
BRITISH APPROVALS SERVICE FOR CABLES
BASEC

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BASEC approval helps

Rule out the Risk

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Chief Executive, BASEC

Overview

1. What does BASEC do for cable users?
2. Why do we do it this way?
3. Standards – Prysmian Cables and Systems
4. Testing – Draka UK
5. Benefits to cable users and manufacturers

BASEC

- Independent non-profit certification body
- Specialists in cable manufacture
- Over 35 years of operation
- Objectives: sustain and improve standards of safety and quality of wires & cables
- Accredited by UKAS
- Notified Body for Low Voltage Directive (EU)

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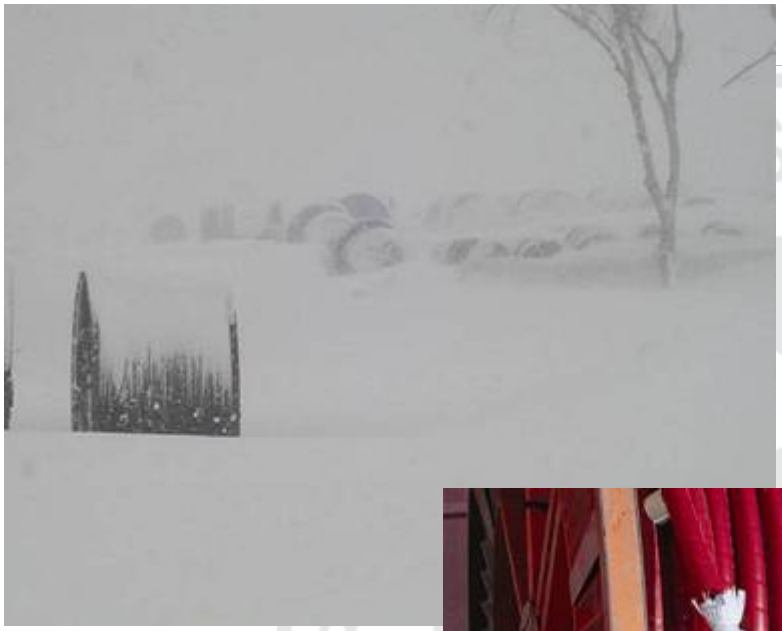

World-wide operations

Manufacturers / Markets

- United Kingdom
- Australia
- Saudi Arabia
- Syria
- United Arab Emirates
- South Africa
- PR China
- Hong Kong SAR
- India
- Japan
- Thailand
- France
- Greece
- Ireland
- Italy
- Lithuania
- Norway
- Poland
- Spain
- Sweden
- Turkey
- USA

BASEC Approval Schemes

- ***Product Certification***
  - BA 2250 part 1 and 2
- Quality management systems
  - ISO 9001:2000
- Environmental management systems
  - ISO 14001:2004
- Health & safety management systems
  - OHSAS 18001
- Environmental product profiles
  - Eco-Green Cable Scheme BA 2280

Benefits for Cable Users

- Independent checking of seller's claims
- Does it <u>really</u> comply with the standard?
- Helps compliance with IEE Wiring Regs
- Helps compliance with Part P
- Reduces fail / re-work risk for contractors
- Provides complaints service

What do we do?

New factories / products:

- Type testing – <u>all</u> tests in the standard
- Factory inspection using BASEC BA 2250 – *(ISO 9001 is not enough to ensure consistent quality in cable manufacture)*

What do we do?

All factories /products - ongoing basis:

- Product pick-up – across range of approvals - between 25 and 150 cable samples / year
- Surveillance testing on sampled products – full range of tests over approval cycle
- Factory inspection to BASEC BA 2250 – every 3, 4 or 6 months

Sample Testing and Failures

- Each sample 10 to 30 metres of cable
- All samples tested for many standard tests
- Some samples – more elaborate tests
- Test failures lead to demerit points
- Accumulated points can lead to suspension
- Serious test failures result in immediate enforced product recalls

