



**DANISH MINISTRY OF DEFENCE**  
**ACQUISITION AND LOGISTICS ORGANISATION**

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**TECHNICAL REFERENCE**

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**FMT- 00000021**

**For**

**TEXTILE TOUCH AND CLOSE FASTENERS**

**SEE PAGE 7**

**(NATO Stock Number)**

1. Definition.

The textile touch and close fasteners consisting of a hook part and a loop part made of fully synthetic materials should be used for quick fastening of various flexible items.

2. Specifications, etc.

a. General Terms

All documentation below refers to the edition or corrections, valid at the date of order. In the production the following specification and directions must be followed, and alterations shall not be made by the supplier without the approval from DALO (Danish Defence Acquisition & Logistics Organization).

The used dyestuffs, auxiliaries and chemicals shall not at any point during the entire self-gripping tape life cause fibre damage.

The textile touch and close fasteners is to be produced in such a way as to obtain the OEKO-TEX Standard 100, Product Class III or equivalent to certify the product if required.

If there in the production or after treatment are used suspect chemicals, the supplier is responsible for the labelling in accordance herewith.

The ordinary production execution should have a high qualitative standard.

b. Reference is Made to the Following Standards (latest editions):

RAL 840 HR	Colour system (RAL 840 HR(semi gloss) (RAL = Reichs Ausschuss für Lieferbedingungen)
DIN 3415-1	Textile Touch & Close fasteners
ISO 13934-1	Breaking strength
ISO 13934-1	Shear strength and peel strength
ISO 105-B02	Fastness to light
ISO 105-C03	Fastness to washing
ISO 105-D01	Fastness to dry cleaning
ISO 105-X12	Fastness to rubbing
ISO 105-E04	Fastness to perspiration
ISO/EN 3758	Care Labelling Code

### 3. Manufacture

The textile touch and close fasteners is a hook (burr type) and loop fasteners as described in DIN 3415-1.

#### a. Width

The textile touch and close fasteners should be supplied in width; 20 mm, 25 mm, 30 mm, 50 mm and 100 mm.

#### b. Weight

Weight (g/rm)	20 mm	25 mm	30 mm	50 mm	100 mm
Touch/hook, min. 240 g/m <sup>2</sup>	6,5	7,9	9,8	16,6	33,3
Fasteners/loop, min. 290 g/m <sup>2</sup>	6,6	7,9	9,5	17,0	36,3

#### c. Edges

The textile touch and close fasteners edges should preferably be woven. If the edges are cut, they shall be non-fraying. This shall not be achieved by gluing.

The tendency of unravelling shall be tested after 3 x 60<sup>0</sup>C machine washing and tumble drying.


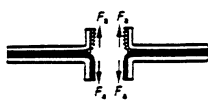

#### d. Apparatus

The textile touch and close fasteners should be furnished with a back finish preventing the hooks and loops being drawn through the fasteners itself and preventing unravelling in use.

The finish should give the backside of the fasteners a smooth and homogeneous surface, which can be basis for printing name or numbers.

There should not be used additives, which can cause any difficulties in screen printing name labels or having an adverse effect on the printed labels in use.

