Table 2: Overview of Properties of Materials Used in els-Installation Systems

Material:	Used in products:	Weak acid	Strong acid	Weak alkali	Strong alkali	Alcohol	Petrol	Benzene	Mineral oil	Diesel	Ammonia	Vegetable oil	Animal oil	Free from halogens, heavy metals, PVC and silicon	Combustion behaviour to VDE 0471/UL 94	Max ambient temperature, brief (1h)	Continuous operating temperature range
Polystyrene, impact resistant	AK system, A-box, TK-PS, HF	●	◗	●	●	●	⊗	⊗	◗	⊗	●	◗	◗	Yes[1]	960°C / V-2	+80°C	-40°C to +70°C
Polycarbonate, glass-fibre reinforced	Nautic, STV / STG, TK-PC, BM, AKi	●	●	⊗	⊗	●	●	⊗	●	◗	⊗	●	●	Yes	960°C / V-2	+130°C	-35°C to +120°C
Polycarbonate, transparent	Lid AK, small distribution units, STV and TK	●	●	⊗	⊗	◗	◗	⊗	●	◗	⊗	●	●	Yes	850°C / V-2	+130°C	-35°C to +120°C
Polyethylene	Connectors, twist nipples, Red series, box lower part	●	●	●	●	●	◗	⊗	◗	◗	●	●	●	Yes	650°C / HB	+100°C	-40°C to +70°C
Polypropylene	Red series lids, IBT HW range, HP series	●	◗	●	◗	●	◗	◗	●	◗	●	●	●	Yes[1]	960°C / V-2	+120°C	-30°C to +100°C
Polypropylene, flame-resistant, halogen-free	Halogen-free types: HW	●	◗	●	◗	●	◗	◗	●	◗	●	●	●	Yes	960°C / V-2	+120°C	-30°C to +100°C
Polyurethane, version 1	Lid seal, TK, HF, BM, AKII, AKL	◗	◗	◗	◗	◗	◗	◗	●	◗	◗	●	●	Yes	650°C / —	+110°C	-35°C to +80°C
Aluminium Al 12 Si	AL	●	◗	●	●	◗	●	⊗	●	●	●	◗	◗	Yes	—	+130°C	-40°C to +100°C
Duroplastic	WK housing	◗	◗	◗	◗	●	●	●	●	●	●	●	●	Yes	960°C / V-0	+90°C	-40°C to +70°C
Duroplastic	Fitting terminal blocks of WK series except 4 mm²	⊗	⊗	◗	⊗	●	●	●	●	●	●	●	●	Yes	960°C / V-0	+120°C	-40°C to +100°C
Polyamide 6, glass-fibre reinforced	Cable glands IP 68	●	◗	●	●	●	●	◗	●	●	●	◗	◗	Yes	750°C / HB/V-2	+200°C	-30°C to +100°C
Thermoplastic elastomer	Double membrane connectors, membrane seal (A-box 025/040, 2K-12)	●	◗	●	◗	●	◗	◗	◗	◗	◗	●	●	Yes	750°C / HB	+110°C	-30°C to +80°C

● = resistant ◗ = Partially-resistant ⊗ = Not-resistant

1) The basic material is halogen-free. Low proportions (up to approx. 6%) are added to the base material to improve flame resistance.

The materials used by Spelsberg have been subjected to weather testing to DIN 53 387/1000 hour tests by the "State Testing Office in Dortmund". The polycarbonate with 15% glass-fibre reinforcement used in the Nautic and STV series had the optimum result. This material also passed the UV resistance test to UL 746 C unconditionally.
Summary: In principle in selecting the installation site, as well as the protection class, the climatic conditions and the occurrence of chemical influences should be assessed. Data on material properties and chemical resistance of materials used is given in the tables.