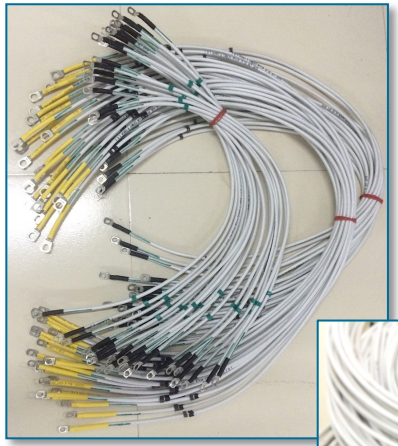
Industrial Glass Insulation

About IGI

- **Industrial Glass Insulation (IGI)** was set up in 1989 in Mumbai.
- The main objective of IGI is to produce high quality wires and cables, which are durable and safe.
- The CEO, **Shri Omprakash Rajgarhia** has decades of experience and knowledge in the field of manufacturing cables and electrical insulating material, particularly specialty wires and cables, which are meant for high temperature and high voltage applications.
- The IGI team consists of a highly qualified and professional workforce that is dedicated at producing high quality products, using advanced imported machinery.
- The practice of quality control includes continuous in-process inspections, laboratory examinations of product specifications and rigid testing of the finished goods.
- Along with the assurance of quality, IGI believes in providing prompt customer service through timely response and follow-up on all requests and queries.

Our Products

- Nyvin Cables
- Silicon Cables
- Fibre Glass Wires & Cables
- PVC Insulated Cables
- PTFE Wires & Cables
- Fibre Glass based Insulating Material
- Other cables designed as per customer specifications



Nyvin Cables

- The British Standard states the requirement for ‘Nyvin’ type cables for aircraft wiring.
- Nyvin Cables are single Core, Annealed Tinned Copper Conducting, Heat Resistant (105°C) Poly Vinyl Chloride (HR-PVR) insulation cables with Fibre Glass Braiding and Nylon Braiding & Lacquering.
- These cables are ideal for use in Battery Cables, UPS Wiring, Battery Bank Interconnections, Control Panel Board Wiring, Electric Motors, Transformers, Generators, Invertors, Solar Power Equipment, Data Center Wiring and many others.

Features of Nyvin Cables

- Cost Effective
- Higher Temperature Resistance as compared to Ordinary PVC Cables
- Oil & Water Resistant
- Abrasion Resistant
- High Current Carrying Capacity
- Light Weighted

PVC Cables vs. Nyvin Cables

PVC Cables	Nyvin Cables
CONDUCTOR	
Bare copper conductor	Tinned copper conductor
Result: The cable gets oxidized when it comes in contact with air.	Result: The cable doesn't get oxidized and it is easy to solder.
PVC INSULATION	
Ordinary PVC	HR PVC
Result: The cable can stand a maximum temperature of 70°C	Result: The cable can stand a maximum temperature of 105°C
FIBRE GLASS BRAIDING	
Not Applicable	Fibreglass being a bad conductor ensures fire-retardancy during fires. It gives high mechanical strength to the cable.
NYLON BRAIDING & LACQUERING	
Not Applicable	Nylon adds to the thermal stability of the cable. The process of lacquering improves the mechanical strength of the cable. It makes the cable oil, water and abrasion resistant.

PVC Cables vs. Nyvin Cables

PVC Cables		Uninyvin Cables		
Cable Size (Sq.mm)	Current Rating (Amps)	Cable Size (Sq.mm)	Area (Sq.m)	Current Rating (Amps)
1.50	14	20	0.556	14
2.50	19	18	0.966	18
4.00	26	16	1.170	21
6.00	33	14	2.050	31
10.00	45	12	3.220	43
16.00	60	10	5.330	61
25.00	75	8	8.760	87
35.00	95	6	13.300	115
50.00	125	4	21.500	160
70.00	170	2	33.300	200
95.00	210	1	40.700	220
120.00	235	0	53.000	240
150.00	295	00	68.300	270
		000	84.200	300
		0000	109.000	350

