

Product Group: Environmental Protection Ratings
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Title: UL Environmental Protection Ratings

Summary: Describes the UL Environmental Protection Rating for common UL Types and provides their application suitability.

Common UL Types

Type	Description
Type 1	Indoor use primarily to provide protection against contact with the enclosed equipment and against a limited amount of falling dirt.
Type 2	Indoor use to provide a degree of protection against limited amounts of falling dirt and dripping water.
Type 3	Either indoor or outdoor use to provide a degree of protection against windblown dust and windblown rain; undamaged by the formation of ice.
Type 3R	Either indoor or outdoor use to provide a degree of protection against falling rain; undamaged by the formation of ice.
Type 4	Either indoor or outdoor use to provide a degree of protection against falling rain, splashing water, and hose-directed water; undamaged by the formation of ice.
Type 4X	Either indoor or outdoor use to provide a degree of protection against falling rain, splashing water, and hose-directed water; undamaged by the formation of ice. Resists corrosion.
Type 12	Indoor use to provide a degree of protection against dust, dirt, fiber flyings, dripping water, and external condensation of oil and noncorrosive liquids.
Type 13	Indoor use to provide a degree of protection against lint, dust seepage, external condensation, and spraying of water, oil, and noncorrosive liquids.

Table 1

Underwriters Laboratories Inc. *Standard for Enclosures for Electrical Equipment, Environmental Considerations UL50E*. 2nd ed. 2015. PDF file.



These rating descriptions are not complete representations of UL standards and are intended to be used only as a guide to help you select the proper equipment for the environments where it will be installed. It is up to the customer to validate code compliance.

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UL Type Application Suitability

Application	Type							
	1*	2*	3	3R*	4	4X	12	13
Access to hazardous parts	✓	✓	✓	✓	✓	✓	✓	✓
Falling dirt	✓	✓	✓	✓	✓	✓	✓	✓
Dripping and light splashing of non-corrosive liquids		✓	✓	✓	✓	✓	✓	✓
Rain, snow, and sleet ^a			✓	✓	✓	✓		
Circulating dust, lint, fibers, and flyings ^b			✓		✓	✓	✓	✓
Settling airborne dust, lint, fibers, and flyings ^b			✓		✓	✓	✓	✓
Windblown dust			✓		✓	✓		
Hosedown and splashing water					✓	✓		
Oil and coolant seepage							✓	✓
Oil or coolant spraying and splashing								✓
Corrosive agents						✓		

* These enclosures may be ventilated.

^a External operating mechanisms are not required to be operable when the enclosure is ice covered.

^b These fibers and flyings are nonhazardous materials and are not considered Class III type ignitable fibers or combustible flyings. (For Class III type ignitable fibers or combustible flyings, see the Canadian Electrical Code, Part I, Section 18, the National Electrical Code, Article 500, or Mexico's NOM-001-SEDE, Electrical Installations (utility), Article 500.)

Table 2

Underwriters Laboratories Inc. *Standard for Enclosures for Electrical Equipment, Environmental Considerations UL50E*. 2nd ed. 2015. PDF file.

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