

SPECIFICATION FOR LOW TEMPERATURE PVC COMPOUND
(NATURAL COLOUR)

1.	Nomenclature	Low Temperature PVC Compound (Natural Colour) [Low Temperature ^{with the standard} -55°C]		
2.	Scope	To be used for Sheathing of Carried Quad Cable [CQC] in combination with PVC Master Batch Grey		
3.	Relevant Spec.	MSCQ – 7B, JSS 6145-26:2014 (Revision No. 1) and BS-6746		
4.	Granule Properties	a. Specific Gravity	1.23 ± 0.03	
5.	CQC sheath manufactured with this material shall confirm the physical properties as per Sl. No. 6, when Low Temperature PVC Compound (Natural Colour) is mixed with 4% Master Batch Grey of Specification 01, Issue No. 02 dated 01.07.2010, Revision No. 01 dated 07.09.2017.			
6.	Physical Properties	a.	Physical Test on Sheath before ageing	
		i.	Tensile Strength (Speed of the movable jaw shall be 250 mm ± 50 mm/minute)	Not less than 13.72 N/mm sq.
		ii.	Elongation (Speed of the movable jaw shall be 250 mm ± 50 mm/minute)	Not less than 300%
		b.	Physical Test on Sheath after ageing at 80±1°C for 14 days	
		i.	Variation in Tensile Strength	Not less than 90% of values before aging.
		ii.	Variation in Elongation	Not less than 90% of values before aging.
		c.	Cold Bend Test on Completed cable	
		i.	Cold Bend Test at -40°C ± 1°C before ageing Mandrel of Diameter 25.40 mm ± 0.1 mm (Duration 24 Hours)	There shall be no visible sign of cracking of the sheath or break on completed Cable when examined under magnifying glass (Focal length 80 mm)
		ii.	Cold Bend Test at -55°C ± 1°C before ageing Mandrel of Diameter 50.8 mm ± 0.3 mm (Duration 24 Hours)	There shall be no visible sign of cracking of the sheath or break on completed Cable when examined under magnifying glass (Focal length 80 mm)
		Above referred Cold Bend Test at c (i) & c (ii) will be carried out before ageing as well as after ageing.		
d.	Compression Test (Insulation) Heat Test on sheath			
i.	Hot deformation Test at 120°C ± 1°C Mandrel of Diameter 9.4mm ± 0.1 mm (Duration 1-Hour)	There shall be no evidence of cracking of the sheath when examined under magnifying glass (Focal length 80 mm)		
e.	Loss of Mass at 80°C ± 1°C (Duration 120 Hours)	Not more than 2 mg/cm sq. The surface area to be figured out at both faces of sheet.		
7.	Packing	Material should be free from all contaminations. The material shall be packed in moisture free heavy duty polyethylene bags each containing 25 kilograms of material.		
8.	Marking	Each bag of material shall be marked with the following information:		
		a.	Manufacturer's Name	
		b.	Specification or Grade No. of the material.	
		c.	Batch No.: Batch number to be marked on sides of bags.	
		d.	Month and Year of Manufacture	
		e.	Net Weight	
		f.	Each lot/batch shall be checked by supplier and accompanied by test certificate.	
		g.	The material should be uniform in quality and condition, clean, free from foreign material and defects.	

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