

# Subjects 44, 854 and 4703

## Heat- and Moisture-Curable EPCV and Heat-, Moisture-, and Irradiation-Cross-Linkable Synthetic-Polymer (Class XL) Compounds Acceptable under the Type L Follow-Up-Service Program for Thermoset-Insulated Wires and Cables, Service-Entrance Cables, and Photovoltaic Wire

The following tables are complete lists of presently available commercial compounds that have been investigated by UL and are considered interchangeable, without submittal to UL, with those compounds covered in the Follow-Up Service Procedures assigned to a manufacturer for (1) Thermoset-Insulated Wire and Cable Types SIS, XHH, XHHW, and XHHW-2 rated 600 volts and Types RHH, RHW, and RHW-2 rated 600 - 2000 volts, (2) Service-Entrance Cable Types USE and USE-2 rated 600 volts, and (3) Photovoltaic Wire insulation rated 600, 1000, or 2000 volts.

Compounds that are acceptable for use on Type XHHW, XHHW-2, RHW, or RHW-2, and also acceptable for use on Type USE or USE-2, are acceptable for use on the conductors in Type SE Service-Entrance Cable. Conductors in Type SE cable are rated only for 600 volts.

Compounds that are acceptable for use on Type RHW-2 are acceptable for use on PV wire employing a jacket.

Unless otherwise noted by a footnote, the PV compounds shown are rated 600 volts, 90°C and do not require a jacket.

**TABLE I  
HEAT-CURABLE CLASS XL COMPOUNDS**

Compound Supplier	Compound Designation	Footnotes	Color	Type XHHW	Type XHH	Type XHHW-2	Type RHH	Type RHW	Type RHW-2	Type SIS	Type USE	Type USE-2	Type PV
Borealis Compounds, LLC.	FR-4830		All	-	-	-	-	-	-	X	-	-	-
176 Thomas Rd.	PC-6240		Black	X	X	-	X	X	-	X	X	-	-
Port Murray, NJ 07865	PC-6260		Black	-	-	-	X	X	-	X	X	-	-
Mr. Lars Westling	PC-504		Black	X	X	-	X	X	-	X	X	-	-

	PC-530		Black	-	-	-	X	X	-	X	X	-	-
<a href="tel:908-850-6272">Tel: 908-850-6272</a>	PC-531		Black	-	-	-	X	X	-	X	X	-	-
<a href="tel:908-850-6268">Fax: 908-850-6268</a>	PC-532		All	-	-	-	X	X	-	X	X	-	-
	PC-730		All	-	-	-	-	-	-	X	-	-	-
	PC-731		Black	-	-	-	X	X	-	X	X	-	-
	PC-732		All	-	-	-	X	X	-	X	X	-	-
	PC-737		All	-	-	-	-	-	-	X	-	-	-
	PC-745		All	-	-	-	-	-	-	X	-	-	-
	PC-746		All	-	-	-	-	-	-	X	-	-	-
	PC-780	a,c,d,e,f,h	All	X	X	X	X	X	X	X	X	X	-
	PC-785	c,d,e,f,h	All	X	X	X	X	X	X	X	X	X	-
	PC-787	a,c,d,e,f,h	All	X	X	X	X	X	X	X	X	X	-
	PC-796	c,d,e	Black	X	X	-	X	X	-	X	X	-	-
	PC-797	c,d,e	All	X	X	-	X	X	-	X	X	-	-
	PC-798		All	X	X	X	X	X	X	X	X	X	-
	PC-799		All	X	X	X	X	X	X	X	X	X	-
	PC-804		Black	X	X	-	X	X	-	X	X	-	-
	PC-814	c,d,e	Black	X	X	-	X	X	-	X	X	-	-
	PC-824		All	X	X	-	X	X	-	X	X	-	-
	PC-829		All	X	X	X	X	X	X	X	X	X	-
	PC-869	c,d,e	All	X	X	-	X	X	-	X	X	-	-
	PC-870		All	X	X	-	X	X	-	X	X	-	-
	PC-920		Black	X	X	-	X	X	-	X	X	-	-
	PC-925		Black	X	X	-	X	X	-	X	X	-	-
	PC-930		Black	X	X	X	X	X	X	X	X	X	-
	PC-1120		Black	X	X	-	X	X	-	X	X	-	-
	PC-1125		Black	X	X	-	X	X	-	X	X	-	-
	PC-1130		Black	X	X	-	X	X	-	X	X	-	-
The Dow Chemical Company	HEFD-1438	a	All	X	X	-	X	X	-	X	X	-	-
1 Riverview Drive	HEFD-1439	a,c,d,e	All	X	X	-	X	X	-	X	X	-	-
Somerset, NJ 08873	HEFD-1449	b	All	X	X	-	X	X	-	X	-	-	-

