



1. USE

The Colring cable tie is specially designed for connection of electrical cables in series. It has a self-locking head. The ribbing at 0.7 mm intervals allows tightening to the exact dimension of the cables to be held together

2. TECHNICAL CHARACTERISTICS

2.1 Cable ties with ribbed internal surface

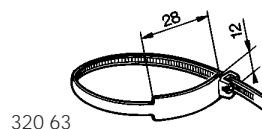
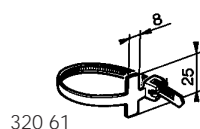
Cat. No.		Width (mm)	Flat length (mm)	Max. tightening diameter (mm)	Min. tightening diameter (mm)	Max. clipping force (mm)	Tensile strength	
Clear	Black High temp. UV prot.						Test diameter (mm) acc. to UL 1565	Guaranteed min. strength (daN)
320 30	320 12	2.4	95	18	1.6	0.15	16	8.2
320 31		2.4	140	33	1.6	0.15	29	8.2
320 32		2.4	180	46	1.6	0.15	37	8.2
320 37	320 15	3.5	140	33	1.6	0.20	29	13.6
320 38		3.5	180	46	1.6	0.20	27	13.6
320 39		3.5	280	77	1.6	0.20	76	13.6
320 40		3.5	360	102	1.6	0.20	102	13.6
320 42	320 22	4.6	180	46	1.6	0.25	37	22.7
320 43		4.6	280	77	1.6	0.25	76	22.7
320 44	320 24	4.6	360	102	1.6	0.25	102	22.7
320 47		7.6	180	42	4.8	1	37	54.5
320 49	320 29	7.6	360	98	4.8	1	88	54.5
320 50		7.6	720	218	4.8	1	102	54.5

Identification cable ties

Cat. No.		Width (mm)	Flat length (mm)	Max. tightening diameter (mm)	Min. tightening diameter (mm)	Max. clipping force (mm)	Tensile strength	
Clear	Black High temp. UV prot.						Test diameter (mm) acc. to UL 1565	Guaranteed min. strength (daN)
320 61		2.4	95	18	4	0.15	16	8.2
320 63		4.6	160	46	9.5	0.25	37	22.7

2.2 Cable ties with ribbed external surface

Cat. No.	Width (mm)	Flat length (mm)	Max. tightening diameter (mm)	Min. tightening diameter (mm)	Max. clipping force (daN)	Tensile strength	
Clear						Test diameter (mm) acc. to UL 1565	Guaranteed min. strength (daN)
320 52	2.4	105	22	1.6	0.45	16	8.2
320 54	3.5	140	33	1.6	0.6	29	13.6
320 55	4.6	180	46	1.6	0.9	37	22.7
320 57	4.6	360	102	1.6	0.9	88	22.7
320 58	7.6	360	98	4.8	1.5	88	54.5



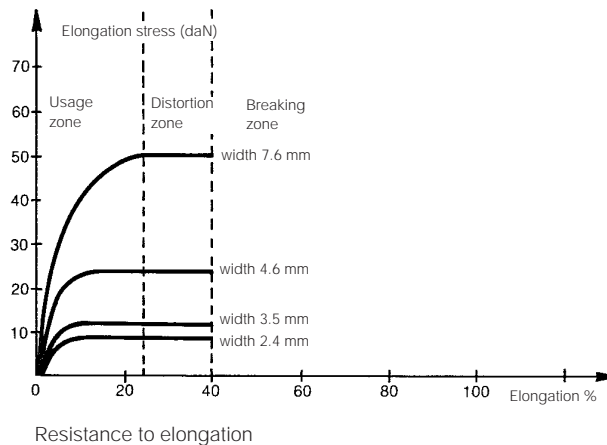
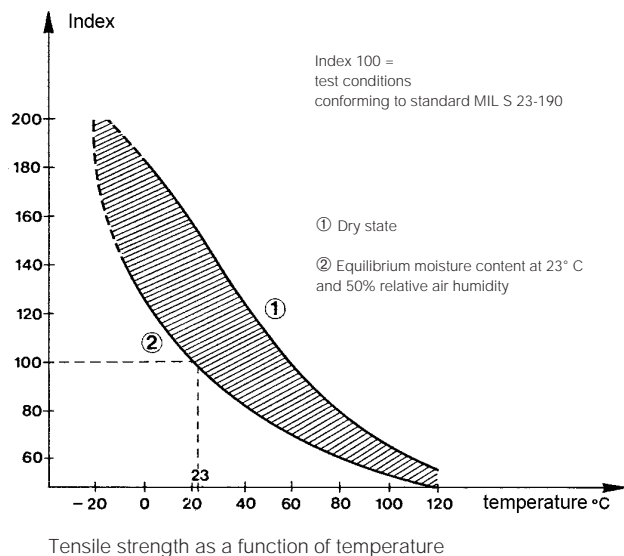
Colring cable ties

