Notes* on the areas of application and temperature recommendations** for thermoplastic materials

This table shows the ideal heating temperature for each type of plastic.
* This information applies only to thermoplastic materials from Ottobock SE & Co. KGaA.
** The temperatures specified here are only recommendations of Ottobock SE & Co. KGaA and must be adjusted for your individual heating devices.
*** Please heat ThermoLyn Pedilon in a water bath at 60 °C/140 °F.
For more information, please consult the Ottobock materials catalogue (646K1=GB) and the Ottobock information for practitioners – SKINGUARD thermoplastic resins and lamination resins for prosthetics and orthotics (646D119=GB).

Application examples/ product names	Chemical composition	FO	Dynamic AFO	AFO	Nighttime positioning splint	Test KAFO	KAFO	Orthosis bracket	Hand positioning orthosis	Body jacket with pads (TLSO)	Prosthesis test socket	Harmony socket	Definitive inner socket, leg prosthesis	Definitive inner socket, hip disarticulation	Definitive inner socket, arm prosthesis	Special characteristics / areas of application	Convection oven	Infrared oven
ThermoLyn Pedilon 616T73	NTT polyester								•							**Ideal for clinical use!** Mobile application possibilities, **Thermoformable at low temperatures,** Elaborate plaster casting and modelling work is eliminated, High adhesive strength, Highly resilient when reheated	***	***
ThermoLyn Trolen 616T3	PE-LD						•	•	•							**Good transparency, Good thermoformability and flexibility,** Low molecular weight, Particularly suitable for orthotic components that require low stiffness but high flexibility, **Suitable for fabricating brackets in socket technology applications**	125 °C/257 °F	125 °C/257 °F
ThermoLyn PP-C 616T120	PP-C		•	•	•		•		•	•						**Good stiffness, low weight,** Increased impact strength at low temperatures, **Low tendency to white crack, Good adaptation to orthotic joints,** Favourable welding characteristics, Low shrinkage	185 °C/365 °F	185 °C/365 °F
ThermoLyn PP-H 616T20, 616T56	PP-H	•	•	•			•									**High rigidity and stiffness,** High thermoplastic dimensional stability, Reduced impact value, **Particularly suitable for orthotic components subject to extreme strain, e.g. Paralysis orthoses**	185 °C/365 °F	185 °C/365 °F
ThermoLyn PE 200 616T19, 616T58, 616T95	PE-HD 200				•		•		•	•						**Hard polyethylene,** Good welding characteristics **Good grinding characteristics Low shrinkage, Can be combined e.g. with Plastazote®**	165 °C/329 °F	165 °C/329 °F
ThermoLyn RCH 500 616T22, 616T44	PE-HD 500				•		•									Homogenous thermoplastic resin, **High stiffness,** Adequate welding characteristics, Good heating behaviour, **Good gliding characteristics, Low shrinkage**	185 °C/365 °F	185 °C/365 °F
ThermoLyn RCH 1000 616T16	PE-HD 1000	•														**High-strength material,** High abrasion resistance, Requires heavy deformation forces in the thermoplastic state, **Can also be reshaped cold,** Thermoforming is made easier through the use of vacuum forming equipment with rubber membrane	195 °C/383 °F	195 °C/383 °F
ThermoLyn PETG clear 616T183	Copolyester											•				**Extremely high impact strength, Outstanding socket suspension, Protection of the liner,** Used as the first layer in definitive sockets, **Easy to put on with liner/soft socket, for example as part of the Harmony device**	170 °C/338 °F	160 °C/320 °F
ThermoLyn clear 616T83	Copolyester					•					•					**Good transparency,** High impact strength, **Post-forming is possible by reheating, e.g. with a hot air gun,** May be over-laminated to secure adapters, Low shrinkage	165 °C/329 °F	165 °C/329 °F
ThermoLyn rigid 616T52	Styrene butadiene										•					**High stiffness,** High thermoplastic dimensional stability, High resistance against the formation of stress cracks, **Extremely high impact strength,** May be over-laminated to secure adapters	160 °C/320 °F	160 °C/320 °F
ThermoLyn soft, clear 616T53	EVA												•		•	High surface quality, **Comfortable to wear,** Major shrinkage if cooled too quickly, **For fabricating flexible inner prosthetic sockets in lower limb prosthetics**	160 °C/320 °F	160 °C/320 °F
