

UI Classification Listings

OVERVIEW

UL Classification Listings need not be hard to interpret. The Listings only cover what tests have been run on specific assemblies and do not cover many other possibilities. The chart on the back of this page divides listing into various categories for easier comparison than is possible in the UL Roofing Material and Systems Directory.

The chart does not contain all listing information due to space constraints, so it is important to always refer to the actual listing for the entire content of items like approved insulations, minimum or maximum thickness', all SBS or APP products approved and approved coatings. Also, the chart does not include Maintenance and repair listings because there are so many "gray areas". The latter we prefer to discuss on specific job to job basis.

Another point is that not all of the assemblies, as listed, are warrantable by BITEC. For example, going over an existing smooth membrane without a base sheet or over a gravel surfaced roof without removing the gravel and not using insulation as a divorcement layer. These are not warrantable systems with BITEC.

It is important to remember that modified bitumens differ considerably compared to similar BUR listings using cap sheet membranes, which use oxidized asphalt, and fiberglass reinforcement mats; i.e., G3 sheets. In general modified bitumens give greater fuel contribution in fire test than built up items, therefore usually requiring additional coatings to resist flame spread. Some membranes are formulated with fire retardant chemical and inert fillers that make the additional coatings unnecessary. These fire resistant membranes are usually referred to as "FR" membranes, but the "FR" name means nothing to UL. For instance, a manufacturer does not have to label a sheet "FR" just because it meets certain fire test requirements. The "FR" designation is nothing more than a marketing term that should only, in our opinion, be used to designate a membrane that does not require additional coatings to meet UL Fire Resistance Classification "A".

For example, In one of BITEC's tests at UL, we received Class "A" approval for using APM-4T and APM-4.5T without the use of insulation or a coating, but without insulation, the listing is restricted to non-combustible decks such as structural concrete, lightweight insulating concrete or gypsum. Steel decks would require the use of insulation, but the insulation is limited to a maximum thickness of 3/4" perlite, fiberglass or wood fiber. If any other insulation

were used, it would require a layer of minimum 1/4" Dens-Deck over the insulation to provide a non-combustible substrate for the installation of the membrane assembly. In this assembly the slope is limited to 1" per foot. The point is, in these systems, the result is a Class "A" assembly without the use of a "FR" membrane. Also, those same two membranes used over combustible decks without insulation has been approved as Class "B" without a coating, but the slope is limited to 1/4" per foot.

APM-4T and APM-4.5T provide situations where "non-FR" membranes will meet the requirements for UL Class "A" or "B" without the use of FR membrane or additional coatings. Questions are often asked if a certain product is Class "A". That question cannot be answered without knowing how the product is used in assembly with other materials; what type deck is used, what insulation is used, if any, and what the maximum incline or slope is.

In addition to the preamble at the front of the UL Roofing Materials and Systems Directory and the preamble that precedes the BITEC Listings, it is important to remember the following information when selecting BITEC products for specific assemblies.

1. The UL preamble information is copied in your Technical Binder.
2. EPS insulation, any thickness, can be used on non-combustible decks only, with minimum 1/2" wood fiber or 3/4" perlite barrier, but not for combustible decks.
3. For combustible decks, minimum 1/4" Dens-Deck can be used over EPS or polyISOcyanurate insulations and the assembly changes to a noncombustible substrate.
4. PS-2H is UL Classified and is an acceptable alternate for a G2 base sheet in non-combustible assemblies only, where perlite or wood fiber is used as a barrier or on lightweight and concrete type decks. (Not for combustible decks)
5. Where two plies of G2 base sheet are required, one ply of inverted G3 base sheet may be substituted.
6. BITEC FA-2T, FS-2H and FS-25 may be used wherever a G2 base sheet is specified.
7. Two plies of Type G1 fiberglass ply sheets may be used in lieu of a Type G2 fiberglass base sheet.

