

HYAT communication cable technical requirements

1.General

| | |
|---------------------------|--|
| Conductor | Solid-Bare annealed copper |
| Insulation | Foam-Skin PE |
| Twisting | 2 wires twisted |
| Cable Structure | 25 pairs of basic unit |
| Composition of cable core | Each unit core Wrapped with single color ribbon |
| Filling | Core waterblocking Grease |
| Cable core wrapping | Wrapped with one polyester tape and one Water Blocking Swellable tape , or Wrapped with two polyester tape |
| Moistureproof belt | Total thickness of 0.25mm APL,non-corrugated Aluminium tape |
| Sheath | Black LDPE material |
| Surface Printing | It will be printed as customer's requirement with batch produce. |
| Packing | Metal drum, Sealing Packaging, No fumigation |

2.Cable Core Structure and Sheath Thickness

| Conductor Nom. O.D. (mm) | Pairs | Cable Structure | | Sheath Thickness (min)mm | |
|--------------------------------|-------|-----------------|--------|--------------------------------|--|
| | | First | Second | | |
| 0.40 mm | 10 | 2+8 | | 1.4 | |
| | 20 | 1+6+13 | | 1.4 | |
| | 30 | (8+9+8)+5 | | 1.4 | |
| | 50 | (12+13)*2 | | 1.4 | |
| | 70P | 1*20+2*25 | | 1.4 | |
| | 100 | 4*25 | | 1.4 | |
| | 200 | 4*50 | | 1.6 | |
| | 300 | 1*50 | 5*50 | 1.6 | |
| | 400 | 4*100 | | 1.8 | |
| | 600P | 1*100 | 5*100 | 1.8 | |
| | 900P | 1*100 | 8*100 | 2.0 | |
| | 1200P | 3*100 | 9*100 | 2.2 | |

| Conductor Nom. O.D. (mm) | Pairs | Cable Structure | | Sheath Thickness (min)mm | |
|--------------------------------|-------|-----------------|--------|--------------------------------|--|
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| | 200 | 4*50 | | 1.6 | |
| | 300 | 1*50 | 5*50 | 1.6 | |
| | 400 | 4*100 | | 1.8 | |
| | 600P | 1*100 | 5*100 | 2.0 | |

3. Insulation Chromatogram

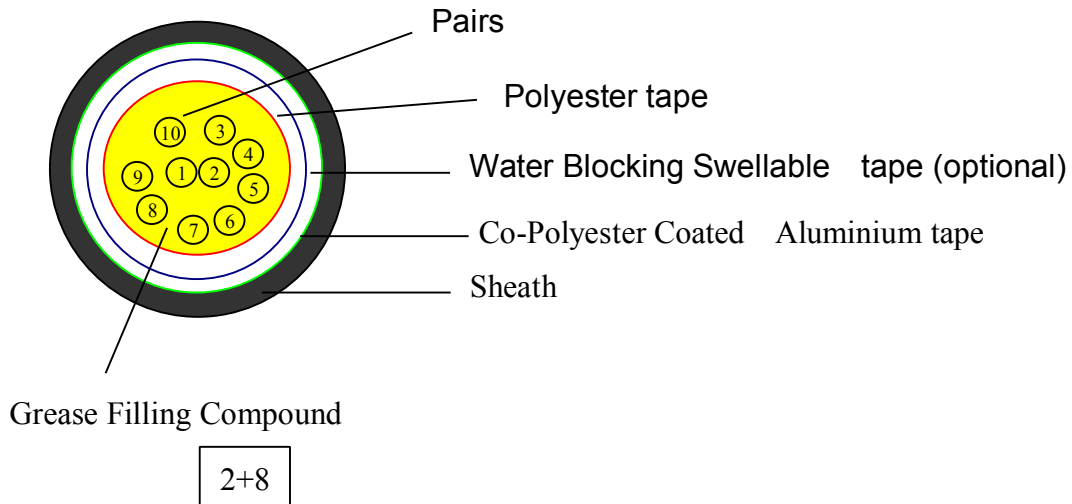
| Number | Insulation Chromatogram | Number | Insulation Chromatogram |
|--------|-------------------------|--------|-------------------------|
| 1 | White-blue | 14 | Black-brown |
| 2 | White-orange | 15 | Black-grey |
| 3 | White-green | 16 | Yellow-blue |
| 4 | White-brown | 17 | Yellow-orange |
| 5 | White-grey | 18 | Yellow-green |
| 6 | Red-blue | 19 | Yellow-brown |
| 7 | Red-orange | 20 | Yellow-grey |
| 8 | Red-green | 21 | Purple-blue |
| 9 | Red-brown | 22 | Purple-orange |
| 10 | Red-grey | 23 | Purple-green |
| 11 | Black-blue | 24 | Purple-brown |
| 12 | Black-orange | 25 | Purple-grey |
| 13 | Black-green | | |

