

VOLTIS® LC 141 EPP65N**VOLTIS® LC 141 EPP65N/T****VOLTIS® LC 141 EPP65N/PP**

Composition

LC 141 EPP65N (/T, /PP) is a rubber-clad phenolic resin paper laminate (also with a teflon or polypropylene coating).

The denomination 'LC' indicates an extremely low Cl-content. The paper laminate is in accordance with the following standards:

DIN 7735:	Hp 2061.6
IEC 60893:	PF-CP 203
NEMA LI1:	XX
JIS K 6912:	PL-PEM-P

VOLTIS® LC 141 EPP65N is composed of a phenolic resin paper laminate with a soft EPDM rubber cladding.

VOLTIS® LC 141 EPP65N/T has an additional teflon coating.

VOLTIS® LC 141 EPP65N/PP has an additional polypropylene coating on the paper side.

Application

The high resistance of the components against temperature and solvents makes these products an excellent choice for use as end caps in electrolytic capacitors. The specially designed components fulfill the needs regarding corrosion and ageing for all types of electrolytes.

The additional polypropylene coating increases the safety against corrosion.

For extreme applications (2000 hr / 135°C) the teflon coated type is recommended.

Punching temperature

120 - 190°C (with PP up to 150°C)

Availability

Standard: 1.5 mm paper laminate / 1.0 mm rubber
 2.0 mm paper laminate / 1.0 mm rubber
 Other dimensions upon request.
 Minimum thickness of rubber: 0.8 mm
 Above mentioned laminates are also available with a teflon or PP coating.
 Thickness of the teflon coating: 0.1 mm
 Thickness of the PP-coating: 0.04 mm

Tolerance: ± 0.2 mm for composite laminate
 ± 0.1 mm for rubber

Standard sheet size: 1030 mm x 1030 mm (+30 / -0 mm)

Technical Data (mechanical values are the mean of both directions)

1. Paper Laminate

Properties	Testmethod	Unit	Value
Tensile strength (23°C)	ISO 527	MPa	170
Flexural strength 23°C / 85°C / 125°C	ISO 178	MPa	190 / 150 / 130
Modulus of elasticity 23°C / 85°C / 125°C	ISO 178	MPa	10000 / 9000 / 8000
Insulation resistance after immersion in water (1mm thick)	IEC 167	Ohm	$\geq 10^8$
Water absorption (1mm thick)	ISO 62 / 1	mg	≤ 120
Resistance to solvents			
- DMF / 168 h / 85°C			
Flexural strength (23°C)		MPa	130
Modulus of elasticity (23°C)		MPa	6000
-Glycol / 168 h / 85°C			
Flexural strength (23°C)		MPa	150
Modulus of elasticity (23°C)		MPa	6000

2. Rubber (Type EPDM)

Properties	Testmethod	Unit	Value
Shore hardness A	DIN 53505		65 ± 5
Tensile strength	DIN 53504	MPa	> 10
Elongation at break	DIN 53504	%	> 200
Compression set (168 h / 85°C / 25 %)	DIN 53517	%	< 25
Insulation resistance	IEC 93	Ohm	≥ 10 ¹⁰
Shore hardness A after ageing (1000h / 125°C)	DIN 53505		65 (+10 / -3)
Resistance to solvents (1000 h / 125°C)			
- Ethylene glycol Shore hardness A Weigh increase		%	65 (+5 / -10) < 10
- Dimethylformamid Shore hardness A Weigh increase		%	65 (+5 / -10) < 10

3.Composite

Properties	Testmethod	Unit	Value
Insulation resistance after immersion in water	IEC 167	Ohm	≥ 10 ⁸
Peel strength	IPN 115		
- as delivered		N/mm	> 1,5
- ageing in air (168 h/100°C)		N/mm	> 1,0
- ageing in DMF (168 H/100°C)		N/mm	> 1,0
Cl-content	IPN 113	ppm	≤ 5