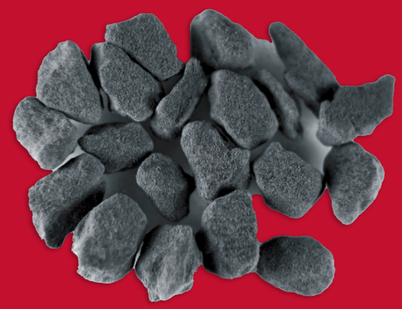
HIGH-PERFORMANCE PLASTICS

PRODUCT OVERVIEW

duresco
moulding success

Epoxy Moulding Compounds



Shelf life

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

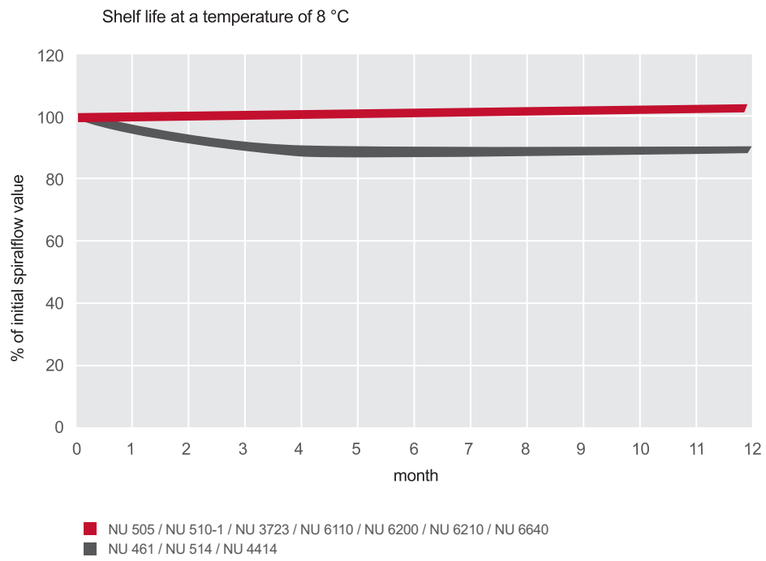
STORAGE

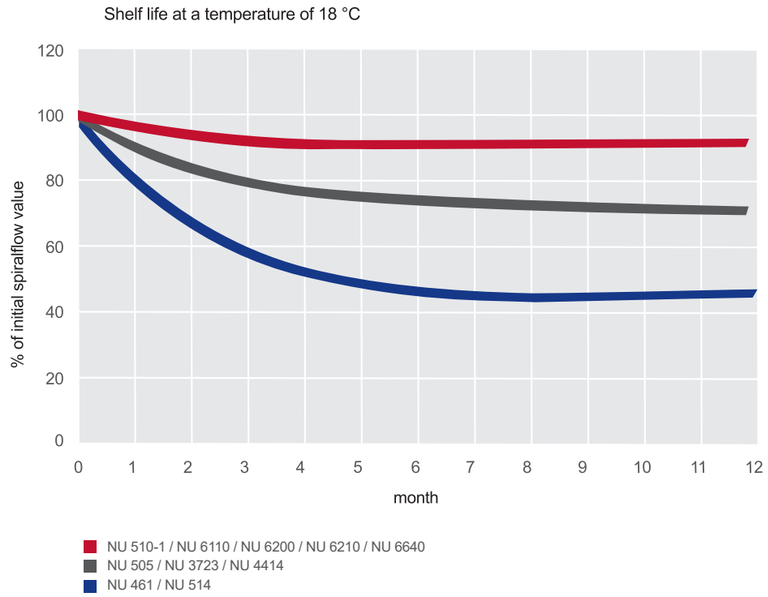
Compounds remain processable for several months
(see shelf life) if stored under cool and dry conditions.

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.





