HIGH-PERFORMANCE PLASTICS

PRODUCT OVERVIEW

duresco
moulding success

Epoxy Moulding Compounds

HIGH PERFORMANCE PLASTICS

Epoxy Moulding Compounds (EMC) are high-performance thermosetting materials that are able to be processed using transfer or injection moulding. Duresco Epoxy Moulding Compounds usually exhibit the following characteristics:

- High electrical insulation properties
- High dimensional stability and temperature resistance
- Low viscosity; mild and well sealed encapsulation of inserts
- Low water absorption combined with outstanding chemical resistance
- Reliable, long-term use under difficult chemical conditions
- Excellent price/performance ratio

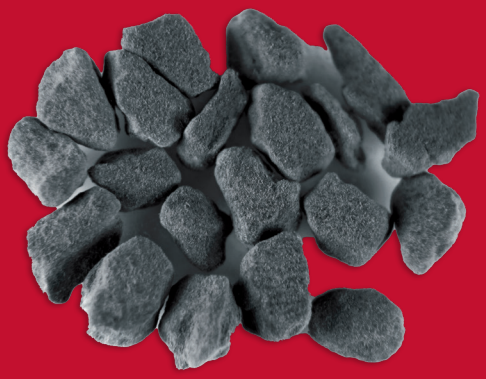
STORAGE

Compounds remain processable for several months (see shelf life) if stored under cool and dry conditions.

INDUSTRIAL SAFETY

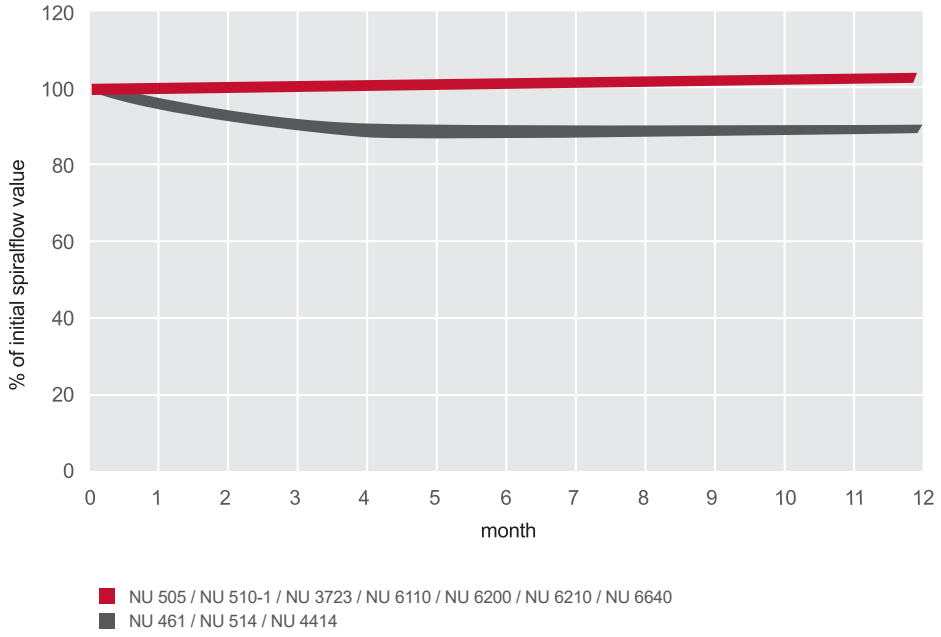
SQS - Certificate ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018 | IATF 16949:2016

The advice regarding industrial safety on the MSDS should be followed when using our moulding compounds.

