

Hueson Corporation of Northbridge MA, a specialty wire and cable manufacturer has recently introduced a solution to a long term industry challenge in the Trailer Cable Industry. Their solution involves combining the expertise and history of well known insulating and jacketing products into their custom cable fabrication to create a line of robust cables capable of superior performance.

The challenge for many years involved Original Equipment Manufacturers (OEM's) looking for insulation systems superior to PVC capable of handling higher temperature ratings as well as higher pinch, abrasion and crush resistance. Current options including XLPE's proved challenging as the minimum economic order quantities required by the mass producing factories were not favorable to specialty cables often released in 5k - 25k lots.

In addition, many of the XLPE insulators do not provide cabling and jacketing operations. And if they do, they do not have the flexibility a specialty cable manufacturer offers. "We find ourselves running an incredibly diverse variety of cables these days" offers Brian Hanlon, General Manager of Hueson Wire. In any given day we are running trailer and transportation cables with shields, drains and composite conductors (combination of multiple AWG sizes). "In addition we are seeing a greater demand in high performance jacketing compounds and a lot less PVC these days."

Anti-icing is also a factor in cables these days as brine or wetted salt solutions are applied in anticipation of snow storms. The combination of anti-icing and everyday oils, fluids and chemicals demand more robust jacketing compounds including Santoprene, Hytrel, Alcryn and Polyurethanes.

For our insulation system Hueson not only offers the basic SAE-J-1128 types GPT, TXL, GXL and SXL but has recently partnered up with GE Plastics (now SABIC- Innovative Plastics) and their Flexible Noryl product line. Based on an alloy of GE's polyphenylene oxide (PPO) and an olefin, Flexible Noryl offers 7 to 10 times greater pinch and abrasion resistance than an equal thickness of PVC. Because of this we can push Noryl into much thinner walls and still exceed the SAE- J-16878 and ISO-6722 pinch and abrasion requirements.

The thermal performance is also far superior to standard GPT wire which carries an 80°C rating. PPO, which has a glass transition temperature of 212°C is suitable for ISO-6722 105°C Class B wiring and passes the 125°C Class C requirements for internal cable use. Other features Noryl brings to market are inherent flame retardance and outstanding chemical resistance.

Lastly, Flexible Noryl is non halogen and recyclable and fits perfectly with Hueson's position as the industry leader in Green Initiatives. Spearheaded by Europe's ELV (End of Life Vehicle), Noryl offers environmental solutions that both PVC and XLPE's cannot offer.

Contact Hueson Corporation for additional information or details.



ISO-6722 Automotive Primary Wire Ultra Thin Wall

Part #	Size AWG	No of Strands	Insulation Thickness Mils.– Nom.	Diameter Inches Nom.	Approx New Weight #/1000 FT
TWL24/7/010	24	7/32	.010	.040	1.74
TWL22/7/010	22	7/30	.010	.046	2.51
TWL20/7/010	20	7/28	.010	.054	3.95
TWL18/19/010	18	19/. 0092	.010	.061	6.01
TWL16/19/010	16	19/29	.010	.077	8.58
TWL14/19/012	14	19/27	.012	.095	13.62
TWL12/19/015	12	29/25	.015	.120	21.50

- Ultra Thin wall construction designed to replace TXL
- Thin and medium wall constructions also available to replace GXL and SXL
- Designed to ISO-6722 thin wall insulation
- Rated for 110°C Continuous use without cross linking
- Exceeds ISO-6722 and SAE-J1678 Pinch and abrasion requirements
- Halogen and Heavy Metal Free
- Meets European Community ELV initiative



SAE-J-1128 Automotive PVC Primary Wire Type GPT

Part #	Size AWG	No of Strands	Insulation Thickness Mils.– Nom.	Diameter Inches Nom.	Approx New Weight #/1000 FT
GPT22/7	22	7/30	.023	.053	3
GPT20/7	20	7/28	.023	.084	6
GPT18/19	18	19/. 0092	.023	.092	8
GPT16/19	16	19/29	.023	.103	11
GPT14/19	14	19/27	.023	.117	16
GPT12/19	12	19/25	.026	.142	25
GPT10/19	10	19/23	.031	.175	38

- Annealed Bare Copper (also available in tinned copper or anti-capillary conductor)
- Polyvinylchloride GPT 60 Volt -40°C to + 85°C Rated
- Capable of 105°C
- SAE-J-1128 Type GPT
- RoHS, Reach, Heavy Metal Free



