

Product Highlights

- High level of thermal insulation
+700°C / +1292°F
- No burn through in torch
exposure of +1000°C (1832°F)
x 30 minutes
- Withstands multiple cycles of
blast exposure
- Flexible and easy to install
- Customized designs for custom fit
- Compatible to directly adhere to
battery case

Typical Applications

- Limit propagation of thermal
runaway
- EV Battery Case Liner
- EV Battery Pack:
 - Module level protection
 - Component level protection



Our manufacturing sites are
certified ISO 9001, IATF 16949,
or AS/EN 9100, ISO 14001
and ISO 45001 (Selected Sites)



Protexx-Shield® 7040 / 7045 is a high performing flexible thermal and flame barrier specifically designed as anti-propagation protection for extreme conditions within EV battery pack. Product is a highly engineered composite structure that provides multiple functions. These functions include providing flame barrier, blast barrier, high level of thermal insulation and electrical insulation. Protexx-Shield 7045 is available with pressure sensitive adhesive to allow for direct application onto a variety of surfaces.

Protexx-Shield 7040 is constructed of multiple layers of materials to provide a high level of thermal insulation and survive harsh thermal runaway environments. The outer material layer is a proprietary silicone-based coating applied to a silica fabric structure providing flame and blast protection. The next material layer is a textile insulation that reduces temperature transfer. Entire structure is designed to help limit thermal runaway propagation and any associated failure modes.

Protexx-Shield 7045 takes the base of Protexx-Shield 7040 and applies a pressure sensitive adhesive to the insulation layer for direct mounting functionality.

Performance Data – Protexx-Shield® 7040 / 7045

Property	Test Method	Performance 7040 / 7045
Thermal Insulation exposed to +1000°C (+1832°F) torch	SP Internal Test Method	Backside plate less than 250°C in 1000°C Torch
Thermal Runaway	SP Internal Test Method	Resists 30min x +1000°C Torch, No burn through
Blast Resistance	UL 2596 TaG Test	Greater than 2 cycles
Flammability	UL 94	V0 Rating
Thickness	ASTM D1777	3mm
Density	ASTM D1777; D3776; D3776M	0.47 g/cm ³
Thermal Conductivity	ASTM D1503	0.046 [W/m.k]

All numeric performance data shows average or typical values. Please consult your sales representative for product drawings, test reports and OEM approvals.

Construction & Typical Product Characteristics

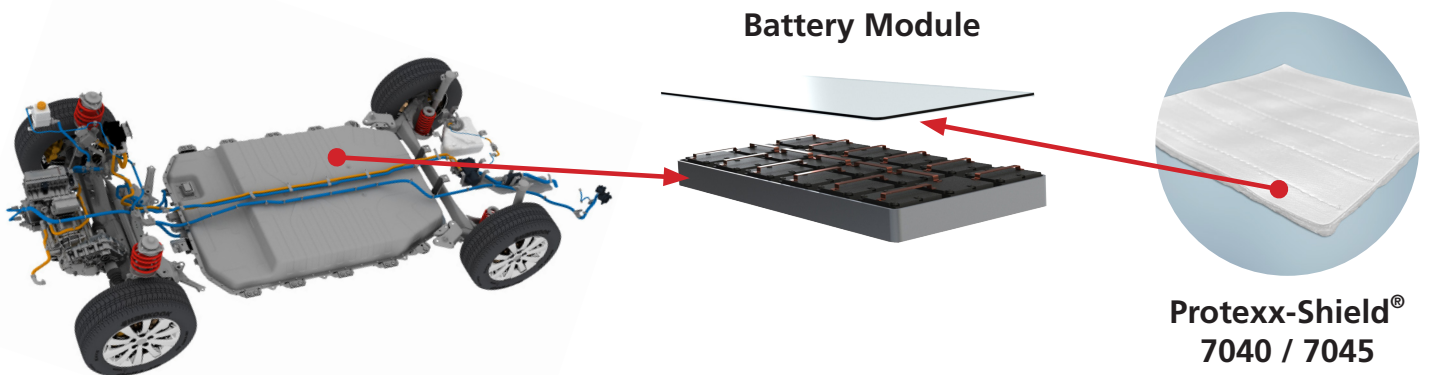
Multiple layer engineered composite structure:

- **Outer layer:** proprietary coating applied to textile structure
- **Insulation layer:** high temperature textile insulator
- **Optional Adhesive layer** to directly mount to application

Availability

This product is designed to customer specific application, geometry and performance requirements.

Due to the nature of this custom product, please consult your local sales representative for more details.



**Protexx-Shield®
7040 / 7045**



United States: (1) 800 926 2472 • México: (52) 442 101 8100 • Brazil: (55) 19 3116 1600
 EMEA: (33) 3 44 39 06 06 • Japan: (81) 45 330 0300 • China: (86) 21 6182 7560
 Southeast Asia: (66) 35 276 400 • Korea: (82) 44 861 6368 • India: (91) 124 4784565
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