



VM INSULATION

VIDYA METAL MFG. CO. PVT. LTD.
WINDING WIRES

INDIA'S MOST TRUSTED
**ALUMINIUM & COPPER
WINDING WIRES**



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VM INSULATION

**offers clients a full range
of Enamelled Aluminium
& Copper wire tailored to
their specific needs.**



Company Profile



VMI GROUP engaged in the Copper & Aluminium Enamelled Wire, Plastics Jars and Mineral Bottles industry since last 35 years . We are having our units at Jammu, Manesar and Bhiwadi. VMI Group, having a team of highly experienced professionals. VMI Group has spread its wings in diverse direction which include Copper Rods, Copper Wire, Winding Wires, Copper Strips & Flats, Super Enamelled Wire and Polycarbonate Sheet, Multiwall Polycarbonate Sheet and Multicell Panel Sheet etc.



VMI INSULATION (AN ISO 9001:2015 Certified Co.) to meet customer deadlines, we have created an agile production facility for drawing, shaping, serving, twisting and insulating wire for high-technology users worldwide. Short production runs and quick turnarounds are our specialities. Much of our production equipment is made exclusively to serve its customers' speciality wire needs which includes Aluminium Rods, Wires, Strips, Foils, Flats and Insulated conductors of Enamel / Fibre Glass / Paper, Confirming to National and International Standards.



Vidya Metal Mfg. Co. Pvt. Ltd. (An ISO 9001:2015 Co.) a group company has established a unit at Bhiwadi (Haryana) to manufacture Electrolytic Copper Rods & Strips, Busbar & Profiles with latest imported plant & technology to produce International standard products confirming to BIS / IEC Standards. We are fully equipped with in house laboratory and quality parameters are tested on line as well as off line for each batch of products.



VMI Plastics Pvt. Ltd. entered into the field of manufacturing Polycarbonate bottles in year 2000. Presently we are supplying bottle to The Hindustan Coca-Cola and other reputed mineral water bottle manufacturers. In the year 2004 we entered into manufacturing of Polycarbonate sheet under the brand name "SUNLITE Polycarbonate Sheet". The manufacturing and technical center is located in Manesar (Haryana).



Alliance Copper Concepts Pvt. Ltd. (An ISO 9001:2015 Co) is an association of vast experience accompanied by young zeal & enthusiasm. Our organization is very well equipped to deliver its customers the best quality products at the most reasonable prices, being our works situated at one of the most economically strategic locations of India, Jammu. We manufacture ACC Enamelled Winding Wires made of C.C. Copper, range between 8-SWG to 40-SWG. These wires are insulated with variety of Wire Enamels, like Polyester, Modified Polyester, Polyesterimide (Hermetic) and Dual Coat (Lmide-Amide).



VMI Manufacturing setup at Bhiwadi

Leading through a passion for innovation.

At **VM Insulation** we want to offer our customers the best Bare and Insulated conductors (Enamel / Fibre Glass / Paper) of Copper & Aluminium and Flats and Profiles. Therefore, we are constantly on the look-out for innovative new solutions. In the way we fulfill the promise to our customers that we will always be a step ahead.

By opting for VM Insulation Enamelled Copper and Aluminum Wire you are choosing :

Wide range of products and sizes	FU PAO INDIA , BAWA POLYMERS, ELANTAS BECK INDIA LTD., HARMAN BAWA PVT. LTD. - Enamel and Insulation used for production
Flexible machinery that is constantly being upgraded	More than 35 + years of experience
Customized solutions	Quality that will exceed expectations
High quality raw material	Hindalco / Vedanta Coils - used as raw material
Optimising the use of materials	Improving business and technological processes
Moderate volumes, competitively priced	Order specific packaging
Extremely customer service oriented	Environmentally friendly



A

**4 Plants across
the India**

B

**World Class
Manufacturing
Setup**

C

**One of India's Largest
Aluminum Enamelled
Wire Producing Company**

D

**35+ Years
of Experience**

Product Profile

Aluminium / Copper Enamelled Round Winding Wire

Enamel Base	Polyester	Modified Polyester	Polyester Imide	Dual Coat (Lmide-Amide)
Temperature Index	130°	155°	180°	200°
Thermal Class	B	F	H	H+
Colour	Light Brown to Brown	Brown	Brown	Light Brown
Range	0.122mm to 4.0mm	0.122mm to 4.0mm	0.122mm to 4.0mm	0.5mm to 2.0mm
I.S. Specification	I.S. - 13730 PT-34	I.S. - 13730 PT-3	I.S. - 13730 PT-8	I.S. - 13730 PT-13
Cut Through	240°C	270°C	300°C	320°C
Heat Stock	155°C	175°C	200°C	220°C
Abrasion Resistance Flexibility Solvent Resistance	Good	Good	Very Good	Excellent
Application	All General Electric Equipment	General Purpose Rotating and Static Electrical Equipment	For FHP Motors, Hand Tool, Electromagnetic Coils	Special Motors including hermetic Motors, High speed winding machines
Special	Ideal for Rewinders	Balanced Electrical & Mechanical Properties Good for O.E.Ms	Higher Thermal Endurance Excels in Thermoplastic Flow, Abrasion & Heat Shock	Very High Thermal Property, Excellent for Hermetic Use

Product:

Enamelled / Magnet Copper Wire
Enamelled / Magnet Aluminium Wire
Aluminium / Copper Enamelled Round
Winding Wires

Product Range:

Minimum 0.122mm to maximum 4.0mm

Packing Details:

Taper Spools : PT-130mm to PT-335mm

Class of Insulation:

