

1998

Listings & Approvals

Fire & Wind Ratings for LightGuard® Systems

Type	Test Method	Design Reference	Pg. No.	Location
Fire from without	ASTM E108-UL 790	Coal Tar Pitch Felt Systems	325	Roofing Materials & Systems 1998
	ASTM E108	Fluid Applied Coating Systems	325	R14358(N)
	ASTM E108	Single-ply Membrane Systems	325	R14358(N)
Wind Uplift	UL 1897	Mod Bit/BUR Roofing Systems Uplift		R14358(N)
	UL 1897	Mod Bit/BUR Single-ply Membrane Systems		R14358(N)
	UL 580	Construction No. 58	428	Roofing Materials & Systems 1998
	UL 580	Construction No. 87	443	
Fire Classified	UL 1256	Construction No. 1	417	Roofing Materials & Systems 1998
	UL 1256	Construction No. 2	417	
	UL 1256	Construction No. 3	418	
	UL 1256	Construction No. 14	419	
	UL 1256	Construction No. 58	428	
	UL 1256	Construction No. 87	443	
	UL 1256	Construction No. 200	508	
	UL 1256	Construction No. 237	532	
	UL 1256	Construction No. 260	549	
	UL 1256	Construction No. 276	559	

Fire & Wind Ratings 1998

Fire Resistance Assembly	Test Method	Design Reference	Pg. No.	Fire Resistance Ratings Vol. 1
	1 & 1/2 hr.	Design No. P225	471	Steel Deck
	1 & 1/2 hr.	Design No. P229	476	Gypsum Deck
	1 hr.	Design No. P230	478	Steel Deck
	1 hr.	Design No. P235	482	Steel Deck
	1 1/2 & 2 hr.	Design No. P404	515	Steel Deck
	1 & 1/2 hr.	Design No. P505	522	Gypsum Deck
	1 & 1/2 hr.	Design No. P507	524	Gypsum Deck
	1 1/2 & 2 hr.	Design No. P714	551	Steel Deck
	1 1/2 & 2 hr.	Design No. P801	583	Steel Deck
	1 & 1 1/2 hr.	Design No. P803	586	Steel Deck
	1 1/2 & 2 hr.	Design No. P805	587	Steel Deck
	1 hr. — 3 hr.	Design No. P811	590	Steel Deck
	1 & 1/2 hr.	Design No. P813	591	Steel Deck
	1 hr.	Design No. P814	592	Steel Deck
	1 hr. — 2 hr.	Design No. P815	594	Steel Deck
	2 hr.	Design No. P904	610	Concrete Deck
	1 hr. — 2 hr.	Design No. P908	613	Lightweight Concrete
	2 hr.	Design No. P909	616	Concrete Deck
	2 hr.	Design No. P912	618	Concrete Deck
	2 hr.	Design No. P915	620	Concrete Deck

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Factory Mutual Acceptance*

T. Clear Corporation
3255 Symmes Road
Hamilton, OH 45015

Protected Membrane Roof Systems

T. Clear Protected Membrane Roof Systems are Factory Mutual accepted.

See FM 1-29* for acceptability or call T. Clear Corporation.

*FM has not "approved" **LIGHTGUARD®**, **COOLGUARD®** or **HEAVYGUARD®** PMRs because they are unable to fully test ballasted roofing systems. However, FM will "accept" these systems if the design meets the FM criteria.

Should you be involved in designing a T. Clear Corp. ballasted roofing system, contact your local FM Field Engineering Office. The Field Engineer should have the Internal Bulletin filed with 1-29 allowing acceptance of T. Clear **LIGHTGUARD** systems installed according to FM recommendations.

NOTE: The Factory Mutual design requirements are more stringent than T. Clear minimum requirements.

The "Range 2" and "Range 3" manufacturer's design criteria listed in Factory Mutual's 2.0 Recommendations document refers to T. Clear's "System 2" and "System 3" wind designs and securements as referenced in Technical Data Sheet 4.4.

Call T. Clear Corporation at 1-800-544-7398 for information or assistance.

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Listings & Approvals

Single-Ply Membrane Systems

T. Clear Corp, Hamilton OH 45012

R14358(N)

Class A — Ballasted

Single-Ply Membrane Systems

1. Deck: C-15/32

Incline: 3

Membrane: Any UL Classified PVC, EPDM, CPE, CSPE, TRE, nitrile alloy or modified bitumen,
loose laid or mechanically fastened.

Slip Sheet: (Optional) Dry inorganic glass fiber mat.

Insulation: Dow Chemical Styrofoam RM, PD, SM, TG, Grayboard, or Styrorib (plastic),
1 in. minimum.

As an alternative, the membrane may be loose laid over the insulation

Scrim: (Optional) "Fabrene", "International Paper D689" or "Rufon Polypropylene". 2 oz./sq. yd.

Surfacing: Crushed stone, river bottom stone (3/4 to 1 3/4 in. diameter). 900 lbs./sq. concrete
blocks, 10 lbs./sq. minimum spread not more than
1/8 in. apart, or LightGuard® panels surfaced
butted together. with 5/16 in. minimum concrete mortar,

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Listings & Approvals

Loose-Laid Single Ply Membrane Systems

TGIK

Roofing Systems, Uplift Resistance

T. Clear Corp, Hamilton OH 45012

R14358(N)

Single Ply Membrane Systems

November 10, 1993

Uplift resistance: 90 psf.

