

EXRAD[®] HV Materials

With over 20 years of developing cable solutions for the Automotive and Commercial Vehicle markets, Champlain has a robust selection of EXRAD[®] insulation solutions. Over the years, each insulation material was developed to solve a specific customer problem or goal.

This reference table summarizes the various EXRAD HV cable insulations to help you determine to the best option for your particular design.

Each material can be used as an insulation, or jacket, or both. Some are a better fit for one vs. the other and our data sheets reflect this. One of the many benefits of this family of offerings is the ability to mix and match materials to best meet specific design requirements.

Voltage is a function of wall thickness and insulation strength, and is typically 600VAC or 1,000VAC. When both are represented, it is typically due to a small thin-wall size having only 600V capability, whereby the thick-wall would be 1,000V regardless of size.

ISO 6722-1 has two wall thickness options, thin-wall or thick-wall. So, when you consider the insulation material options, SAE or ISO standards, thin- or thick-wall, and also shielded or unshielded, the myriad of cable options grows considerably.

This reference focuses strictly on the insulation materials. The options of thin- and thick-wall, standards, and shielding are detailed in the specific data sheets.

EXRAD [®] Material	Available Standards	AC Voltage	Temp Range	Oil Resistance	Flame	Flex	Fluid	Cut-Through	Comment
EXRAD FX	SAE / ISO	600V / 1000V	-70C to +150C	60C	FT-2	4	4	3	Champlain's first battery cable. Very robust all-around.
EXRAD HVFX	SAE / ISO	600V / 1000V	-55C to +150C	70C	FT-2	4+	4	3	Better flex and oil vs FX
EXRAD XLE	SAE Only	600V / 1000V	-70C to +150C	90C	FT-4	5	4	3	Best-in-Class flex and oil. Typically used as jacket.
EXRAD ERGOFLEX™	SAE / ISO	600V / 1000V	-55C to +150C	60C	FT-2	5	4	3	Best-in-Class flex and robust all-around.
EXRAD XLE 200	SAE / ISO	600V / 1000V	-70C to +200C	130C	VW-1	4	5	4	Superior oil, fluid and thermal range. Used in the most demanding applications.

1 to 5 Scale: 1 = Below Average
 5 = Best-In-Class

Contact us! We look forward to inventing the future of wire and cable with you. 800-451-5162.
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EXRAD[®] HV Cables in a Hybrid System on a Commercial Bus.