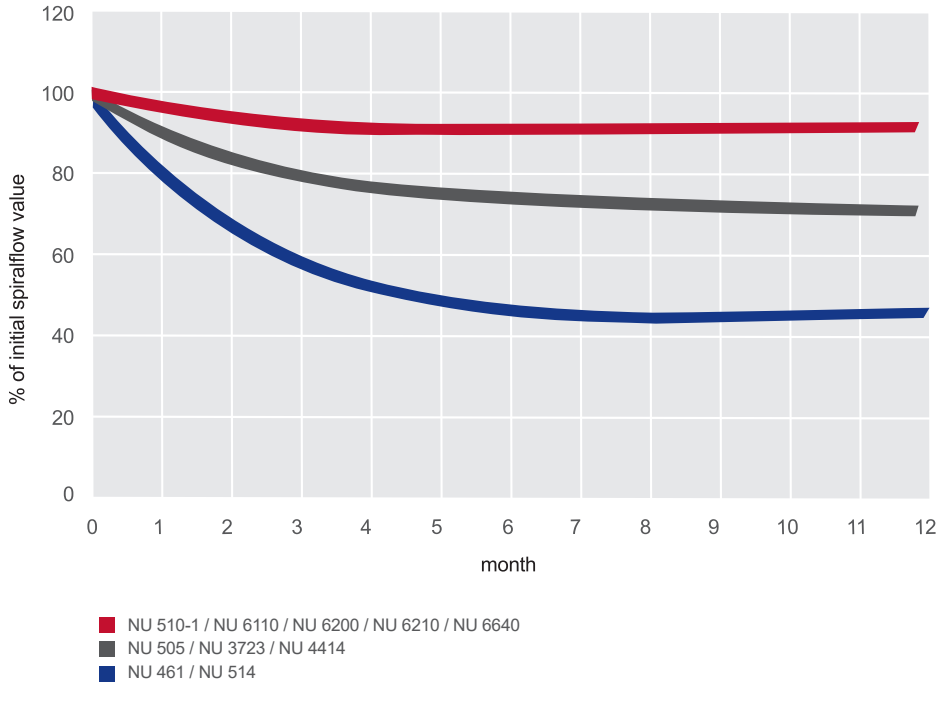


Shelf life

Shelf life at a temperature of 8 °C



Shelf life at a temperature of 18 °C



Product properties

	PROPERTY	STANDARD	UNIT	NU 505
GENERAL	Density	DIN 53479	g/cm³	2.0
	Water absorption (100°C / 30 Min)	ISO 62	%	0.05
	Mould shrinkage*		%	0.6-0.8
	Post shrinkage (170°C / 2h)		%	0.01
MECHANICAL	Tensile strength	ISO 527	MPa	45
	Flexural strength	ISO 178	MPa	100
	Surface strain (flexural test)	ISO 178	%	0.8
	E-modulus (flexural test)	ISO 178	GPa	15
	Impact strength	ISO 179-1	kJ/m²	6
	Notched impact strength	ISO 179-1	kJ/m²	2
THERMAL	Glass transition temperature	ISO 6721	°C	200
	Temp.-time limit (flexural strength) **2'000h**	IEC 60216	°C	220
	Temp.-time limit (flexural strength) **20'000h**		°C	175
	Coefficient of linear thermal expansion (30-105°C)	ISO 11359-2	ppm/K	18
	Thermal conductivity	ISO 22007-4	W/mK	0.90
	Flammability	UL 94	Class	HB
ELECTRICAL	Volume resistivity (25°C)	IEC 60093	Ωcm	10^{15}
	Surface resistivity (25°C)	IEC 60093	Ω	10^{16}
	Dielectric loss factor tan δ (50 Hz)	IEC 60250	%	1.5
	Dielectric constant εr (50 Hz)	IEC 60250	-	5.5
	Comparative Tracking Index	IEC 60112	CTI	300
	Arc Resistance	ASTM D-495	Class	2
UL LISTED PRODUCTS FILE NR-E66640				●