Deck: Steel, min. 22 MSG.

Air Barrier: Minimum 6 mil polyethylene sealed with tape and/or caulk at laps, at roof penetrations and at the roof perimeter to form an air sealed envelope with the loose-laid membrane.

Gypsum Board: 5/8 in. thick min. mechanically fastened.

Fasteners: No. 12-12 by 1 5/8 in. long, No. 3 Phillips drive truss head types point steel screws.

A 3 in. diameter, No. 22 MSG Steel Pressure Plate used with each screw. A total of 18 screws used per 4 by 8 ft. sheet. Positioned in 3 rows. Rows located 6 in. from 8 ft. sides and along the center line. Fasteners spaced 18 in. OC beginning 3 in. from the 4 ft. edge.

Membrane: Any UL Classified single ply membrane, loose laid.

Surfacing: LIGHTGUARD® Panels, min. 2 in. thick.

Strapping: No. 22 MSG thick, 3 in. wide, coated or stainless steel. Fastened to peripheral LIGHTGUARD® Panels with blind rivet type fasteners. Minimum 2 fasteners used per unit.

Listings & Approvals

BUR/Modified Bitumen Membrane Systems

TGIK

Roofing Systems, Uplift Resistance

T. Clear Corp, Hamilton OH 45012

R14358(N)

BUR/Modified Bitumen Membrane Systems

November 10, 1993

Uplift resistance: 135 psf.

Deck: Steel, min. 22 MSG.

Gypsum Board: 5/8 in. thick min. mechanically fastened.

Fasteners: No. 12-12 by 1 5/8 in. long, No. 3 Phillips drive truss head types point steel screws.

A 3 in. diameter, No. 22 MSG Steel Pressure Plate used with each screw. A total of 18 screws used per 4 by 8 ft. sheet. Positioned in 3 rows. Rows located 6 in. from 8 ft. sides and along the center line. Fasteners spaced 18 in. OC beginning 3 in. from the 4 ft. edge.

Base/Ply Sheet: One or more layers of Type G1, Type G2, or UL Classified polyester base/ply sheet hot-mopped to the gypsum board.

Surfacing: LIGHTGUARD® Panels, min. 2 in. thick.

Strapping: No. 22 MSG thick, 3 in. wide, coated or stainless steel. Fastened to peripheral LIGHTGUARD® Panels with blind rivet type fasteners. Minimum 2 fasteners used per unit.

Listings & Approvals

Coal Tar Pitch Felt Systems With Hot Roofing Coal Tar Pitch

T. Clear Corp, Hamilton OH 45012

R14358(N)

Class A

Coal Tar Pitch Felt Systems with Hot Roofing Coal Tar Pitch

1. Deck: C-15/32

Incline: 1

Base Sheet: Required for combustible decks — asphalt organic, asbestos or inorganic glass, nailed.

Ply Sheet: Two or more layers Type 15 asphalt organic, asbestos or Type G1 inorganic glass, coal tar pitch or bitumen. 25 lbs./sq. sealed with coal tar pitch or bitumen. 25 lbs./sq. followed by coal tar at 45 lbs./sq.

Insulation: Dow Chemical Styrofoam RM, PC or Styrorib (plastic) 1 in. minimum with or without attachment.

Scrim: (Optional) "Fabrene", "International Paper D689" or "Rufon Polypropylene". 2 oz./sq. yd.

Surfacing: Crushed stone, river bottom stone (3/4 to 1 3/4 in. diameter). 900 lbs./sq. concrete blocks, 10 lbs./sq. minimum spread not more than

1/8 in. apart, or LightGuard® panels surfaced
butted together.

with 5/16 in. minimum concrete mortar,

2. Deck: C-15/32

Incline: 2

Base Sheet: Required for combustible decks — Type 15 asphalt inorganic felt, nailed.

Ply Sheet: Two or more layers Type 15 asphalt organic, asbestos or Type G1 inorganic glass felt secured with hot roofing asphalt.

Insulation: Dow Chemical Styrofoam RM, PD or Styrorib (plastic) 1 in. minimum .

Scrim: (Optional) "Fabrene", "International Paper D689" or "Rufon Polypropylene". 2 oz./sq. yd.

Surfacing: Crushed stone, river bottom stone (3/4 to 1 3/4 in. diameter). 900 lbs./sq. concrete blocks, 10 lbs./sq. minimum spread not more than

1/8 in. apart, or LightGuard® panels surfaced
butted together.

with 5/16 in. minimum concrete mortar,

Listings & Approvals

Fluid-Applied Coating Systems

T. Clear Corp, Hamilton OH 45012

R14358(N)

Class A

Fluid-Applied Coating Systems

1. Deck: C-15/32

Incline: 3

Coating: Any UL Classified fluid applied roof coating system.

Slip Sheet: (Optional) Dry inorganic glass fiber mat.

Insulation: Dow Chemical Styrofoam RM, PD, SM, TG, Grayboard, or Styrorib (plastic),
1 in. minimum.

Scrim: (Optional) "Fabrene", "International Paper D689" or "Rufon Polypropylene". 2 oz./sq. yd.

Surfacing: Crushed stone, river bottom stone (3/4 to 1 3/4 in. diameter). 900 lbs./sq. concrete
blocks, 10 lbs./sq. minimum spread not more than
1/8 in. apart, or LightGuard® panels surfaced
with 5/16 in. minimum concrete mortar,
butted together.

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