

RedcoLite®

U.L. Approved Roof Deck Designs

A premium PERLITE product by
REDCO II

PRODUCT
INFORMATION
BULLETIN

510

PERLITE CONCRETE U.L. RECOGNIZED ROOF DECK CONSTRUCTION

This is a guide to U.L. Designs for which perlite insulating concrete is approved. Specific information on individual designs must be verified by reference to the U.L. Fire Resistance Directory. Not all ratings are applicable to an unrestrained system.

STEEL DECKING

Insulating concrete over rigid polystyrene board sandwiched in insulating concrete on steel decking.

MAXIMUM FIRE RATING, HRS.		U.L. DESIGN NO.	MAX. SPAN BETWEEN SUPPORTS	GA. OF STEEL DECK	MAX. EPS BOARD THICKNESS	MIN. PERLITE CONCRETE THICKNESS	CEILING (IF REQUIRED)
RESTRAINED	UNRESTRAINED						
2	2	P-251	4'-0"	28	8"	2"	Metal/Acoustic
2	2	P-922	8'-0"	24	4"	2"	-- 0 --
2	2	P-920	10'-0"	24	8"	2"	-- 0 --
2	2	P-921	10'-0"	24	8"	2"	-- 0 --
2	2	P-923	10'-0"	24	8"	2 3/4"	-- 0 --
2	2	P-410	8'-0"	24	8"	2"	-- 0 --
1 1/2	1 1/2	P-231	4'-0"	26	8"	2 1/4"	Metal/Acoustic
1 1/2	1 1/2	P-513	4'-0"	24	8"	2"	GWB
1 1/2	1 1/2	P-919	8'-0"	26	4"	2"	-- 0 --
1	1	P-509	5'-0"	24	8"	2"	GWB
1	1	P-246	4'-0"	28	8"	2"	Metal/Acoustic
----	1	P-511	2'-0"	28	8"	2"	GWB

Insulating Concrete directly on top of steel decking.

MAXIMUM FIRE RATING, HRS.		U.L. DESIGN NO.	MAX. SPAN BETWEEN SUPPORTS	GA. OF STEEL DECK	MIN. PERLITE CONCRETE THICKNESS	CEILING (IF REQUIRED)
RESTRAINED	UNRESTRAINED					
3	3	P-405	4'-0"	28	2"	Plaster
2	2	P-407	4'-0"	28	2"	-- 0 --
2	2	P-241	4'-0"	28	2"	-- 0 --
2	2	P-902	8'-0"	24	2 3/4"	-- 0 --
2	2	P-907	9'-0"	24	2 3/16"	-- 0 --
2	2	P-908	8'-0"	24	2 1/4"	-- 0 --
2	2	P-216	4'-0"	28	2"	A.T.
2	2	P-215	4'-0"	28	2"	GWB
1	1	P-903	6'-6"	24	2 1/4"	Plaster
1	1	P-214	6'-0"	22	2"	A.T.

STRUCTURAL CONCRETE

Precast concrete tees with rigid expanded polystyrene board covered with insulating concrete.

MAXIMUM FIRE RATING, HRS.		U.L. DESIGN NO.	MAX. EPS BOARD THICKNESS	MIN. PERLITE CONCRETE THICKNESS	CEILING (IF REQUIRED)
RESTRAINED	UNRESTRAINED				
2	2	P-708	4"	2"	-- 0 --
2	2	P-810	8"	2"	-- 0 --
2	1/2	P-905	4"		-- 0 --
2	1	P-910	4"	2"	-- 0 --
2	1 1/2	P-913	4"	2"	-- 0 --
2	2	P-916	4"	2"	-- 0 --

Insulating concrete directly on concrete.

MAXIMUM FIRE RATING, HRS.		U.L. DESIGN NO.	MIN. PERLITE CONCRETE THICKNESS	CEILING (IF REQUIRED)
RESTRAINED	UNRESTRAINED			
2	1	P-812	2"	Sprayed Fiber

See Reverse Side For Non Standard Designs

NON-STANDARD DESIGNS

Insulating concrete on top of paper-backed 14 gauge welded wire fabric.

MAXIMUM FIRE RATING, HRS.		U.L.	JOIST	MIN. PERLITE	CEILING
RESTRAINED	UNRESTRAINED	DESIGN NO.	SPACING	CONCRETE THICKNESS	(IF REQUIRED)
3	2	P-406	24"	2½"	Plaster

Insulating concrete on 1" cement fiber form boards and bulb tees.

MAXIMUM FIRE RATING, HRS.		U.L.	MAX. SPAN	MIN. PERLITE	CEILING
RESTRAINED	UNRESTRAINED	DESIGN NO.	BETWEEN SUPPORTS	CONCRETE THICKNESS	(IF REQUIRED)
1	1	P-678	8'-0"	2"	-- 0 --

Perlite-asphalt concrete over rigid insulation or directly to concrete tees.

MAXIMUM FIRE RATING, HRS.		U.L.	MAX. EPS	MIN. PERLITE	CEILING
RESTRAINED	UNRESTRAINED	DESIGN NO.	BOARD THICKNESS	CONCRETE THICKNESS	(IF REQUIRED)
2	½	P-906	4"	2"	-- 0 --
2	1½	P-914	4"	2"	-- 0 --

Redco II welcomes inquiries on these other uses of RedcoLite Aggregate:

- Ultra lightweight concrete - density as low as 55 lbs per cubic foot
- One hour fire rated floor-ceiling assembly, wood frame
- 53 STC floor-ceiling assembly, wood frame
- RedcoLite Insulating Concrete over steel or concrete substrates
- RedcoLite Insulating Concrete for heated and unheated slabs on-grade
- Fire rated plaster assemblies, interior and exterior
- Soil amendment with Redco Horti-Perl Horticultural Perlite