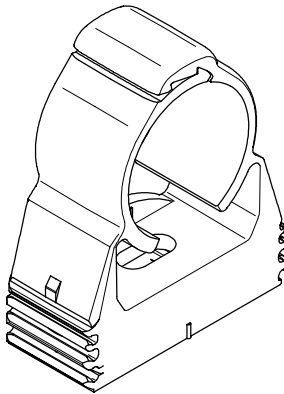


## Technical data sheet TD 7

### Physical properties of pipe clamps, plastic, self locking



Type:	starQuick®
Hersteller:	starQuick International Ltd Lochrütiried CH-6386 Wolfenschiessen
Description:	plastic pipe clamp with automatic locking mechanism for internal and external applications. Each size enables the taking up of the starQuick® nut. Up to and including SQ 28 the clamps can be tacked together.
Application:	the starQuick® pipe clamps are especially suitable for the fixing of pipes in the field of sanitary, electrical (Pg and metric systems), heating, air-conditioning and also galvanic and chemical industries, clean rooms, swimming pools etc.

### Physical properties:

The starQuick® pipe clips are made from modified polyamide PA 6.

Polyamide has been chosen on the strength of its excellent physical properties and high resistance against chemical influences.

For the chemical properties please ask for technical datasheet TD 6.

Characteristics of the physical properties:

- high form hold at high temperatures.
- temperature resistant from  $-40^{\circ}\text{C}$  till  $+90^{\circ}\text{C}$ .
- fixing temperature till  $-10^{\circ}\text{C}$ .
- fire behaviour: UL 94-V2.
- high tensile strength
- low expansion.
- free of halogen

The modification takes care for extra stabilising against extreme influences by UV-radiation and weather.

Polyamide may be judged as one of the most suitable thermoplastics for the application as pipe fixing in electrical, sanitary and hevac installations.

A detailed list of the physical properties can be found on the back of this sheet.

**Note:** Further technical data can be requested from the technical service of the manufacturer.

# material properties of starQuick® articles made of PA6

	test conditions	test	value	
	DIN EN ISO	specification	dr./cd.	
<b>mechanical properties</b>				
yield stress	23° C; 50 mm/min	527	80/50	MPa
yield strain	23° C; 50 mm/min	527	4/22	%
stress at break	23° C; 5 mm/min	527	--/--	MPa
strain at break	23° C; 5 mm/min	527	--/--	%
Tensile modulus	23° C; 1 mm/min	527	3000/1100	MPa
Charpy impact strength	+ 23° C	179/1eU	KB/KB	kJ/m2
Charpy impact strength	- 30° C	179/1eU	KB/-	kJ/m2
Charpy notched impact strength	+ 23° C	179/1eA	--/--	kJ/m2
Charpy notched impact strength	- 30° C	179/1eA	--/--	kJ/m2
<b>electrical properties</b>				
volume resistivity		IEC93	1E15/1E12	Ohmxcm
surface resistivity		IEC 93	1E13/1E10	Ohm
loss factor	1 MHz	IEC250	230/3000	E-4
comparative tracking index (C.T.I.)	test liquid A	IEC112	600	level
electric strength		IEC243-1	100/60	kV/mm
relative permittivity	1 MHz	IEC250	3,7/7,0	
<b>thermal properties</b>				
melting temperature	10K/min	3146	223	° C
temperature of deflection under load (HDT)	0,45 Mpa	75-1/2	170	° C
	1,8 Mpa	75-1/2	65	° C
max. using temperature	short time	IEC216	175	° C
	continuous	IEC216	75	° C
	(GTP 50% tensile)			
flammability	0,8 mm	UL 94	--	level
flammability	1,6 mm	UL 94	V-2	level
glow wire test	sheet 3 mm	IEC695-2-1	--	° C
<b>other properties</b>				
density	+ 23° C	53479	1,13	g/cm3
water absorption (saturation)			9 - 10	%
water absorption(23° C, 50% rel.h.)			3 - 4	%
K-value		96% H2SO4	77-82	
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