BS 6004 – 6242Y

Test description	Requirement		Test Method		Freq
	Specification	Clause	Specification	Clause	
Bending test at low temperature (Insulation)	BS7655-3.1	Table 2	BSEN60811-1-4	8.1	F5
Bending test at low temperature (Sheath)	BS7655-4.1/4.2	Table 2	BSEN60811-1-4	8.2	F5
Bi-colour combinations	BS6004	5.2.2	BS6004	5.2.2	F100
Cable construction	BS6004	5.1	Visual Inspection	-	F100
Colour - clarity and durability of colour	BS6004	5.2.3	BS6500	5.2.3	F100
Colour - sequence	BS6004	5.2.1	Visual inspection	-	F100
Compatibility	BS6004	8.4	BS6004	Annex G	F25
Conductor construction	BS6004	6.1	BSEN60228	5	F100
Conductor resistance	BS6004	7.2	BSEN60228	Annex A	F100
Core identification – colour/numbering	BS6004	5.2	Visual inspection	-	F100
Elongation test at low temperature (Insulation)	BS7655-3.1	Table 2	BSEN60811-1-4	8.3	F5
Elongation test at low temperature (Sheath)	BS7655-4.1/4.2	Table 2	BSEN60811-1-4	8.4	F5
Flame propagation of a single cable	BSEN60332-1-2	Annex A	BSEN60332-1-2	-	F25
Impact test at low temperature (Insulation)	BS7655-3.1	Table 2	BSEN60811-1-4	8.5	F5
Impact test at low temperature (Sheath)	BS7655-4.1/4.2	Table 2	BSEN60811-1-4	8.5	F5
Insulation resistance	BS6004	7.6	BS6004	Annex C.4	F5
Insulation resistance constant (Insulation)	BS7655-3.1	Table 2	BS6469:99.2	8	F5
Insulation resistance constant (Sheath)	BS7655-4.2	Table 2	BS6469:99.2	8	F5

Test description	Requirement		Test Method		Freq
	Specification	Clause	Specification	Clause	
Long term resistance of insulation to dc	BS6004	7.7	BS6004	C.5	F5
Loss of mass (Insulation)	BS7655-3.1	Table 2	BSEN60811-3-2	8.1	F5
Loss of mass (Sheath)	BS7655-4.1/4.2	Table 2	BSEN60811-3-2	8.2	F5
Marking - legend	BS6004	5.3	Visual inspection		F100
Marking - durability	BS6004	5.3.5	BS6004	5.3.5	F100
Ovality	BS6004	8.3	BSEN60811-1-1	8.3	F25
Mean overall dimensions	BS6004	8.2	BSEN60811-1-1	8.3	F25
Pressure test at high temperature (Insulation)	BS7655-3.1	Table 2	BSEN60811-3-1	8.1	F5
Pressure test at high temperature (Sheath)	BS7655-4.1/4.2	Table 2	BSEN60811-3-1	8.2	F5
Resistance to cracking (Insulation)	BS7655-3.1	Table 2	BSEN60811-3-1	9.1	F50
Resistance to cracking (Sheath)	BS7655-4.1/4.2	Table 2	BSEN60811-3-1	9.2	F50
Tensile strength & Elong as manufactured (Insulation)	BS7655-3.1	Table 2	BSEN60811-1-1	9.1	F25
Tensile strength & Elong after ageing in air (Insulation)	BS7655-3.1	Table 2	BSEN60811-1-2	8.1	F25
Tensile strength & Elong as manufactured (Sheath)	BS7655-4.1/4.2	Table 2	BSEN60811-1-1	9.2	F25
Tensile strength & Elong after ageing in air (Sheath)	BS7655-4.1/4.2	Table 2	BSEN60811-1-2	8.1	F25
Minimum thermal stability (Insulation)	BS7655-3.1	Table 2	BSEN60811-3-2	9	F5
Thickness of insulation	BS6004	6.2.3	BS6004	Annex D.1	F100
Thickness of sheath	BS6004	6.6.3	BS6500	Annex D.2	F100
Voltage test on complete cable	BS6004	7.3	BS6004	Annex C.2	F5
Voltage test on cores	BS6004	7.4	BS6004	Annex C.3	F5

Why do we do this?

