



G4J - gel for prefilled joints

G4J is a Polymeric Gel on elastomeric cross linked base, chemically inert and absolutely no toxic.



G4J is UL Recognized Component

For additional information see the UL Online Certifications Directory at www.ul.com/database

G4J is used for the filling of **all RAYTECH PREFILLED joints**:

HAPPY and **HAPPY JOINT** in all packing options;
GEL BOX LINE (ISAAC, PASCAL, WATT, JOULE, KELVIN) in all packing options;
GEL COVER LINE (OHM, BAR, MAMMUT GEL COVER) in all packing options;
NANO JOINT, NANO MAM and **NANO FOR**,
BRAVO and **MINI BRAVO**,
LITTLE JOINT (BARNEY, FRED, DINO, BARNEY Y, FRED Y, BOB4) in all packing options,
READY BOX IP68, FOX BOX
SUPER CLIK, RAPID JOINT IP68, RAPIDINO IP68,
KING JOINT, RAPID JOINT, CLIK FIRE,
RAPID JOINT IP68 System Fast RP and **RAPID JOINT System Fast RP**,
GALACTIC MAMMUT SECURITY, GALACTIC NANO JOINT,
MCA UNIVERSAL IP68 and **MCA-Y**.

PROPERTY		TEST METHOD / NOTE	UNIT	TYPICAL VALUE
Physical	Aspect	-	-	Gel
	Colour	-	-	Clear and transparent
	Initial Hardness	Penetration cone ASTM D 217/C	1/10 mm	340
	After aging hardness	Penetration cone ASTM D 217/C	1/10 mm	290
	Hardness	-	-	0 SHORE 00
	Density	-	g/cc	0,97
	Thermal conductivity	-	W/mK	Approx 0,2
	Continuous working temperature	-	°C	from -60 to +150
	Installation temperature	(related to joints)	°C	from -40 to + 50
	Water absorption after 30 days immersion	-	%	<< 0,05%
Flammability	Flame class	UL 94	-	HB
	Flammability point	-	°C	>200
	Auto-ignition temperature	-	°C	>400
Electrical	Dielectric strength	-	kV/mm	25
	Dielectric constant / Permittivity	@ 100Hz @ 100kHz	-	2.95 2.95
	Power factor / Tan δ	@ 100Hz @ 100kHz	-	0,0025 0,00015
	Volume resistivity	-	Ω cm	2,4 x 10exp 15
	Degree of protection	EN 60529	-	IPX8, IP68 (Depending on the envelopes)

RAYTECH S.r.l.

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 R.E.A. 1458135 • Iscr. Reg. Imp. MI 11325760152 • Capitale Sociale € 78000,00 i.v. • Part. IVA e C.F. 11325760152

EXPOSITION TO CHEMICALS OF CROSSLINKED PRODUCT	
Salt, salty water etc	have no adverse effect.
Sea water or chlorine environments (swimming pools etc.)	have no adverse effect.
Inorganic acids in water solutions	have not visible effects.
Strong, pure acids or alkaline (not in solution)	The exposition has to be avoided, especially at high temperature.
Alkaline solutions and vinegar	could bring, after a long time of exposition, to a softening of the external surface.
Solutions of hydrocarbons in water	could give, after a long exposition at quite high temperatures, the hardening of the external surface of the products; of course nothing happens for temporary expositions
Pure hydrocarbons	Permanent immersion in strong and pure hydrocarbons has to be avoided.

SHELF LIFE	
The product has unlimited shelf life, if stored and used according to the relevant instructions.	

Settimo Milanese, 10/2018

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TDS_G4J_gel_prefilled - 2/2



POLYPROPYLENE AUTO-EXTINGUIBLE - UL94 V2

- Raw material for the moulding of the following lines of enclosures:
 - Materia prima per lo stampaggio dei seguenti accessori:
 - Matière première pour la fabrication des suivantes accessoires:
- **Gel Box Line, (ISAAC, PASCAL, WATT, JOULE, KELVIN), HAPPY** with coloured casing ;
Gel Box Line, (ISAAC, PASCAL, WATT, JOULE, KELVIN), HAPPY con involucri colorati ;
Gel Box Line, (ISAAC, PASCAL, WATT, JOULE, KELVIN), HAPPY avec boites colorées ;
 - **MAMMUT GEL COVER**
 - **NANO JOINT, NANO MAM , NANO FOR**
 - **LITTLE JOINT (BARNEY, FRED, DINO, BARNEY Y, FRED Y, BOB4)**
 - **SUPER CLIK**
 - **RAPID JOINT IP68, RAPIDINO IP68**
 - **KING JOINT**
 - **RAPID JOINT**
 - **CLIK FIRE**
 - **MAGIC JOINT FIRE**
 - **RAPID JOINT L RIP68 e RAPID JOINT RP**
 - **GALACTIC MAMMUT SECURITY**
 - **GALACTIC NANO JOINT 4**
 - **MCA Universal IP68**
 - **MCA-Y**

