have to be joined, especially single ply membranes such as; TPO, PVC, EPDM and Hypalon.

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 Tie-in fleece to get wet.

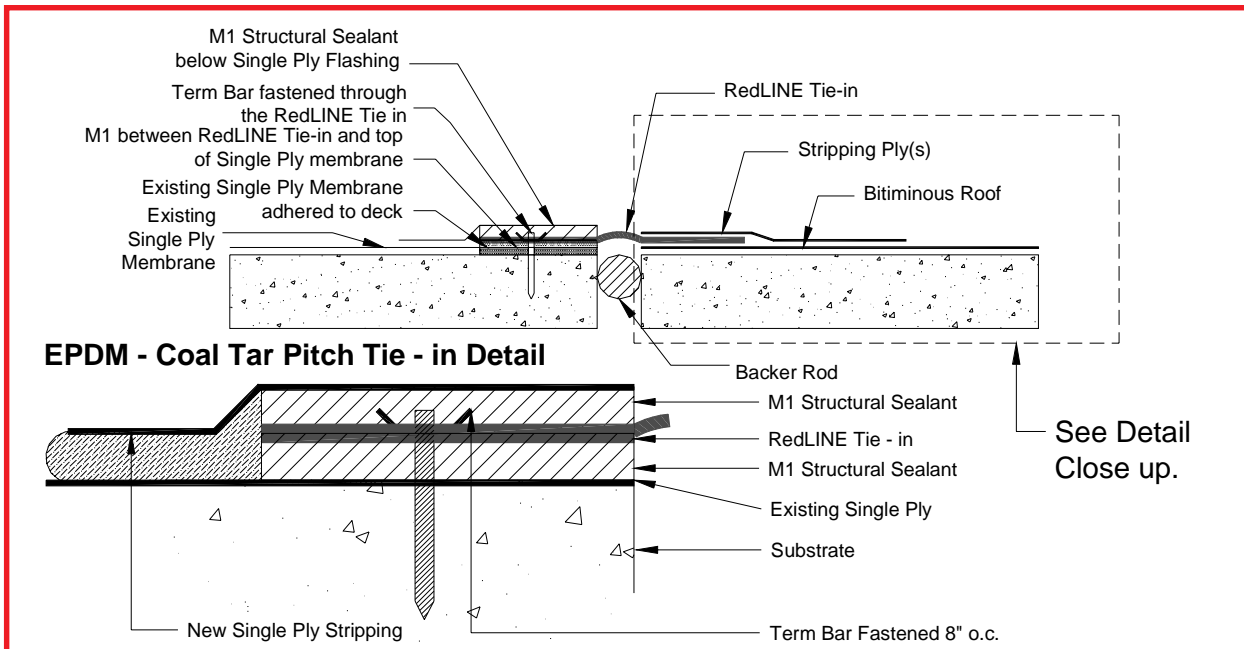
SURFACE PREPARATION

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 location of the tie-in detail. Roll out the RedLINE Tie-in and allow it to relax prior to application. Make sure that the substrate is clean and free of debris. Align the salvage edge of the RedLINE over the installed single ply roof membrane, in such a manner that a least 6" (150 mm) width is over the EPDM roof membrane, (either on top or the bottom)

Fold back the RedLINE Tie-in on itself and clean the single ply membrane in accordance to the single ply membrane manufacturer's requirements. Once the single ply roof membrane has been cleaned, primed (if necessary) and allowed to dry, apply the supplied adhesive on to the single ply membrane and embed the RedLINE Tie-in. Once the adhesive has set apply a coat of adhesive over the RedLINE Tie in and strip in the single ply membrane, as shown on the detail below, a termination bar may be required. Once the RedLINE Tie-in has set, install the fleece end to the adjacent roof, as if installing a regular RedLINE expansion joint.



RedLINE® Flashing

DESCRIPTION:

RedLINE Flashing material is a specially designed flashing membrane for use with all types of asphaltic based roof membranes. It provides for a water-tight and continuous seal at building envelope discontinuities.

The RedLINE Flashing is comprised of a continuous material strip which is compounded of a specially formulated elastomer with polyester fleece embedded across its entire surface. RedLINE Flashing 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 Flashing include the elimination of wood curbs, metal components such as metal flashing, nails and screws, caulked or glued seams resulting in significant labor savings. RedLINE Flashing is manufactured from a saturated elastomer which is chemically stable and has excellent resistance to weathering.

TYPICAL USES:

The RedLINE Flashing can be used in variety of situations.

- Balcony flashings
- Metal/PVC window frame seals
- Door frames with side frame seals.
- Plywood joint seals
- Air shaft seals
- Terrace base flashings
- Round balustrade flashing
- Bridge flashing.

ADVANTAGES

- No restrictions as to ponding water or direction of water flow against seam laps
- Flat profile
- Waterproof, vulcanized seams
- Any detailing and unique shapes possible



RedLINE Flashing being installed

MATERIAL DATA

The RedLINE Flashing is used to provide building envelope continuity at various openings and gaps.

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 Flashing
Thickness	0.81" [2.2 mm]
Roll Width	14" [350 mm]
Roll Length	Endless
Weight	0.54 lb/ft [0.80 kg/m]
Color	White

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 Flashing 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 location of the flashing detail. Roll out the RedLINE Flashing and allow it to relax prior to application. Make sure that the substrate is clean and free of debris.

Installation in Asphalt:

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

Installation in Epoxy Resin:

RedLINE Flashing is frequently installed on a concrete substrate the preferred method is using a two part epoxy resin. The RedLINE Flashing material is laid down in a prepared bed of epoxy. The underside surface of the RedLINE Flashing is NOT coated. The RedLINE Flashing is pressed firmly into the epoxy, to wholly encapsulate the polyester fleece. Once the underside surface of the RedLINE Flashing has been laid into the epoxy resin bed, the top side fleece surface is coated. A uniform layer 1/16" [2 mm] thick is applied to the top side surface of the RedLINE Flashing, using the spatula. All the exposed fleece material must be covered. The epoxy must encapsulate wholly a minimum of 1 3/4" [40 mm] of the RedLINE Flashing fleece edging and extend a minimum of 3/4" [20 mm] onto the substrate.

ADDITIONAL PROTECTION COURSE

RedLINE Flashing can be additionally protected from mechanical damage by the installation of a strip of modified bitumen cap sheet, secured by mopping or torching to one side of the expansion joint. Alternatively in the case of application over a concrete substrate light gauge metal counter flashing can be used.



908 Niagara Falls Boulevard, # 688
North Tonawanda, NY 14120-2060
USA

Phone: (416) 622-0253 • Fax: (416) 620-9715
Toll Free: 1-888-4-SITURA (474-8872)
E-Mail: situra@situra.com • Web site: www.situra.com

2 Bloor Street West, Suite 100-304
Toronto, ON M4W 3E2
CANADA