

# Elastollan® for Electric-Vehicle-Charging (EVC) Cable Sheathings

## Customized Thermoplastic Polyurethane (TPU) solutions

### Basic requirements

- IEC 62893, EN 50620: EVM-1
- Flexible, even at low temperatures
- Flame retardant, halogen free
- Resistant against mechanical stress, microbes, weathering and humidity
- Able for being spiralized and colorable in diverse colors
- Easy to process & recyclable
- Matt surface, smooth touch & haptic

### Elastollan® EVC-cable sheathing product portfolio

Tailored & commercialized polyether-based Thermoplastic Polyurethanes

Property	Unit	Standard	1175 A 12 WM	1180 A 10 M	1185 A 10 M	1185 A 10 W	1185 A 10 WM	1185 A 12 WM	1185 A 10 FHF	1190 A 10 FHF	1190 A 10 FHF U	1176 A 10 FR	1188 A 10 FR
Feature				matt, less blocking	matt, less blocking			easy processing	flame retardant	flame retardant	flame retardant, UV-stabilized	flame retardant, Ideal for DC	All-rounder
Hardness	Shore A/D	DIN ISO 7619-1(3s)	77A	82A	88A	83A	87A	87A	89A	90A	90A	76A	88A
Density	g/cm <sup>3</sup>	DIN EN ISO 1183-1-A	1.11	1.10	1.11	1.16	1.15	1.13	1.23	1.25	1.25	1.16	1.18
Tensile strength	MPa	DIN 53504-S2	28	35	45	40	35	30	35	25	25	34	36
Elongation at break	%	DIN 53504-S2	750	750	600	700	600	650	600	550	550	710	510
Tear strength	kN/m	DIN ISO 34-1.B(b)	40	50	60	50	55	55	60	60	60	40	55
Abrasion	mm <sup>3</sup>	DIN ISO 4649-A	75	70	60	55	38	65	35	30	50	70	65

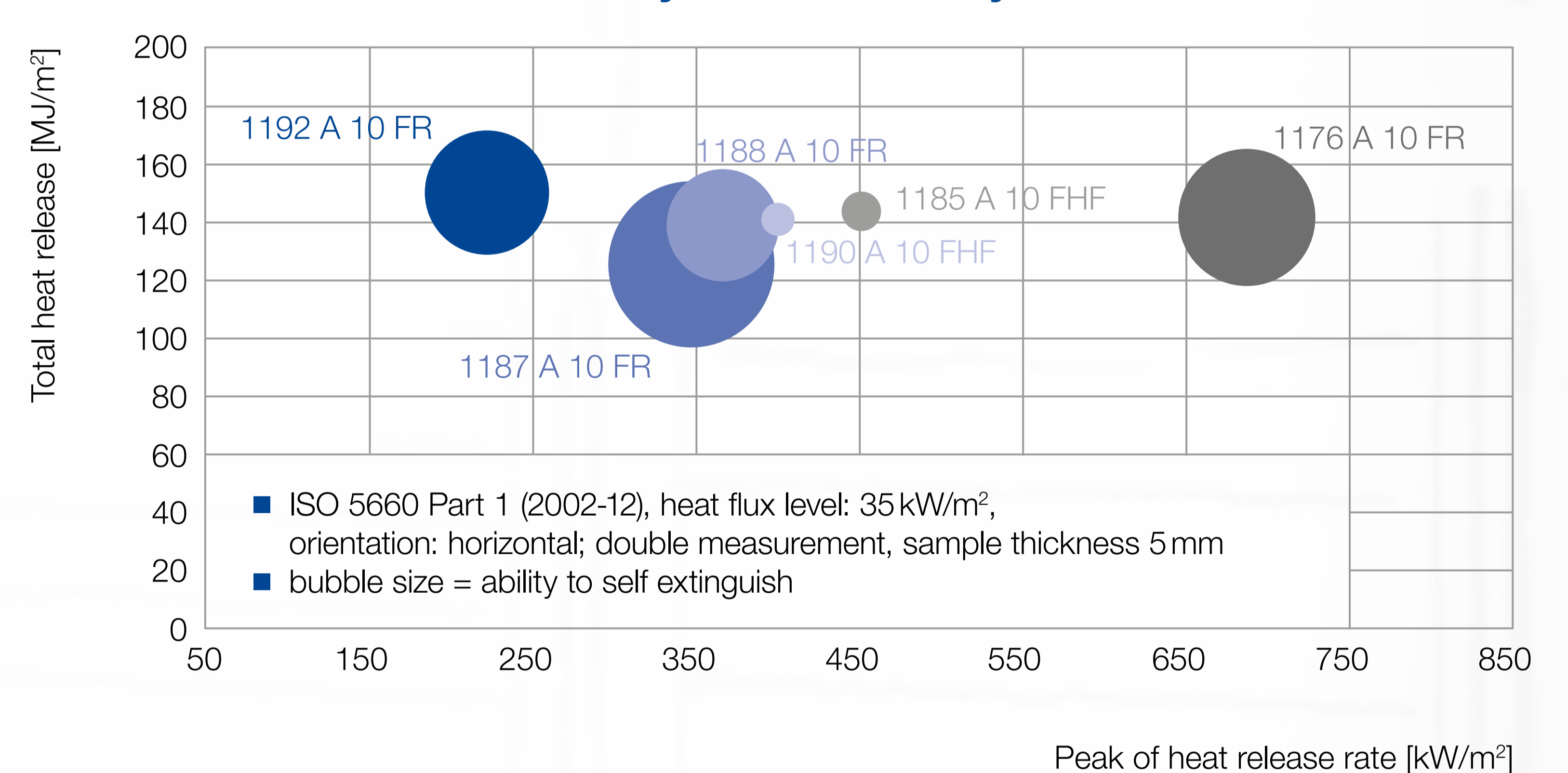
### Example: Elastollan® 1187 A 10 FR – The new “Allrounder” for EVC