4. Electrical Performance Requirements

| Item | 0.40mm | 0.50mm |
|---|-------------------------------|--------|
| Direct Current Resistance of Single conductor (Maximum) ohm/km | 148.0 | 98.0 |
| Imbalance of Direct Current Resistance to pair (Maximum) % | 5.0 | |
| Insulation resistance of each single insulated conductor to other conductors shield DC 500V (M·ohm/km) | >3000 | |
| Working Capacitance (800Hz/km) nF/km Maximum | 10 pairs ≤58 >10 pairs ≤57 | |
| Pair to pair capacitance unbalance(800Hz/300m) pF/km Maximum | ≤250 | |
| Electrical Strength DC Sustainable Time Between conductor and conductor Between conductor and shield | 1min 1KV 3KV | |

5. Structure Drawing

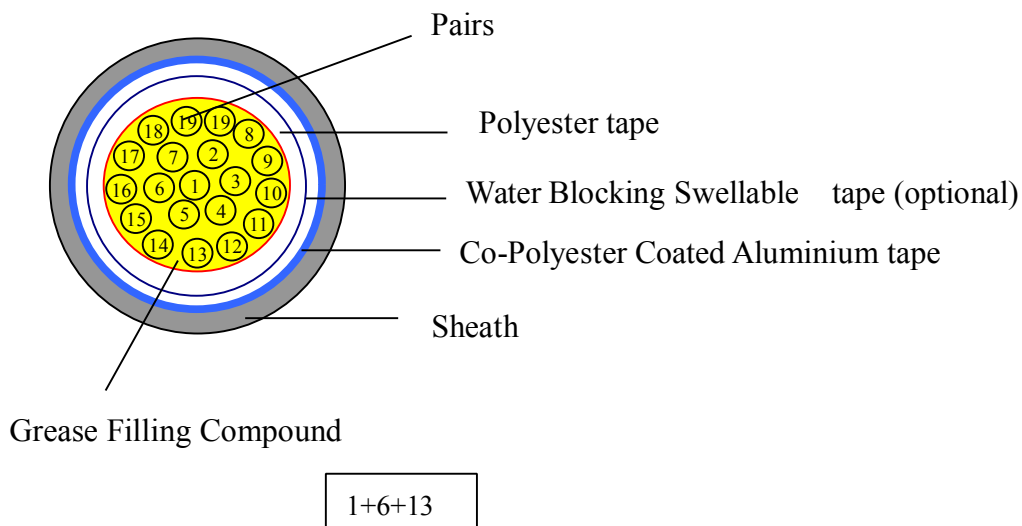
(一) 10 Pairs Cable Structure

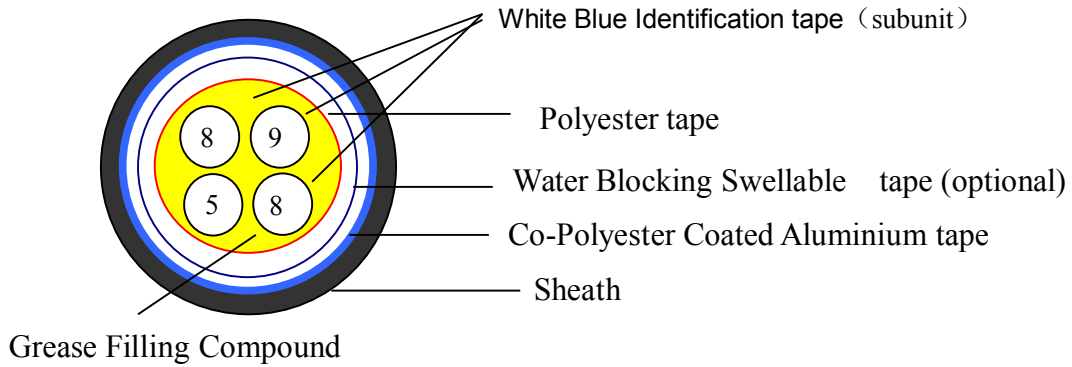


2. Ribbon Chromatogram

| Number | Ribbon Chromatogram | Number | Ribbon Chromatogram |
|--------|---------------------|--------|---------------------|
| 1 | White Blue | 6 | Red Blue |
| 2 | White Orange | 7 | Red Orange |
| 3 | White Green | 8 | Red Green |
| 4 | White Brown | 9 | Red Brown |
| 5 | White Grey | 10 | Red Grey |