In addition to the above, there are several other provisions in the preamble that allow for BITEC products to be used, that are not specifically clear in the individual listings. In conclusion, we reiterate that UL Listings need not be hard to understand, but be specific and DO NOT MAKE ASSUMPTIONS, especially in "gray areas". If you have any doubts or questions please contact BITEC's Technical Services Dept. at 800-535-8597.

See the UL Listings Chart on the back of this page.

UL LISTINGS & REQUIREMENTS

For more specific information, please refer to the UL Catalog, 2004 Edition
For Monthly information contact UL Technical Services Dept. @ 1-800-497-9897. Not all ratings are available.

UL Listing Number	Class	Dist	Steps	Insulation requirements	Base P/R Requirements	Temp	SPB	APF	Building Requirements
#1	Exposed	A	NC 3"	Opt. Almost any, Any thickness.	1 or more G2, Insul or mop	Optional	YES	YES	Road coat & gravel. Loose gravel up to 2 1/2 max incline.
#2	Insulated	A	COMB 1/2"	Opt. 1/2" with 1/2" UL Listing	Same	Optional	YES	YES	Field coat & gravel or loose gravel.
#3	Poly-Adhered	A	NC 1-1/2"	Almost any insulation, any thickness.	1 or more G2, Insul or mop	Optional	NO	YES	APOC #212, HENRY 500, KARNAK #97, MONSEY PRO GRADE
#4	Fully-Adhered	A	NC 3/4"	Almost any Insul, 4" min. thickness	Same	Optional	YES	NO	KARNAK #97 or AF, Gravel at MB.
#5	Poly-Adhered	A	NC 3/4"	Almost any insulation, any thickness.	Same	Optional	SPM-4 Study	NO	APOC #212, HENRY 500, KARNAK #97, MONSEY PRO GRADE
#6	Fully-Adhered	A	NC 1/2"	NONE	2 P/R G2 or 1 P/R G3	Optional	SPM-4 Study	YES	APOC #212, HENRY 500, KARNAK #97 or AF, MONSEY PRO GRADE
#7	Poly-Adhered	A	NC 1/2"	NONE	3 P/R G2 or 1 P/R G3	Optional	YES	NO	APOC #212, HENRY 500, KARNAK #97 or AF, MONSEY PRO GRADE
#8	Fully-Adhered	A	NC 1"	Almost any insulation, any thickness.	Same	Optional	YES	NO	APOC #212, HENRY 500, KARNAK #97 or AF, MONSEY PRO GRADE
#9	Poly-Adhered	A	COMB 1/2"	Almost any insulation, any thickness.	3 P/R G2 or 1 P/R G3	Optional	SPM-4 Study	YES	APOC #212, HENRY 500, KARNAK #97, MONSEY PRO GRADE or loose gr
#10	Fully-Adhered	A	COMB 1/4"	Optimal, almost any Insul, Any thickness	1 or more G2, Insul or mop	Optional	YES	YES	APOC #212, HENRY 500, KARNAK #97, MONSEY PRO GRADE or loose gr
#11	Poly-Adhered	A	NC 1"	Conc. Deck or Insulating type deck flat out.	Same	Optional	NO	YES	APOC #212, HENRY 500, KARNAK #97, MONSEY PRO GRADE or loose gr
#12	Poly-Adhered	A	NC 1"	Optimal, almost any Insul, Any thickness	1 or more G2, Insul or mop	Optional	YES	YES	Gravel at MB only. This has Overlay test and listing
#13	DELETED								
#14	Poly-Adhered	A	NC 1/2"	Optimal, 1/2" minimum thickness	Same	Optional	YES	NO	KARNAK #97 or AF, Gravel or loose gravel.