PROPERTIES – Proprietà - Propriétés	METHOD Metodo Méthode	UNIT Unità Unité	TYPICAL VALUE Valore tipico Valeur typique
• GENERAL – generali - général			
Density Densità Densité	ASTM D-792	g/ml	0.93
Melt volume rate Tasso volumetrico allo stato fuso Débit volumique à l'état fondu 230°C/2.16Kg	ISO-1133	cm ³ /10 min	16.0
Linear modul shrinkage Ritiro lineare Rétraite linéaire	ASTM D-955	%	1.5
Transversal mould shrinkage Ritiro trasversale Rétraite transversale	ASTM D-955	%	1.5
Water adsorption (24h-23°C) Assorbimento acqua (24h-23°C) Absorption de l'eau	ASTM D-570	%	0.02
• THERMAL – Termiche- Thermique			
Vicat B	ASTM D-1525	°C	80
HDT A	ASTM D-648	°C	55

PROPERTIES – <i>Proprietà - Propriétés</i>	METHOD <i>Metodo Méthode</i>	UNIT <i>Unità Unité</i>	TYPICAL VALUE <i>Valore tipico Valeur typique</i>
• MECHANICAL – Meccaniche - Mécanique			
IZOD impact strength, notched <i>IZOD con intaglio IZOD avec entaille</i>	ISO-180/1A	KJ/m ²	9
IZOD impact strength, unnotched <i>IZOD senza intaglio IZOD sans entaille</i>	ISO-180/1U	KJ/m ²	NB
Tensile strength <i>Carico a trazione Charge à la traction</i>	ASTM D-638	MPa	20
Tensile elongation at break <i>Allungamento a rottura Allongement à rupture</i>	ASTM D-638	%	>100
Tensile modulus <i>Modulo elastico trazione Module d'élasticité traction</i>	ASTM D-638	MPa	1000
Flexural modulus <i>Modulo elastico a flessione Module d'élasticité à flexion</i>	ASTM D-790	MPa	-
Flexural strength <i>Carico massimo a flessione Charge maximale à flexion</i>	ASTM D-790	MPa	-
• ELECTRICAL – elettriche - électrique			
Comparative tracking index <i>CTI Indice d'alignement comparatif</i>	IEC 60112	V	-
Surface resistivity <i>Resistività di superficie Resistività de surface</i>	-	Ohm	-
• FLAME RESISTANCE - Resistenza alla fiamma – Resistività à la flamme			
Flame resistance (3.2 mm) <i>Resistenza alla fiamma (3.2 mm) Resistività à la flamme (3.2 mm)</i>	UL94	-	V2
Flame resistance (1.6 mm) <i>Resistenza alla fiamma (1.6 mm) Resistività à la flamme (1.6 mm)</i>	UL94	-	V2
Flame resistance (0.8 mm) <i>Resistenza alla fiamma (0.8 mm) Resistività à la flamme (0.8 mm)</i>	UL94	-	-
GWFI	IEC 60695-2-12	°C/mm	-
GWIT	IEC 60695-2-13	°C/mm	-

Settimo Milanese, 10/2018



POLYPROPYLENE RANDOM

- Raw material for the moulding of the enclosures (muffle) of following product lines:
Materia prima per lo stampaggio degli involucri (muffole) dei seguenti accessori:
Matière première pour la fabrication des suivantes accessoires (moufle):

HAPPY with transparent casing/con involucri trasparenti/ avec boites transparentes,

HAPPY JOINT,

GEL BOX LINE (ISAAC, PASCAL, WATT, JOULE, KELVIN) with transparent casing/con involucri trasparenti/ avec boites transparentes

GEL COVER LINE (OHM, BAR) with transparent casing/con involucri trasparenti / avec boites transparentes; BRAVO, MINI BRAVO;

MAGIC POWER JOINT, MAGIC POWER JOINT System Plus, MAGIC POWER JOINT System Fast RP;

MAGIC JOINT, MAGIC JOINT System Plus, MAGIC JOINT System Fast RP;

RUBBER JOINT;

RAYCAST, RAYCAST System Plus, RAYCAST System Fast RP;

WONDER JOINT, WONDER JOINT System Plus.

GELGUM JOINT L,

GELGUM JOINT Y

PROPERTIES – Proprietà - Propriétés	METHOD Metodo Méthode	UNIT Unità Unité	TYPICAL VALUE Valore tipico Valeur typique
• GENERAL – generali - général			
Density Densità Densité	ISO-1183	Kg/m ³	905
Melt Flow Rate Indice di fluidità Indice de fluidité 230°C/2.16Kg	ISO-1133	g/10 min	20
• THERMAL – Termiche- Thermique			
HDT 0.45MPa	ISO-75	°C	69
• MECHANICAL – Meccaniche - Mécanique			
Charpy impact strength, notched Charpy con intaglio Charpy avec entaille	ISO-179	KJ/m ²	6
Flexural modulus Modulo elastico a flessione Module d'élasticité à flexion	ISO-178	MPa	1100

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