ThermoLyn soft, caucasian 616T69	EVA												•		•	Translucent, High surface quality, **Comfortable to wear,** Major shrinkage if cooled too quickly, **For fabricating flexible inner prosthetic sockets in upper limb prosthetics**	160 °C/320 °F	160 °C/320 °F
ThermoLyn soft, black 616T690	PE-C												•		•	**High flexibility,** Low density for especially low weight, High tensile strength, High surface quality, **Comfortable to wear**	130 °C/266 °F	130 °C/266 °F
ThermoLyn supra soft 616T59	EVA												•		•	**Comfortable to wear, For fabricating highly flexible inner prosthetic sockets**	155 °C/311 °F	155 °C/311 °F
ThermoLyn supra soft plus silicone 616T111	EVA with silicone												•		•	More comfortable socket edge design, High surface quality, **Comfortable to wear, Good sanding characteristics, For fabricating highly flexible inner prosthetic sockets**	150 °C/302 °F	150 °C/302 °F
ThermoLyn supra flexibel 616T112, 616T113	EVA	•						•	•				•	•	•	**Very high flexibility,** More comfortable socket edge design, **Comfortable to wear** Large choice of colours	100–120 °C/ 212–248 °F	80–100 °C/ 176–212 °F
Antibacterial thermoplastic resins I SKINGUARD technology																		
Antibacterial ThermoLyn clear 616T283	Copolyester					•					•					**Good transparency,** High impact strength, **Post-forming is possible by reheating, e.g. with a hot air gun,** May be over-laminated to secure adapters, Low shrinkage	165 °C/329 °F	165 °C/329 °F
Antibacterial ThermoLyn rigid 616T252	Styrene butadiene										•					**High stiffness,** High thermoplastic dimensional stability, High resistance against the formation of stress cracks, **Extremely high impact strength,** May be over-laminated to secure adapters	160 °C/320 °F	160 °C/320 °F
Antibacterial ThermoLyn soft, clear 616T253	EVA												•		•	High surface quality, **Comfortable to wear,** Major shrinkage if cooled too quickly, **For fabricating flexible inner prosthetic sockets in lower limb prosthetics**	150 °C/302 °F	150 °C/302 °F
Antibacterial ThermoLyn soft, caucasian 616T269	EVA												•		•	Translucent, High surface quality, **Comfortable to wear,** Major shrinkage if cooled too quickly, **For fabricating flexible inner prosthetic sockets in upper limb prosthetics**	150 °C/302 °F	150 °C/302 °F
ThermoLyn SilverShield® 616T200	EVA/LDPE												•		•	**Flexible material,** Pleasant wearing characteristics and Skin comfort, **Low shrinkage as pressed synthetic material, For fabricating flexible inner prosthetic sockets**	150 °C/302 °F	150 °C/302 °F
Fibre-reinforced thermoplastics																		
TP.C carbon fibre cloth 617R15	Fibre: Carbon Matrix: TPU	•	•	•			•		•							Paintable, Potentially adhesive, Can be welded with components of the same matrix, Clean processing, **No special storage requirements (e.g. no cooling),** For high-strength, very thin components on a thermoplastic material basis	220 °C/428 °F	220 °C/428 °F
TP.C textile 617R18	Fibre: Aramid Matrix: PP	•						•	•							Can be welded with components of the same matrix, Clean processing, **No special storage requirements (e.g. no cooling),** Can be used as reinforcement for 616T20 ThermoLyn PP-H, For high-strength, very thin components on a thermoplastic material basis	220 °C/428 °F	220 °C/428 °F

SKINGUARD technology – benefits at a glance:

+ High, long-lasting effectiveness of the antibacterial substances
+ Effective against a wide range of pathogenic bacteria such as Staphylococcus aureus (gram-positive) and Escherichia coli (gram-negative) as specified by the JIS Z 2801 standard
+ Effectively reduces formation of odours
+ Outstanding skin compatibility (dermatologically tested, SGS Institut Fresenius GmbH Deutschland)
+ Does not impair physical characteristics or processing properties due to the addition of the antibacterial substances

SilverShield® is a registered trademark of North Sea Plastics; Plastazote® is a registered trademark of Zotefoams.
Please note that the actual colours of the individual thermoplastic materials may differ from the colours shown in the table.

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