#15	Poly-Adhered	A	COMB 1"	Optimal, any Insul, except, no barrier board.	1 P/R G2 Insul or mop	Optional	SPM-4 Study	YES	KARNAK #97 or AF, No UL Listing for App-Coatings.
#16	Fully-Adhered	A	NC 1"	Optimal, See listings for approved insulations	1 P/R G2 Insul or mop	Optional	NO	YES	APOC #212, HENRY 500, KARNAK #97, MONSEY PRO GRADE (PG)
#17	Fully-Adhered	A	NC 1/4"	NONE, Conc type decks, LVLs, & Gypsum	1 P/R G2 Insul or mop	Optional	NO	AFM-A145T only	(INCHES REQUIRED) Includes Traction w/ Barbed Board
#18	Fully-Adhered	A	NC 1"	Optimal, Almost any insulation any thickness	1 or more G1 or G2	Optional	NO	YES	FIELDS P/SB HEAT SHIELD OR P/SB
#19	Fully-Adhered	A	NC 1"	Optimal, Only perils WP or PQ; 3/4" max. thick.	1 or more G1 or G2	Optional	NO	AFM-A145T only	IF NO COATING REQUIRED II
#20	Fully-Adhered	A	NC 1/2"	Optimal, Only perils WP or PQ; 3/4" max. thick.	1 or more G1 or G2	Optional	"YES"	NO	IF NO COATING REQUIRED III
#21	Fully-Adhered	A	NC 3/4"	Almost any insulation, any thickness.	1 or more G2, Insul or mop	Optional	PR	NO	PR - NONE REQUIRED IIII
#22	All Insulation	PR	NC 3/4"	EPS w/1/2" WP or 3/4" Insula Insulation	Same	Optional	PR	NO	SAME
#23	Fully-Adhered	PR	NC 1/4"	Almost any, 1 1/2" Perils or 3/4" wood fiber Insul.	Same	Optional	PR	NO	SAME
#24	Fully-Adhered	PR	NC 3/4"	Optimal, Any insulation, any thickness	1 G1 or G2, Insul or mop	Optional	PR	NO	SAME
#25	Fully-Adhered	PR	COMB 3/4"	Almost any, 1 1/2" perils or 3/4" WP, other joints	1 P/R G2, Insul or mop	Optional	PR	NO	SAME
#26	Fully-Adhered	PR	COMB 1" (G3)	Opt. Any, Any Ins, requires bar/ self-welded Jn.	Same	Optional	SPM-3, SP-2R only	NO	SAME
#27	Fully-Adhered	B	COMB 1/2"	Almost any, any thickness, 3" min. thickness	1 or more G2, Insul or mop	Optional	YES	YES	KARNAK #97 or AF, GRUNDY at MB, See listing for APP coatings
#28	Fully-Adhered	B	COMB 1/2"	NONE ALLOWED, See actual listing IIII	2 P/R G2 or 1 P/R G3	Optional	PR only	NO	KARNAK #97, APOC #212, HENRY 500, MONSEY PRO GRADE
#29	Fully-Adhered	B	COMB 1/2"	NONE ALLOWED, See actual listing IIII	Same	Optional	NO	NO	PR - NONE REQUIRED
#30	Fully-Adhered	B	COMB 1/2"	OPTIONAL, Frsh. most 3/4" Frsh. perils, 1" WP	1 P/R G2 Insul or mop	Optional	NO	AFM-A145 Study	APOC #212, HENRY 500, KARNAK #97, MONSEY PRO GRADE
#31	Fully-Adhered	B	COMB 1/4"	NONE	Same	Optional	NO	SAME	IIII NONE REQUIRED IIII
#32	Fully-Adhered	B	COMB 1/2"	NONE	1 or more G2, Insul or mop	Optional	PR only	NO	PR - NONE REQUIRED
#33	Fully-Adhered	B	COMB 1/2"	OPTIONAL, "Must Insulate" any thickness	1 or more G2, Insul or mop	Optional	NO	YES	FIELDS 550 OR 650 only, FIELDS LISTING I
#34	Fully-Adhered	C	COMB 1/4"	Optional, Any, Any thickness	1 or more G2, Insul or mop	Optional	NO	YES	NONE REQUIRED
#35	NOT USABLE	C	NC 1/2"	Almost any, Any thickness	1 P/R G2 Insul or mop	Optional	YES	NO	NONE REQUIRED
#36	Poly-Adhered	C	COMB 1/4"	NONE	1 P/R G2 Insul or mop	Optional	NO	N/A	NONE REQUIRED