Mr. S. Ramachandran	HEFD-1450	b	All	X	X	-	X	X	-	X	-	-	-
	HEFD-1548	a	All	-	-	-	-	-	-	X	-	-	-
<a href="tel:732.271.7924">Tel: 732.271.7924</a>	HEFD-1818	a	All	X	X	-	X	X	-	X	-	-	-
<a href="tel:732.668.5887">Cell: 732.668.5887</a>	HFDA-1441		All	-	-	-	-	-	-	X	-	-	-
<a href="tel:732.271.7949">Fax: 732.271.7949</a>	HFDA-1492	c, d, e	All	-	-	-	-	-	-	X	-	-	-
	HFDA-1544	a,f,g	All	X	X	X	X	X	X	X	X	X	-
	HFDA-3600	g	All	X	X	X	X	X	X	X	X	X	-
	HFDA-3620	g	All	X	X	X	X	X	X	X	X	X	-
	HFDA-4203		Black	-	-	-	X	X	-	X	X	-	-
	HFDA-4340		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-4360		Black	-	-	-	X	X	-	X	X	-	-
	HFDA-4730		Black	X	X	-	X	X	-	X	-	-	-
	HFDA-5512		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-5530		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-5610		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-5612		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-5620		All	X	X	-	X	X	-	X	X	-	-
	HFDA-5625		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-5630		Black	X	X	X	X	X	X	X	X	X	-
	HFDA-5712		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-5730		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-5812		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-5830		Black	X	X	-	X	X	-	X	X	-	-
	HFDA-6288		All	X	X	-	X	X	-	X	X	-	-
	HFDA-6289		All	X	X	-	X	X	-	-	X	-	-
	HFDA-6522	a,f,g	All	X	X	X	X	X	X	X	X	X	-
	HFDA-6525	a,e,f,j,k	All	X	X	-	X	X	-	X	X	-	-
	HFDB-1544	a	All	X	X	X	X	X	X	X	-	-	-
	HFDB-6522	a	All	X	X	X	X	X	X	X	-	-	-
	HFDB-1441		All	-	-	-	-	-	-	X	-	-	-
	HFDB-5630		Black	X	X	X	X	X	X	X	X	X	-
	HFDC-1441		All	-	-	-	-	-	-	X	-	-	-
	HFDC-5612		Black	X	X	-	X	X	-	X	X	-	-
	HFDC-5630		Black	X	X	-	X	X	-	X	X	-	-



<a href="tel:86-576-85289207">Tel: 86-576-85289207</a>														
<a href="tel:86-576-85289289">Fax: 86-576-85289289</a>														

Ningbo Unicore Chemical Co Ltd	ULPVI01	h,o	All	-	-	-	X	X	X	-	-	-	-
1602 Zhong Su Dasha													
Xinjian North Rd													
Yuyao City													
Zhejiang Province 315472, China													
Mr. Stanley Mo													
Tel: 86.574.62160031													
Cell: 86.137.77180100													

Zhong Lian Photoelectricity New Stuff	3405-UJ	a,o,q,v	All	-	-	-	-	-	-	-	-	-	X
Development Zone													
Chang Kun Economic & Technology													
Changshu, Jiangsu													
China													
Mr. Zhu Jun													
Tel.: 86-512-52578863													
Fax: 86-512-52576316													

Footnote
a
b
c

This compound complies with requirements for wires to be marked "VW-1" as described in the UL Standard for Thermoset-Insulated Wires and Cables (UL 44) for the wire types shown.

This compound complies with the requirements for wires marked "VW-1" as described in the UL Standard for Thermoset-Insulated Wires and Cables (UL 44) for Types XHH, XHHW, XHHW-2, and SIS only.

This compound complies with the requirements for oil-resistant I compounds in accordance with the UL Standard for Thermoset-Insulated Wires and Cables (UL 44).

d	This compound complies with the requirements for oil-resistant II compounds in accordance with the UL Standard for Thermoset-Insulated Wires and Cables (UL 44).
e	This compound complies with the requirements for gasoline and oil resistance in accordance with the UL Standard for Thermoset-Insulated Wires and Cables (UL 44).
f	This compound is acceptable for use on 1/0 AWG and larger cables marked for cable-tray use as described in the UL Standard for Thermoset-Insulated Wires and Cables (UL 44).
g	This compound complies with paragraph 30.4 of the Standard for Service-Entrance Cables, UL 854.
h	This compound in all colors complies with the requirements of the 720-hour weatherometer test and so is acceptable for use on cables marked for sunlight resistance.
j	This compound in black color only complies with the requirements of the 720-hour weatherometer test and so is acceptable for use on cables marked for sunlight resistance and also on PV wire
k	This compound complies with the requirements for the "STI" marking in all sizes.
l	This compound is acceptable for use on 4 AWG and larger cables marked for cable-tray use as described in the UL Standard for Thermoset-Insulated Wires and Cables, UL 44 (4 - 1 AWG sizes are for grounding conductors only).
m	This compound complies with the XL insulation requirements in Table 11 of UL 44.
n	This compound is acceptable for use on 4/0 AWG and larger cables marked for cable-tray use as described in the UL Standard for Thermoset-Insulated Wires and Cables (UL 44).
o	This compound is acceptable for use on cable marked "- 40 C"
p	This compound is acceptable for use on cables 1/0 AWG and larger marked "FT4" and/or "IEEE 1202".
q	This compound is acceptable for use on PV wire rated 600, 1000 or 2000 volts
r	This compound is acceptable for use on PV wire rated 1000 or 2000 volts only
s	This compound is acceptable for use on PV wire rated 90 or 105°C
t	This compound is acceptable for use on PV wire rated 90, 105, or 125°C
u	Jacket required for PV wire use
v	This compound may also be used as insulation under a jacket using the reduced insulation thickness requiring a jacket as described in the UL Outline of Investigation of PV Wire (UL 4703)

**TABLE II  
MOISTURE-CURABLE CLASS XL COMPOUNDS++**

Compound Supplier	Compound Designation	Footnotes	Color	Type XHHW	Type XHH	Type XHHW-2	Type RHH	Type RHW	Type RHW-2	Type SIS	Type USE	Type USE-2	Type PV
Borealis Compounds, LLC.	Visico-Horizontal		All	X	X	X	X	X	X	X	X	X	-
176 Thomas Rd.	Visico-Ambicat		All	-	-	-	-	-	-	-	X	X	-
Port Murray, NJ 07865	Visico-VW-1-HAL	a,j,m,o,q,v	Black	-	-	-	X	X	X	X			X











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@ For manufacturers who are specifically authorized to use irradiation-cured compounds.

a-v See Table I for these notes.