SAE-J-1128 Automotive Thin Wall XLPE Primary Wire Type TXL

Part #	Size AWG	No of Strands	Insulation Thickness Mils.– Nom.	Diameter Inches Nom.	Approx New Weight #/1000 FT
TXL22/7	22	7/30	.016	.062	3
TXL20/7	20	7/28	.016	.070	5
TXL18/19	18	19/. 0092	.016	.078	6
TXL16/19	16	19/29	.016	.089	9
TXL14/19	14	19/27	.019	.102	14
TXL12/19	12	29/25	.018	.127	22
TXL10/19	10	29/23	.020	.155	35

- Annealed Bare Copper (also available in tinned copper or anti-capillary conductor)
- Cross Linked Polyethylene (XLPE) TXL 60 Volt -40°C to + 125°C Rated
- SAE-J-1128 Type TXL
- RoHS Compliant



SAE-J-1128 Automotive XLPE Primary Wire Type GXL

Part #	Size AWG	No of Strands	Insulation Thickness Mils.– Nom.	Diameter Inches Nom.	Approx New Weight #/1000 FT
GXL22/7	22	7/30	.023	.056	3
GXL20/7	20	7/28	.023	.084	7
GXL18/19	18	19/. 0092	.023	.094	8
GXL16/19	16	19/29	.023	.106	11
GXL14/19	14	19/27	.023	.117	16
GXL12/19	12	29/25	.026	.143	24
GXL10/19	10	29/23	.031	.175	38

- Annealed Bare Copper (also available in tinned copper or anti-capillary conductor)
- Cross Linked Polyethylene (XLPE) GXL 60 Volt -40°C to + 125°C Rated
- SAE-J-1128 Type GXL
- RoHS Compliant



SAE-J-1128
Automotive Thin Wall XLPE Primary Wire
Type SXL

Part #	Size AWG	No of Strands	Insulation Thickness Mils.– Nom.	Diameter Inches Nom.	Approx New Weight #/1000 FT
SXL20/7	20	7/28	.029	.096	7
SXL18/16	18	16/30	.030	.110	9
SXL16/19	16	19/29	.032	.120	12
SXL14/19	14	19/27	.035	.139	18
SXL12/19	12	29/25	.037	.162	27
SXL10/19	10	29/23	.041	.192	41

- Annealed Bare Copper (also available in tinned copper or anti-capillary conductor)
- Cross Linked Polyethylene (XLPE) SXL 60 Volt -40°C to + 125°C Rated
- SAE-J-1128 Type SXL
- RoHS Compliant



Custom Transportation Cable Jacket Solutions

Santoprene

-60°C to + 125°C

A soft versatile thermoplastic vulcanizate (TPV) in the thermoplastic elastomer (TPE) family.

- **Good Dimensional Stability**
- **Good Electrical Properties**

- Good Heat Aging Resistance
- Good Tear Strength
- Ozone Resistant

- **UV** Resistant
- Recyclable
- 86A Shore Hardness

Uses: Appliance Wire

- **Automotive Applications**
- **Automotive Underhood**

Ratings: **RoHS Compliant**

- EU2003/11/EC
- **UL QMTT2**

Polyurethane

-40°C to +90°C

Thermoplastic Polyether-Polyurethane.

Features: •

- **Good Chemical Resistance**
- High Flexibility / Elasticity
- **UV** Resistant
- Excellent hydrolysis resistance
 - UL 94 Classification V2
- **Excellent Dimensional Stability**
- **Excellent Tear Strength**
- Recyclable
- High microbial resistance

Halogen-free

- Flame Retardant
- Ozone Resistant
- 87A Shore Hardness
- Low-adhesion surfaces

Uses:

- Agricultural
- Off Road

Tractor Trailers

Ratings:

- **RoHS Compliant**
- EU2003/11/EC

PVC

-30°C to + 105°C

A versatile oil resistant vinyl outdoor jacket

Features: •

- 720 Hour Sunlight Resistant
- Good Dimensional Stability •
- **Good Electrical Properties**

- Good Heat Aging Resistance
- Good Cold Bend Properties
- Ozone Resistant

- **UV** Resistant
- Flame Retardant VW-1
- 90A Shore Hardness

Uses:

- Agricultural
- Off Road

Tractor Trailers

Ratings:

- **RoHS Compliant**
- EU2003/11/EC
- **UL QMTT2**