#### Basic Product Properties

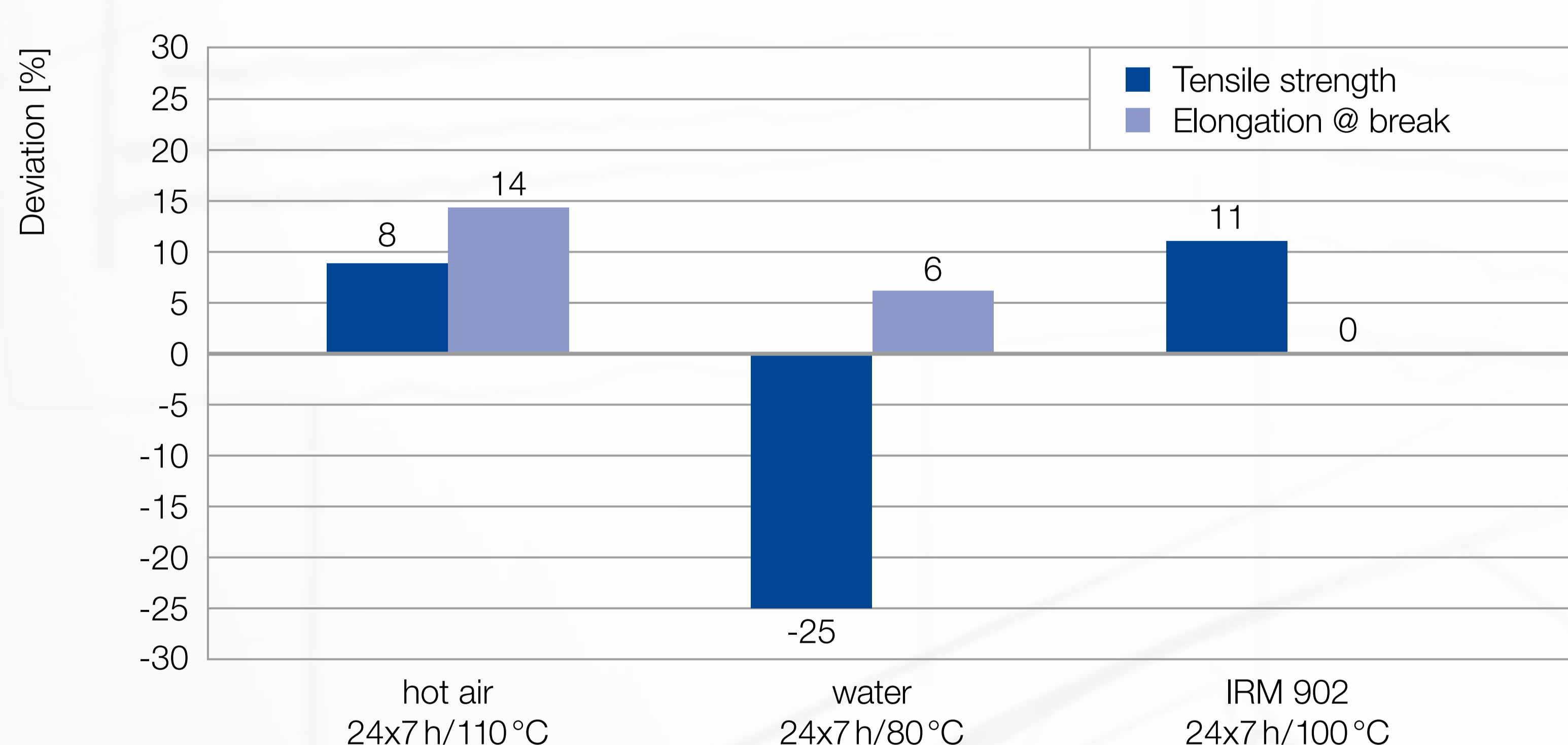
Property	Unit	Standard	1187 A 10 FR*
Hardness	Shore A/D	DIN ISO 7619-1(3s)	87A
Density	g/cm <sup>3</sup>	DIN EN ISO 1183-1-A	1.17
Tensile strength	MPa	DIN 53504-S2	32
Elongation at break	%	DIN 53504-S2	520
Tear strength	kN/m	DIN ISO 34-1.B(b)	41
Abrasion	mm <sup>3</sup>	DIN ISO 4649-A	76
PH		IEC EN DIN 60754-2	7.8
Conductivity	µS/MM	IEC EN DIN 60754-2	15