(二)、20 Pairs Cable Structure



(三)、30 Pairs Cable Structure
1、Structure


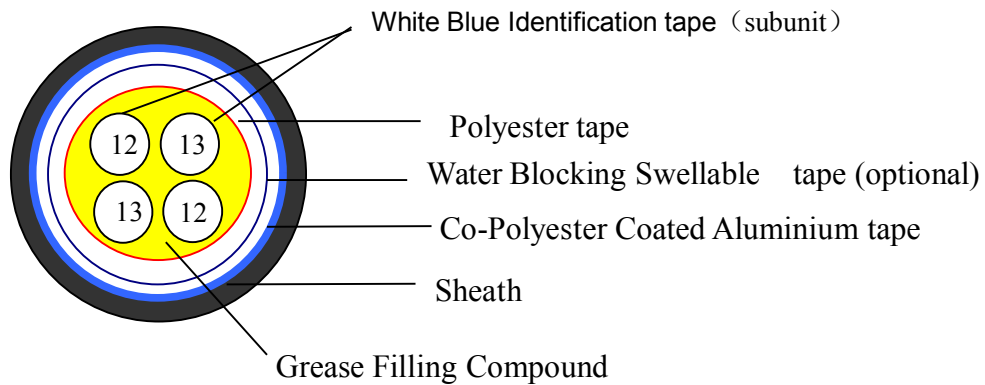
$$(8+9+8)+5$$

2、Ribbon Chromatogram

| Subunit Number | Pairs Number | Ribbon Chromatogram |
|----------------|--------------|---------------------|
| 1 | 8 | White Blue |
| 2 | 9 | White Blue |
| 3 | 8 | White Blue |
| 4 | 5 | White Orange |

(四)、50 Pairs Cable Structure

1、Structure



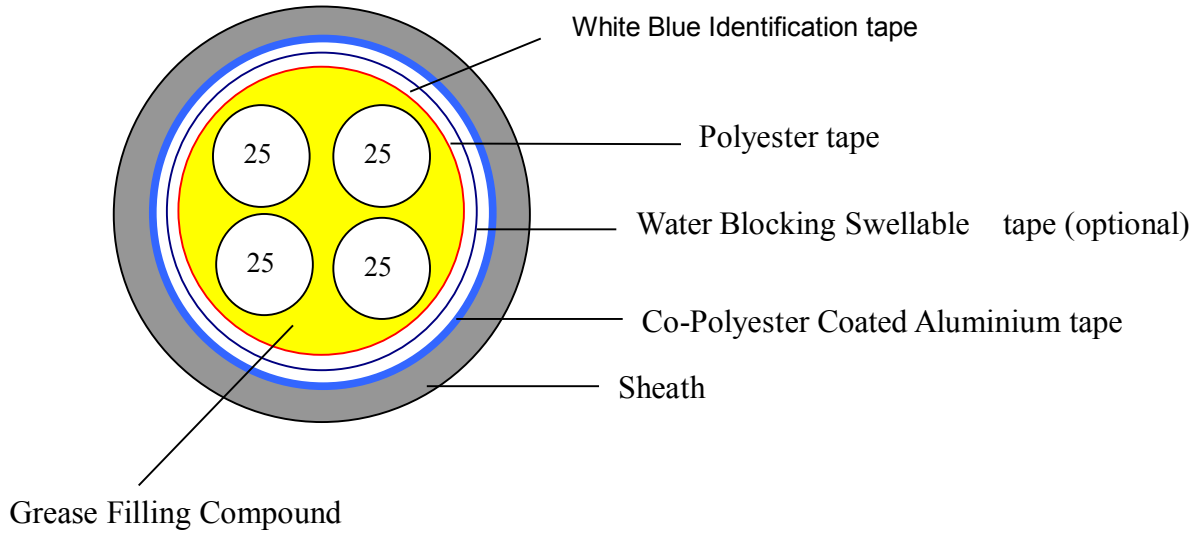
| |
|-----------|
| (12+13)×2 |
|-----------|