## 4. Requirement specifications compare DIN 3415-1.

		<b>Farve:</b> <ol style="list-style-type: none"> <li>Olive Green; (RAL 7013 Brown grey)</li> <li>Grey; (RAL 7012 Basalt Grey)</li> <li>Dark Blue; (RAL 5011 Steel Blue)</li> <li>Black; (RAL 9005 Jet Black)</li> <li>Blue (FN); (RAL 5012 Light Blue)</li> <li>Grey-beige; (RAL 1019 Grey beige)</li> <li>Brown grey; (RAL 7013 Brown Grey)</li> <li>Dark olive green; (RAL 6007 Bottle green)</li> <li>TAN 499 ( Pantone 18-0617 TCX)</li> </ol>
Data/Quality	Requirement	Method
Breaking Strength - After 1 x 60°C machine washing the following should be fulfilled:	Hook part: min. 200 N/cm Width Loop part: min. 180 N/cm Width	ISO 13934-1
Length Shear Strength   F1 = Separation force.	Both ways are tested.  After closing and opening: <ul style="list-style-type: none"> <li>- Once: <b>min. 7 N/cm<sup>2</sup></b>.</li> <li>- After 2 h i water: <b>min. 5 N/cm<sup>2</sup></b>.</li> <li>- 10.000 times: <b>min. 3 N/cm<sup>2</sup></b>.</li> </ul>	ISO 13934-1
Peeling Strength   Fa = Separation force	Both ways are tested.  After closing and opening: <ul style="list-style-type: none"> <li>- Once: <b>min. 1,3 N/cm width</b>.</li> <li>- After 2 h: <b>min. 1,1 N/cm width</b>.</li> <li>- 10.000 times: <b>min. 0,7 N/cm width</b>.</li> </ul>	ISO 13934-1
Shrinkage	Max. Length – and width shrinkage 3 %	- after 1 x 60° machine washing and tumbler drying ISO 6330/5077
Heat-resistance	- 30°C to +80°C	Both parts(hook and loop) should function between the temperature
Light Fastness	Min note 4-5	ISO 105-B02
Washing Fastness	60° Min. note 4	ISO 105-C03
Dry cleaning Fastness	Min. note 4	ISO 105-D01
Care Labelling Code		DS/EN ISO 3758

**SURVEY OF STOCK NUMBERS**

<b>Stock No.</b>	<b>Designation</b>
8315-22-150-2668	Lukkeband, han, 20 mm, olive green
8315-22-150-2670	Lukkeband, hun, 20 mm, olive green
8315-22-124-8138	Lukkeband, han, 20 mm, blue (UN)
8315-22-124-8139	Lukkeband, hun, 20 mm, blue (UN)
8315-22-602-3355	Lukkeband, han, 25 mm, olive green
8315-22-602-3358	Lukkeband, hun, 25 mm, olive green
8315-22-609-3283	Lukkeband, han, 25 mm, black
8315-22-609-3281	Lukkeband, hun, 25 mm, black
8315-22-150-4307	Lukkeband, han, 30 mm, olive green
8315-22-150-4308	Lukkeband, hun, 30 mm, olive green
8315-22-116-2953	Lukkeband, han, 30 mm, dark blue
8315-22-116-3637	Lukkeband, hun, 30 mm, dark blue
8315-22-116-2664	Lukkeband, han, 30 mm, black
8315-22-116-2665	Lukkeband, hun, 30 mm, black
8315-22-116-3923	Lukkeband, han, 30 mm, grey
8315-22-124-8140	Lukkeband, han, 30 mm, blue (UN)
8315-22-124-8141	Lukkeband, hun, 30 mm, blue (UN)
8315-22-126-2074	Lukkeband, han, 50 mm, olive green
8315-22-126-2073	Lukkeband, hun, 50 mm, olive green
8315-22-150-2669	Lukkeband, han, 50 mm, blue (UN)
8315-22-150-2671	Lukkeband, hun, 50 mm, blue (UN)
8315-22-124-8142	Lukkeband, han, 30 mm, grey beige
8315-22-124-8143	Lukkeband, hun, 30 mm, grey beige
8315-22-123-8136	Lukkeband, han, 100 mm, olive green
8315-22-123-8135	Lukkeband, hun, 100 mm, olive green
8315-01-643-3268	Lukkeband, hun, 50MM, TAN 499
8315-01-643-3270	Lukkeband, han, 20MM, TAN 499
8315-01-643-3271	Lukkeband, hun, 100MM, TAN 499
8315-01-643-3274	Lukkeband, hun, 37MM, TAN 499
8315-01-643-3275	Lukkeband, han, 25MM, TAN 499
8315-01-643-3277	Lukkeband, hun, 20MM, TAN 499
8315-01-643-3278	Lukkeband, han, 37 MM, TAN 499
8315-01-643-3279	Lukkeband, han, 100MM, TAN 499
8315-01-643-3282	Lukkeband, han, 50MM, TAN 499
8315-01-643-3283	Lukkeband, hun, 25MM, TAN 499