Mineral fillers			●
Short glass fibres			

* Mould temperature
190° C for Injection
170° C for Compression, transfer



NU 510-1	NU 3723	NU 4414	NU 6110	NU 6200	NU 6210	NU 6515	NU 6640	NU 6700
2.0	2.0	2.0	2.0	1.95	1.95	1.8	2.3	1.9
0.05	0.05	0.04	0.03	0.05	0.06	0.03	0.03	
0.2-0.7	0.3-0.5	0.3-0.5	0.2-0.7	0.2-0.7	0.2-0.7	0.05 - 0.3	0.3-0.5	0.3-0.5
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
90	80	80	80	80	100	95	90	60
160	170	120	165	120	190	140	150	140
1.1	1.1	1.5	1.2	1.5	1.4	0.8	1.0	0.9
18	18	13	18	13	17	19	18	17
11	10	12	16	12	22	10	11	
4	4	4	4	4				
170	200	205	160	205	120	200	150	160
200	230	220	200	220				215
180	190	180	180	180				195
20	18	26	18	26	20	17	19	22
0.70	0.70	0.70	0.70	0.70	0.75	0.06	1.1	1.1
HB	HB	HB	HB	HB	HB		HB	V-0 (1.5mm)
10^{15}	10^{15}	10^{15}	10^{15}	10^{15}	10^{15}	10^{16}	10^{15}	10^{14}
10^{14}	10^{17}	10^{14}	10^{16}	10^{14}	10^{16}	10^{14}	10^{16}	10^{16}
1.0	1.5	1.0	1.1	1.0	1.6	0.5	0.7	2.1
6.0	6.5	6.0	5.4	6.0	5.0	4.0	6.0	5.6
275	250	300	275	300	300	275	275	600
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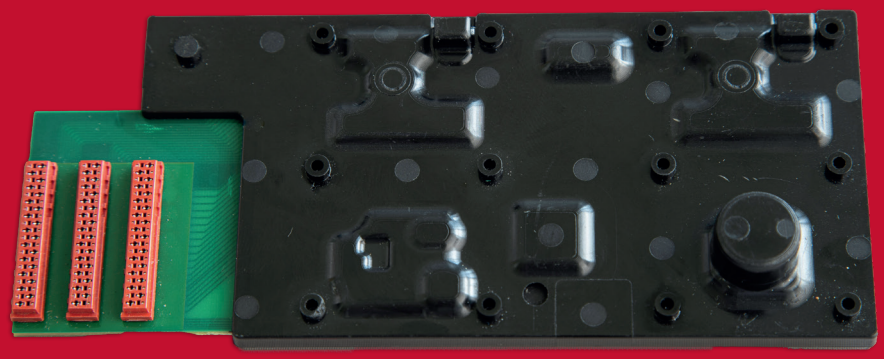
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Product characteristics

SPECIFIC PROPERTIES	NU 505	NU 510-1	NU 3723
Good mechanical properties		●	●
High thermal shock resistance	●	●	
High dimensional stability	●	●	●
High long term heat stability	●	●	●
Low linear thermal expansion	●		
Good chemical resistance	●		●
Good electrical insulation properties	●	●	●
High Comparative Tracking Index			
Flammability UL 94 V-0			
Increased thermal conductivity			

	APPLICATIONS	NU 505	NU 510-1	NU 3723
ELECTRICAL APPL.	Automotive ignition			
	Bushings		●	
	Connectors			
	Insulators		●	
	Transformers			
	Switches	●	●	●
ENCAPSULATION	Coils-Windings			
	Protection of Electronics			
	Sensors			●
	Solenoids			
	Rotors/Stators			
MECHANICAL ENGINEERING	Explosion proofed housings		●	
	Housings	●	●	●
	Rotor shaft insulation		●	
	X-Ray insulation parts			
	Pump and valve parts	●		●

* The information given in this publication is based on the present state of our knowledge but any conclusions and recom ment of our products under their own conditions and for their own requirements.



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mendations are made without liability on our part. Buyers and users should make their own assess-

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MORE IS ALWAYS POSSIBLE.