Technical sheet: F9012D

Cat. No(s): 320 12 to 320 63

Date: 22.04.97

2. TECHNICAL CHARACTERISTICS (continued)



3. MATERIAL CHARACTERISTICS

Polyamide 6/6	clear	black
Moisture intake.....	2.4 %	2.4 %
Temperatures		
• permanent operating: > 20,000 hrs	85 ° C	105° C
• continuous operating: > 1,000 hrs	100° C	120° C
• permitted in peak conditions	130° C	150° C
• resistance to cold:		
- use	- 40° C	- 40° C
- assembly	- 10° C	0° C
Limit oxygen index (LOI) NF T 51-071 - ASTM D 2863	29 %	27.5 %
Corrosion by fumes - NF C 20-453	< 5 %	< 5 %
Flame resistance - UL 94	94 - V2	94 - V2
Incandescent wire test NF C 20-455	850° C	850° C
UV resistance - EDF test	unprotected	protected
Materials without halogen		
Resistance to chemical agents, at a temperature of 23° C (valid for clear and black ties) +: excellent resistance, 0: moderate resistance, -: low resistance		
Acids:		
• mineral		
- hydrochloric ≤ 10 %	0	
- sulphuric ≤ 10 %	-	
- nitric - all concentrations	-	
• organic		
- acetic 10 %	0	
- formic 10 %	-	
Bases:		
• mineral	+	
• organic	+	
Oils	+	
Fats	+	
Petroleum products	+	
Chlorinated solvents	+	
Phenols	-	
Alcohols	+	
Hydrocarbons	+	
Mineral salts	+	

Colring cable ties

Technical sheet: F9012D

Cat. No(s): 320 12 to 320 63

Date: 22.04.97

4. CONFORMITY TO STANDARDS AND APPROVALS

Materials: standard ASTM D 4066-82
 class 1 for clear material
 class 2 for black material
 Cable ties: standard MIL S 23-190
 standard MIL MS 3-367 for Cat. Nos. 320 12/15/22/24/29 320 30/37/42/43/44/49/50/52/54/55/57/58
 standard MIL MS 3-368 for Cat. Nos. 320 61/63
 standard UL 1565 for all Cat. Nos. except 320 40/50
 (approval UL n° E 73 369)

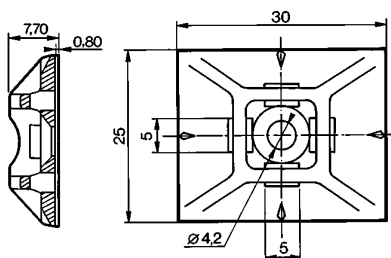
5. INSTALLATION

Colring cable ties are supplied in weatherproof packaging in order to guarantee their integrity whatever the storage conditions
 Colring cable ties are installed manually
 For widths 2.4 - 3.5 and 4.6 mm, the cable tie is tightened and any excess length cut using Legrand pliers P 46 - Cat. No. 320 88 - which comply with standard MIL MS 90-387
 For width 7.6 mm, we recommend Colson pliers - Cat. No. 319 96

6. ACCESSORIES

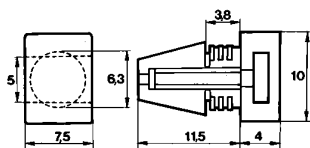
6.1 Self-adhesive mounting base

Cat. No. 320 65: clear
 Cat. No. 320 67: black
 Material: polyamide 6.6
 For cable ties with a max. width of 4.6 mm
 Quick-setting adhesive:
 • Maximum resistance after 48 hrs polymerization for fixing on clean and grease-free surface, applying a force of 5 daN for 5 seconds
 • Ambient fixing temperature: between 20 and 40° C, below 10° C not recommended



6.2 Clip-on mounting base

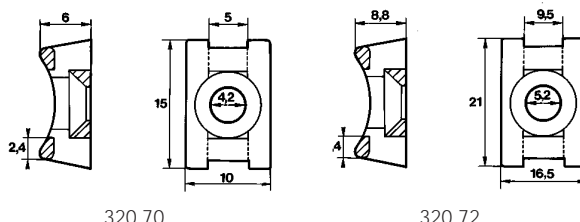
Cat. No. 320 76
 Material: polyamide 6.6 clear
 For cable ties with a max. width of 4.6 mm
 For sheet steel thickness 0.5 to 3 mm
 Drilling diameter: 6 to 6.35 mm



6. ACCESSORIES (continued)

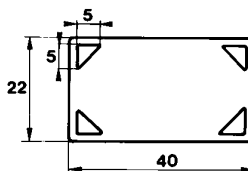
6.3 Screw fixing mounting base

Central fixing
 Cat. No. - 320 70 for cable ties with a max. width of 4.6 mm, screw ø 4 mm
 - 320 72 for cable ties with a max. width of 7.6 mm, screw ø 5 mm
 Material: polyamide 6.6 clear



6.4 Identification plates

Cat. No. 320 85
 For cable ties with a max. width of 4.6 mm
 Marking using black felt-tip pen with indelible ink Cat. No. 372 98



6.5 Colring pliers

Cat. No. 320 88