3、Ribbon Chromatogram

| Subunit Number | Pairs Number | Ribbon Chromatogram |
|----------------|--------------|---------------------|
| 1 | 12 | White Blue |
| 2 | 13 | White Blue |
| 3 | 12 | White Orange |
| 4 | 13 | White Orange |

(五)、100 Pairs Cable Structure

1、Structure



4×25

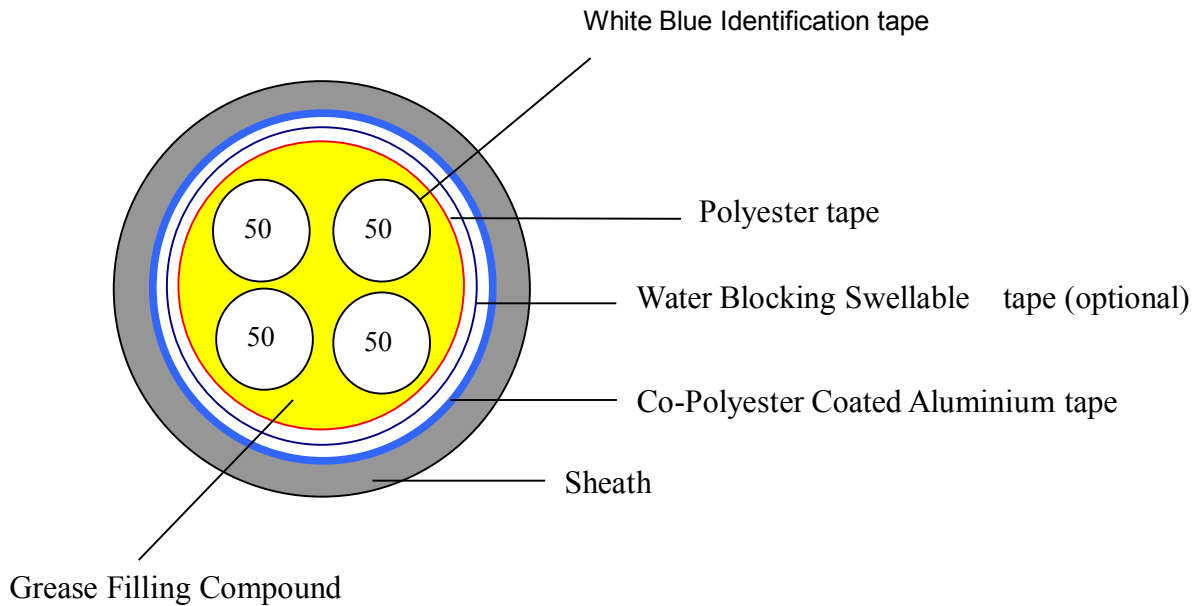
2、 Unit Number and Ribbon Chromatogram

| Unit Number | Ribbon Chromatogram |
|-------------|---------------------|
| 1 | White Blue |
| 2 | White Orange |
| 3 | White Green |
| 4 | White Brown |