\* Tested on annealed 1.6mm films

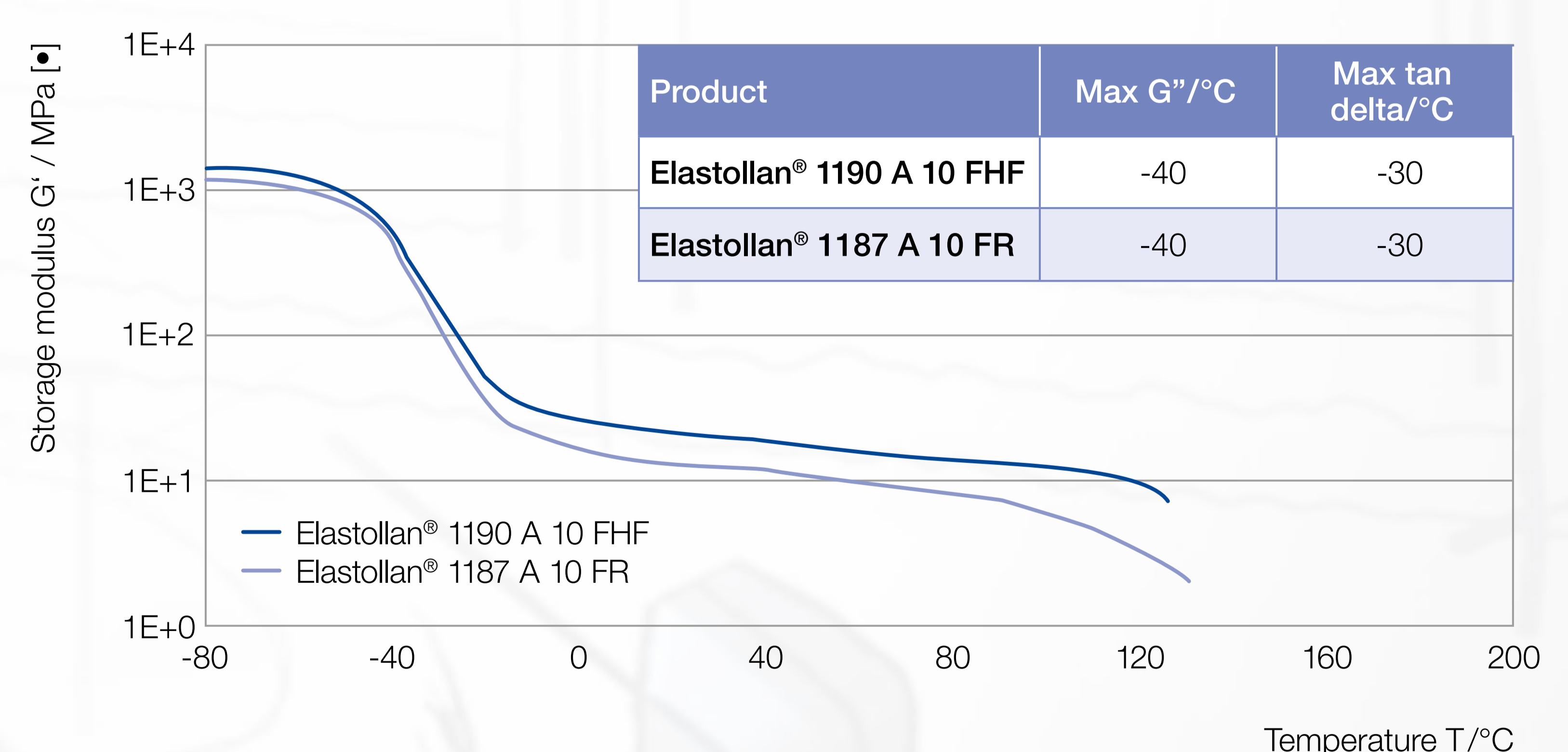
#### Flame retardancy evaluation by Cone Calorimeter



#### Resistance tests at elevated temperatures



#### Dynamic mechanical analysis



### Elastollan® Means More:

- Sustainable solutions possible
- Application specific product solutions
- Global availability & long-term expertise
- Extensive service from product development to cable production
- Reliable product quality (lot & lot-to-lot consistency)