- Regular sampling and testing is the only way to keep manufacturers on their toes
- We spot things before they become a serious problem for product quality
- Ensures consistency between manufacturers – helps cable distributors
- Value for money service – avoids high costs of sorting out problems for users

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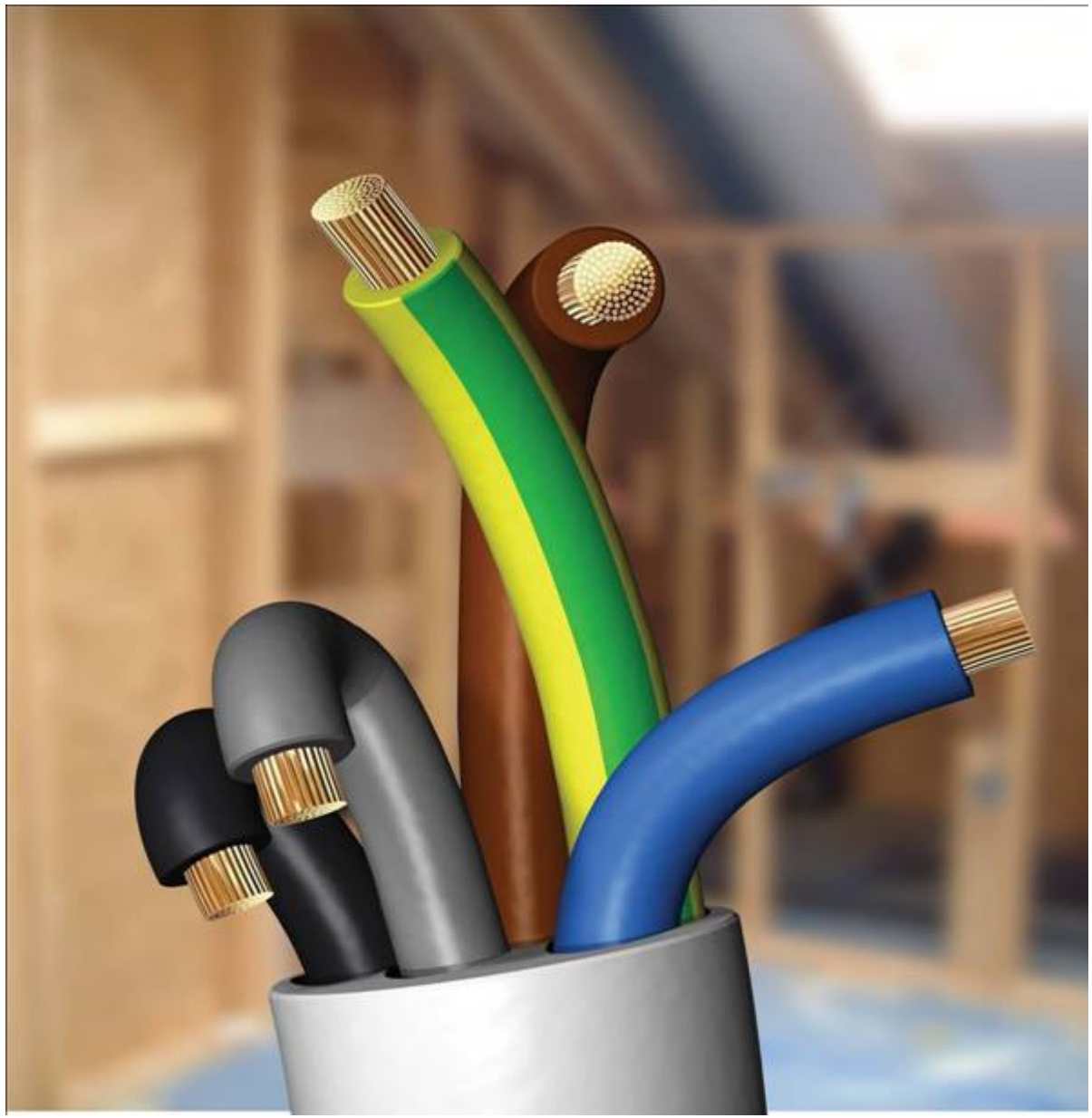


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