4、 spare pair: White Red

(六)、200 Pairs Cable Structure

1、Structure



4 × 50

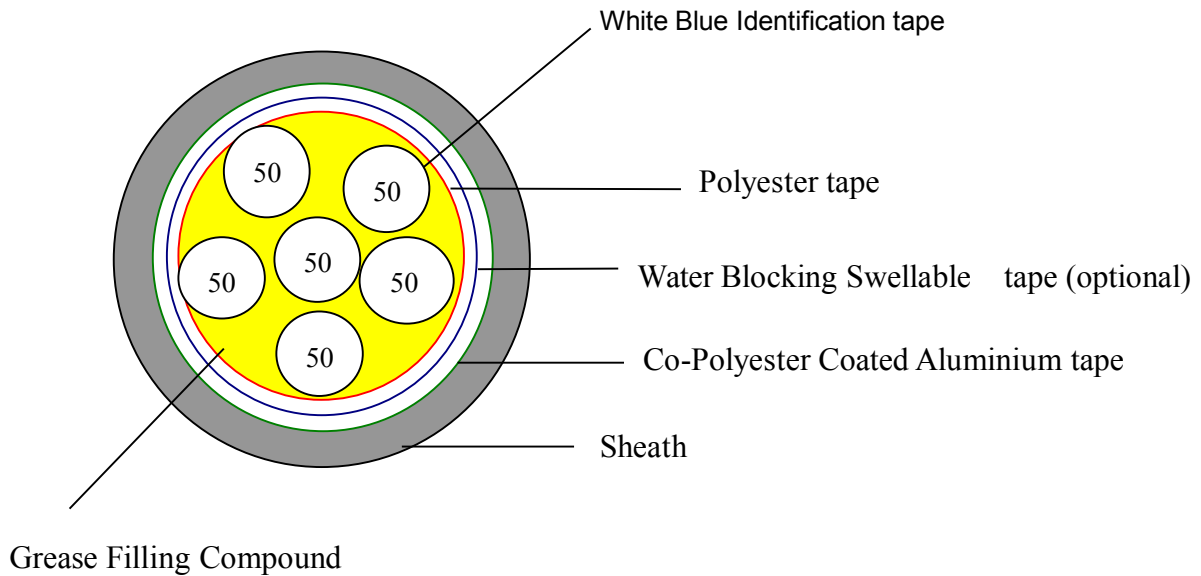
2、Unit Number and Ribbon Chromatogram

| Unit Number | Ribbon Chromatogram |
|-------------|---------------------|
| 1 | White Blue |
| 2 | White Orange |
| 3 | White Green |
| 4 | White Brown |

3、 Spare Pairs number: White Red、White Black

(八)、300 Pairs Cable Structure

1、Structure



4 × 50

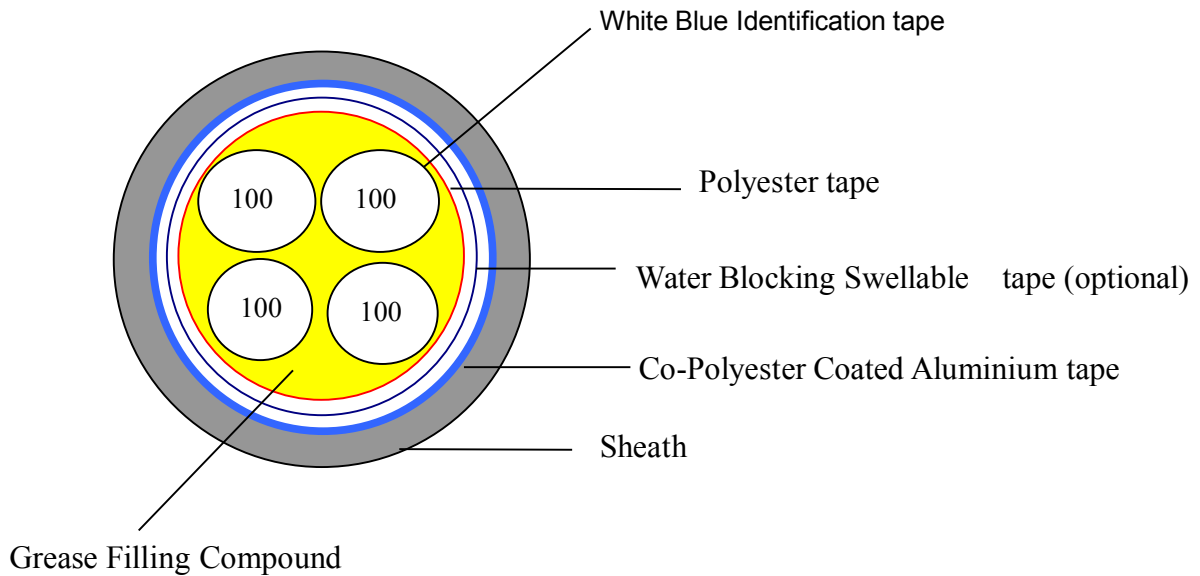
2、Unit Number and Ribbon Chromatogram

| Unit Number | Ribbon Chromatogram |
|-------------|---------------------|
| 1 | White Blue |
| 2 | White Orange |
| 3 | White Green |
| 4 | White Brown |
| 5 | White Grey |
| 6 | Red Blue |

