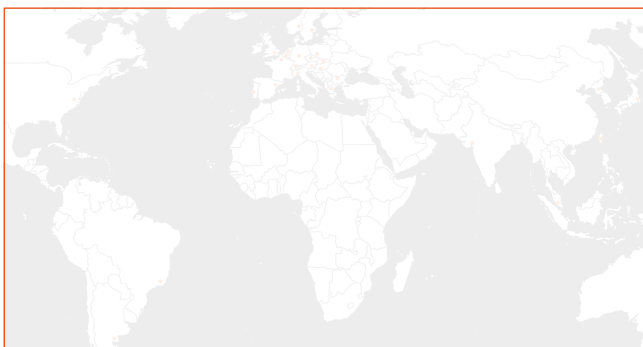




Controlled Expansion Alloys Magnetic Alloys Wire Rods

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For other grades formats made in Imphy, contact us.

Grades	WNR	ASTM	C	Ni	Co	Cr	Si	Mn	Fe	Oth.	Alloy Type	Main properties							Main utilisations Applications			
												Average thermal expansion between 0°C and (in 10 ⁻⁷ /°C)								K at 20°C μΩ.cm /km.s.°C	UTS Mpa	
												-100°C	100°C	200°C	300°C	400°C	500°C	600°C				
Controlled Expansion Alloys																						
INVAR®	1.3912	A658	<0.03	36	-	-	<0.5	<0.5	Bal.		FeNi	-16	11	22	43	-76	-89	-100	75	0.105	590	Precision measuring instruments, control apparatus, thermostats
N42		F30	<0.015	41	-	-	<0.2	0.5	Bal.		FeNi	-55	45	44	45	60	-78	-90	63	0.125	590	Sealing with soft glass
N42 LC	1.3917		<0.01	41	-	-	<0.2	1	Bal.		FeNi	-55	45	44	45	60	-78	-90	63	0.125	550	Sealing with soft glass
N42 Dumet	1.3917		<0.05	42	-	-	<0.2	<1	Bal.		FeNi	-66	57	55	55	64	-81	-93	63	0.125	590	Core wire for dumet
N47 Dumet	1.3920		<0.03	47	-	-	<0.2	<1	Bal.		FeNi	-80	81	81	82	83	90	-102	51	0.160	550	Core wire for dumet
N48	1.3922	F30	<0.03	48	-	-	<0.3	<0.5	Bal.		FeNi	-90	92	92	90	88	92	-103	50	0.160	550	Electrical wiring for glass metal connections
N52	1.3923	F30	<0.03	50.5	-	-	<0.2	<1	Bal.		FeNi	-99	100	100	100	98	98	-102	44	0.167	550	Glass sealing
DILVER 0			<0.04	-	-	29	1	<1	Bal.		FeCr	(-89)	95	98	102	106	111	114	65	0.121	580	Glass sealing
N485	2.4486		<0.01	48	-	5	<0.5	<0.5	Bal.		FeNiCr	(-88)	92	93	102	114	-125	85	0.142	570	Glass sealing in semi-conductor technology	
DILVER P	1.3981	F15	<0.05	29	18	-	<0.5	<0.5	Bal.		FeNiCo	(-65)	60	55	50	49	62	76	49	0.175	540	Ceramic-metal connection, opto-electronics, electrical wiring for high voltage applications
NICKEL 200	2.4060		<0.05	>99.6	-	-	<0.15	<0.15	<0.25		Nickel	(-135)	133	136	141	146	149	152	8	0.750	550	Electrical wiring
NICKEL 205	2.4061		<0.05	>99.6	-	-	<0.15	<0.15	<0.25	Mg, II	Nickel	(-135)	133	136	141	146	149	152	8	0.750	550	Anodes and grids, lead wire
NIMN2	2.4110		<0.1	>97	-	-	<0.2	2	<0.3		NiMn	-	130	-	-	-	-	-	13	0.630	550	Electrical wiring for lighting industry
Magnetic Alloys																						
AFK 18			<0.02	-	18	-	-	-	Bal.	Cr, V, Si	FeCo											Injectors, Patented grades
AFK 1		A801-2	<0.01	-	27	-	-	-	Bal.	Cr	FeCo											Motors & generators parts
AFK 502		A801-1	<0.02	-	49	-	-	-	Bal.	V	CoFe											Motors and generators parts, Injectors.
PERMIMPHY / MUMETAL			<0.01	80	-	-	<0.3	0.5	14	Mo5	NiFeMo											Measuring instruments.
SUPRA 50	1.3922 1.3926		<0.03	48	-	-	<0.3	<1	Bal.		FeNi											Safety parts for gas boiler, Electronic injectors, relays cores

Data between brackets correspond to unusual temperature levels

T_c : Curie point

ρ : Resistivity

K : Conductivity

UTS : Ultimate Tensile Strength

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