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Product properties

	PROPERTY	STANDARD	UNIT	NU 461	NU 505	NU 510-1	NU 514	NU 3723	NU 4414	NU 6640	NU 6110	NU 6200	NU 6210
GENERAL	Density	DIN 53479	g/cm³	2.0	2.0	2.0	1.9	2.0	2.0	2.3	2.0	1.95	1.95
	Water absorption	ISO 62	%	0.1	0.05	0.05	0.06	0.05	0.04	0.03	0.03	0.05	0.06
	Mould shrinkage*		%	0.4-0.6	0.6-0.8	0.2-0.7	0.4-0.6	0.3-0.5	0.3-0.5	0.3-0.5	0.2-0.7	0.2-0.7	0.2-0.7
	Post shrinkage		%	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MECHANICAL	Tensile strength	ISO 527	MPa	90	45	90	80	80	80	90	80	70	100
	Flexural strength	ISO 178	MPa	160	100	160	150	170	120	150	165	130	190
	Surface strain (flexural test)	ISO 178	%	1.5	0.8	1.1	1.2	1.1	1.5	1.0	1.2	1.7	1.4
	E-modulus (flexural test)	ISO 178	GPa	17	15	18	14	18	13	18	18	13	17
	Impact strength	ISO 179-1	kJ/m²	18	6	11	12	10	12	11	16	11	22
	Notched impact strength	ISO 179-1	kJ/m²	6	2	4	4	4	4		4		
THERMAL	Glass transition temperature	ISO 6721	°C	140	200	170	160	200	205	150	160	110	120
	Temp.-time limit (flexural strength)	IEC 60216	°C	230	220	200	200	230	220		200		
	Temp.-time limit (flexural strength)		°C	190	175	180	180	190	180		180		
	Coefficient of linear thermal expansion (20-105° C)	ISO 11359-2	ppm/K	16	18	20	25	18	26	19	18	28	20
	Thermal conductivity	ISO 22007-4	W/mK	0.70	0.90	0.70	0.70	0.70	0.70	1.1	0.70	0.80	0.75
	Flammability	UL 94	Class	HB	HB	HB	V-0 (1.5mm)	HB	HB	HB	HB	HB	HB
ELECTRICAL	Volume resistivity	IEC 60093	Ωcm	10^{15}	10^{15}	10^{15}	10^{14}	10^{15}	10^{15}	10^{15}	10^{15}	10^{15}	10^{15}
	Surface resistivity	IEC 60093	Ω	10^{17}	10^{16}	10^{14}	10^{14}	10^{17}	10^{14}	10^{16}	10^{16}	10^{17}	10^{16}
	Dielectric loss factor	IEC 60250	%	1.2	1.5	1.0	2.0	1.5	1.0	0.7	1.1	1.3	1.6
	Dielectric constant	IEC 60250	-	5.5	5.5	6.0	5.6	6.5	6.0	6.0	5.4	5.8	5.0
	Comparative Tracking Index	IEC 60112	CTI	275	300	275	600	250	300	275	275	375	300
	Arc Resistance	ASTM D-495	Class	3	2	2	4	2	1				
UL LISTED PRODUCTS FILE NR-E66640				●	●	●	●	●	●		●	●	●

Mineral fillers			●	●	●	●	●	●	●	●	●	●	●
Short glass fibres			●		●	●	●	●	●	●	●	●	●

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

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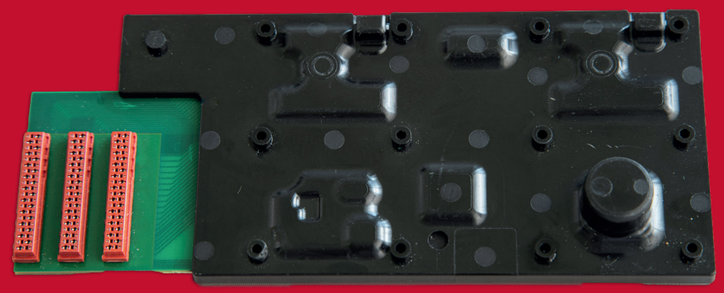
Product characteristics



SPECIFIC PROPERTIES	NU 461	NU 505	NU 510-1	NU 514	NU 3723	NU 4414	NU 6640	NU 6110	NU 6200	NU 6210
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 461	NU 505	NU 510-1	NU 514	NU 3723	NU 4414	NU 6640	NU 6110	NU 6200	NU 6210
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 recommendations are made without liability on our part. Buyers and users should make their own assessment of our products under their own conditions and for their own requirements.

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MORE IS ALWAYS POSSIBLE.