3、Spare Pairs number: White Red、White Black、White Yellow

(九)、400 Pairs Cable Structure

1、Structure



4 × 100

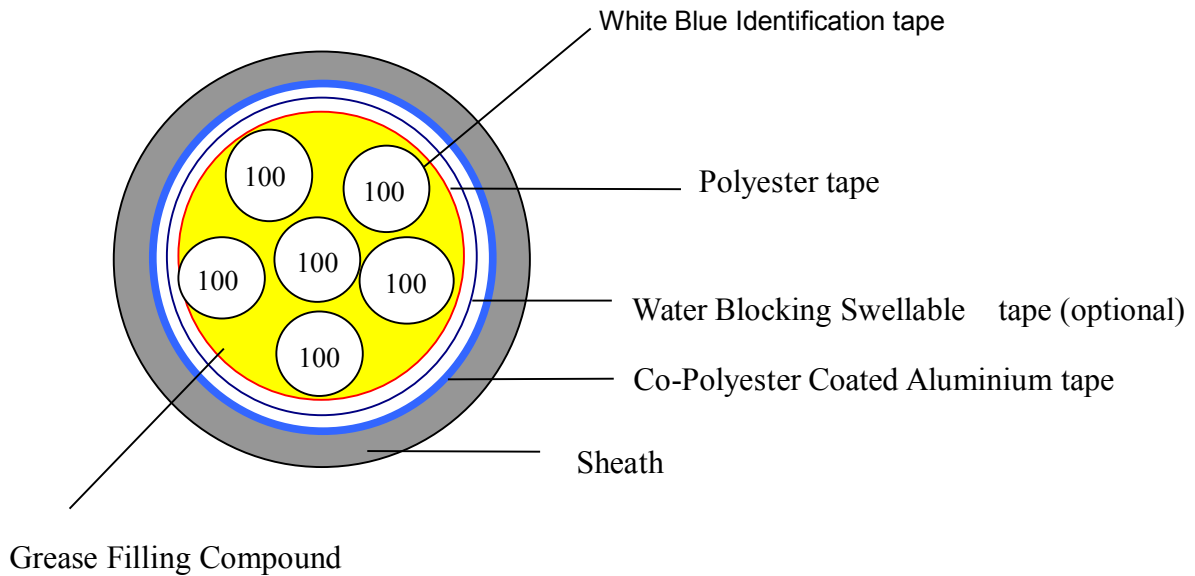
2、Unit Number and Ribbon Chromatogram

| Unit Number | Ribbon Chromatogram |
|-------------|---------------------|
| 1 | White Blue |
| 2 | White Orange |
| 3 | White Green |
| 4 | White Brown |

3、Spare Pairs number: White Red、White Black、White Yellow、White Pink.