INDUSTRIAL GLASS INSULATION

Nyvin Cables

Cable Size	CONDUCTOR					Radical Thickness of Insulation mm, min					Overall Dia of Finished Cable (mm)		Max. Cond. Resistance for 900 mts at 20°C (ohms)	Max. Cond. Resistance for 100 mts at 105°C (ohms)	Max. Cond. Resistance for 1000 mts at 50°C (ohms)	Current Rating Amps at 20°C
	Nom. Area (mm^2)	Heavy Duty Export Series (lug-m^2)	No. & Dia. of Wires (mm)	Dia (mm)		PVC	Nylon Sheath		Nylon Braid & Lacquer							
				Max	Min	Min	Max	Min	Max	Min	Max	Min				Max
22	0.347	0.5	19/0.152	0.838	0.7366	0.2286	0.1778	0.0762	-	-	2.0	1.8	49.66	7.50	61.63	14
20	0.556	0.5	19/0.193	1.041	0.9398	0.2286	0.1778	0.0762	-	-	2.3	2.0	30.95	4.68	38.41	18
18	0.966	1	33/0.193	1.321	1.2192	0.2286	0.1778	0.0762	-	-	2.5	2.3	17.82	2.69	22.11	23
16	1.17	1.5	40/0.193	1.549	1.397	0.2286	0.1778	0.0762	-	-	2.8	2.5	14.7	2.22	18.24	27
14	2.05	2.5	70/0.193	1.956	1.8034	0.2794	0.1778	0.0762	-	-	3.4	3.0	8.41	1.27	10.44	40
12	3.22	4	110/0.193	2.438	2.286	0.2794	0.1778	0.0762	-	-	3.8	3.5	5.35	0.81	6.64	55
10	5.33	6	75/0.3	3.15	2.8956	0.381	-	-	0.1778	0.0762	5.0	4.6	3.23	0.49	4.01	78
8	8.76	10	124/0.3	4.242	3.937	0.381	-	-	0.381	0.127	6.3	5.9	1.97	0.30	2.44	111
6	13.3	16	188/0.3	5.537	5.08	0.381	-	-	0.381	0.127	7.6	7.3	1.3	0.20	1.61	148
4	21.5	25	304/0.3	6.909	6.4516	0.4826	-	-	0.381	0.127	9.3	8.8	0.802	0.12	1.00	205
2	33.3	35	471/0.3	8.763	8.128	0.4826	-	-	0.381	0.127	11.0	10.5	0.517	0.08	0.64	256
1	40.7	50	575/0.3	9.754	9.1186	0.5588	-	-	0.381	0.127	12.2	11.7	0.423	0.06	0.53	282
0	53	70	749/0.3	10.97	10.338	0.635	-	-	0.381	0.127	13.7	13.0	0.325	0.05	0.40	308
00	68.3	70	965/0.3	12.45	11.684	0.6858	-	-	0.381	0.127	15.4	14.6	0.252	0.04	0.31	346
000	84.2	95	1190/0.3	13.92	13.157	0.762	-	-	0.381	0.127	16.9	16.1	0.204	0.03	0.25	384
0000	109	120	1545/0.3	15.62	14.859	0.7874	-	-	0.381	0.127	18.7	17.9	0.158	0.02	0.20	450

As Per G-177

INDUSTRIAL GLASS INSULATION

MAXIMUM CURRENT RATINGS FOR NYVIN & NYVINAL* CABLES

(AS PER G-177)

These current ratings are based on a temperature use of 40°C and allow for an ambient temperature of 65°C. The maximum permissible conductor temperature is 105°C. If the ambient temperature 't' continuously exceeds 65°C, the current ratings should be multiplied by the factor 'k' where, $k = \frac{(105-t)}{40}$

Nyvin	Nyvinal	Maximum Continuous Rating (Amp)				Maximum 5 mins. Rating (Amp)				Maximum 1 min. Rating (Amp)			
		Single Cables in Free Air	3 Bunched Cables in Free Air	7 Bunched Cables in Free Air	12 Bunched Cables in Free Air	Single Cable in Free Air	3 Bunched Cables in Free Air	7 Bunched Cables in Free Air	12 Bunched Cables in Free Air	Single Cable in Free Air	3 Bunched Cables in Free Air	7 Bunched Cables in Free Air	12 Bunched Cables in Free Air
22	-	11	7	5	4	12	8	7	6	15	12	9	9
20	-	14	9	7	5	16	12	9	8	22	19	15	15
18	-	18	13	10	6	23	17	13	12	30	26	19	18
16	-	21	15	11	7	25	19	14	13	33	28	26	25
14	-	31	24	17	12	36	28	24	21	50	47	43	42
12	-	43	30	22	15	50	38	32	30	72	67	62	60
10	8	61	47	36	25	71	56	48	45	110	107	104	101
8	6	87	65	49	36	105	89	82	80	173	165	159	153
6	4	115	87	65	-	152	122	115	-	250	236	230	-
4	2	160	120	92	-	225	185	175	-	390	378	360	-
2	0	200	155	120	-	305	265	250	-	454	530	520	-
1	00	220	165	130	-	330	300	290	-	620	600	590	-
0	000	240	185	168 ^	-	370	350	340	-	705	690	680	-
00	0000	270	210/240 #	190 ^	-	420	410	405 ^	-	820	810	800 ^	-
000	-	300	235/265 #	210 ^	-	470	460	455 ^	-	965	955	940 ^	-
0000	-	350	270/350 #	245 ^	-	570	555	550 ^	-	1255	1240	1225 ^	-

*The values for Nyvinal Cables have not been confirmed experimentally

# Denotes two cables only

^ Denotes five cables only

Our Clients

- Reliance Industries Ltd.
- Bharat Heavy Electricals Ltd. (BHEL)
- National Thermal Power Corporation Ltd. (NTPC)
- Indian Space Research Organisation (ISRO)
- Schneider Electric I.T Business India Pvt. Ltd.
- Delta Power Solution Pvt. Ltd.
- Amara Raja Electronics Ltd.
- Emerson Network Power India Pvt. Ltd.
- Larsen & Toubro Ltd.
- Bharat Electronics Ltd.
- Crompton Greaves Ltd.
- ABB Ltd. and many others

Contact Details

INDUSTRIAL GLASS INSULATION

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bsi.

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2008

This is to certify that:

Industrial Glass Insulation
Building No. E-9, Gala No. 4,5 & 6
Hari Har Compound, Mouje Dapoda
Taluka Bhivandi
Thane 421 302
Maharashtra
India

Holds Certificate No: **FM 574778**

and operates a Quality Management System which complies with the requirements of ISO 9001:2008 for the following scope:

The manufacture and supply of insulated copper cables, wire harness, braided ropes and twines.

For and on behalf of BSI:

Gary Fenton, Global Assurance Director

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...making excellence a habit.