(十)、600 Pairs Cable Structure

1、Structure



$(1+5) \times 100$

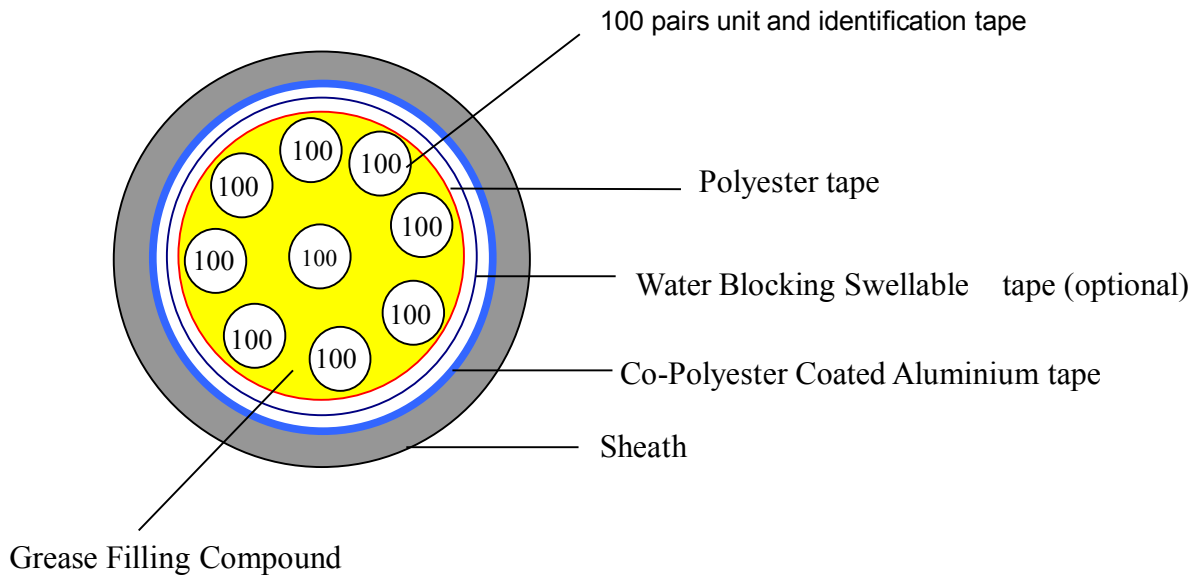
2、Unit Number and Ribbon Chromatogram

| Unit Number | Ribbon Chromatogram |
|-------------|---------------------|
| 1 | White Blue |
| 2 | White Orange |
| 3 | White Green |
| 4 | White Brown |
| 5 | White Grey |
| 6 | Red Blue |

3、Spare Pairs number: White Red、White Black、White Yellow、White Pink、Red Black、Red Yellow。

(十一)、900 Pairs Cable Structure

1、Structure



(1+8) × 100

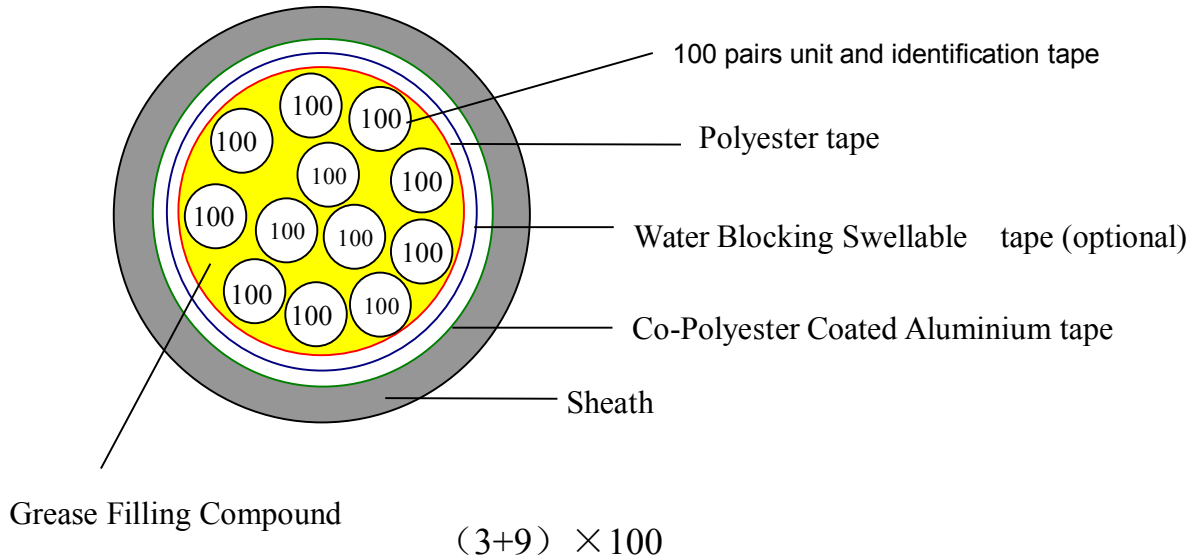
2、Unit Number and Ribbon Chromatogram

| Unit Number | Ribbon Chromatogram |
|-------------|---------------------|
| 1 | White Blue |
| 2 | White Orange |
| 3 | White Green |
| 4 | White Brown |
| 5 | White Grey |
| 6 | Red Blue |
| 7 | Red Orange |
| 8 | Red Green |
| 9 | Red Brown |

3、Spare Pairs number: White Red、White Black、White Yellow、White Pink、Red Black、Red Yellow。

(十二)、1200 Pairs Cable Structure

1、Structure



2、Unit Number and Ribbon Chromatogram

| Unit Number | Ribbon Chromatogram |
|-------------|---------------------|
| 1 | White Blue |
| 2 | White Orange |
| 3 | White Green |
| 4 | White Brown |
| 5 | White Grey |
| 6 | Red Blue |
| 7 | Red Orange |
| 8 | Red Green |
| 9 | Red Brown |
| 10 | Red Grey |
| 11 | Black Blue |
| 12 | Black Orange |

3、Spare Pairs number : White Red 、 White Black 、 White Yellow 、 White Pink 、 Red Black 、 Red Yellow。