Modified Polyester : Class 155

Polyester Imide : Class 180

Dual Coat (Lmide-Amide) : Class 200



Aluminium Fiber Glass



Temp. Class	Type of Insulation	Size Range	Specification
155°C	F	10sq. mm - 100sq. mm	IS - 13730 (Part 32), IEC 317-32 NEMA - MW 41
180°C	H		IS - 13730 (Part 31), IEC 317-31 NEMA - MW 43
200°C	C		IS - 13730 (Part 33), IEC 317-33 NEMA - ME 50

Aluminum Bus Bar

EC Grade Aluminum Alloy



Alloys	Standard	Width (Min.)	Width (Max.)	Thickness mm (Min.)	Thickness mm (Max.)	Types
Aluminum Bus Bar	IS/ASTM	5mm	30mm	1mm and above	10mm	Sharp Edge Half Round Full Round

Paper Covered Round & Rectangular Flats, Strip - Copper & Aluminium



Temp. Class	Type of insulation	Size Range	Specifications
105°C	Electrical Grade : Kraft Paper Crepe Paper Thermally Upgraded Paper	Round wire : 2 to 5mm Flat Strip : 8 to 120sq.mm Min Size : 4 x 2mm Max Size : 20 x 6mm	IEC - 60317-27 IS - 13730-27 NEMA MW 31 & 33

Enamelled Rectangular Flat & Wire Copper & Aluminium



Temp. Class	Type of insulation	Size Range	Specifications
'B', 105°C / 120°C 'F', 155°C 'H', 180°C 'C', 200°C	Polyvinyl Acetal (PVA / PVF) Polyester Polyesterimide Polyesterimide (Base Coat) + Polyesterimide (Top Coat)	Area : 6 -70sq.mm Min Size : 3 x 2 mm Max Size : 14 x 5mm	IEC-60317-18 NEMA MW-18 IEC-60317-16 IS-13730-16 IEC-60317-28 IS-13730-28 IEC-60317-29 IS-13730-29 / NEMA MW-36



Conductor:

Conductor are drawn from electrolytic grade Aluminum & Copper manufactured by using best raw material directly purchased from manufacturers to ensure compliance with global standards.

Enamelling Process:

In Enamelling process, a thin layer of enamel insulation is applied on on top of the drawn bare Copper /Aluminium wire or any combination as per standards or as per customer requirements. It is ensured that enamel application is very scientific and every care is taken to ensure a concentric coating.

During processing on the enamelling machine , the diameter of the conductor, its surface, size of covering etc. are checked at each stage.

The advantage of enamelled copper round winding wire: it takes up less space in coil formation, use less energy and is resistant to corrosion.

Standard Packing: On Plastic Spool.

Standard Length: As per customer requirements.

DELIVERY SPOOLS

Our enamelled wires are supplied on spools, both cylindrical barrelled and taper barrelled as per customer requirement.

130mm	160mm	8" (200mm)	10" (250mm)	260mm	
11" (266mm)	325mm	PT-4	PT-5	PT-10	
PT-20	PT-25	PT-45	PT-60	PT-90	PT-200



Lab Testing Equipments



Inline Dimensional Tester

Automatic in line dimensional testing.



SLA	Speed	Length	Weight	TESTING MAGNET	Resistance Value	Pinhole
W. 181	01	01	0.01	00000	10.00u	0
W. 200	02	02	0.02	00000	10.00u	0
W. 220	03	03	0.03	00000	10.00u	0
W. 240	04	04	0.04	00000	10.00u	0
W. 260	05	05	0.05	00000	10.00u	0
W. 280	06	06	0.06	00000	10.00u	0
W. 300	07	07	0.07	00000	10.00u	0
W. 320	08	08	0.08	00000	10.00u	0
W. 340	09	09	0.09	00000	10.00u	0
W. 360	10	10	0.10	00000	10.00u	0
W. 380	11	11	0.11	00000	10.00u	0
W. 400	12	12	0.12	00000	10.00u	0
W. 420	13	13	0.13	00000	10.00u	0
W. 440	14	14	0.14	00000	10.00u	0
W. 460	15	15	0.15	00000	10.00u	0
W. 480	16	16	0.16	00000	10.00u	0
W. 500	17	17	0.17	00000	10.00u	0
W. 520	18	18	0.18	00000	10.00u	0
W. 540	19	19	0.19	00000	10.00u	0
W. 560	20	20	0.20	00000	10.00u	0
W. 580	21	21	0.21	00000	10.00u	0
W. 600	22	22	0.22	00000	10.00u	0
W. 620	23	23	0.23	00000	10.00u	0
W. 640	24	24	0.24	00000	10.00u	0
W. 660	25	25	0.25	00000	10.00u	0
W. 680	26	26	0.26	00000	10.00u	0
W. 700	27	27	0.27	00000	10.00u	0
W. 720	28	28	0.28	00000	10.00u	0
W. 740	29	29	0.29	00000	10.00u	0
W. 760	30	30	0.30	00000	10.00u	0
W. 780	31	31	0.31	00000	10.00u	0
W. 800	32	32	0.32	00000	10.00u	0
W. 820	33	33	0.33	00000	10.00u	0
W. 840	34	34	0.34	00000	10.00u	0
W. 860	35	35	0.35	00000	10.00u	0
W. 880	36	36	0.36	00000	10.00u	0
W. 900	37	37	0.37	00000	10.00u	0
W. 920	38	38	0.38	00000	10.00u	0
W. 940	39	39	0.39	00000	10.00u	0
W. 960	40	40	0.40	00000	10.00u	0
W. 980	41	41	0.41	00000	10.00u	0
W. 1000	42	42	0.42	00000	10.00u	0

Inline Pin hole Tester

Automatic in line Insulation pinholes testing.



Hot Air Oven

Thermal Stability of Insulation testing



Cut through Tester

Thermoplasticity of Insulation testing.



3 Kv DC Pin hole Tester

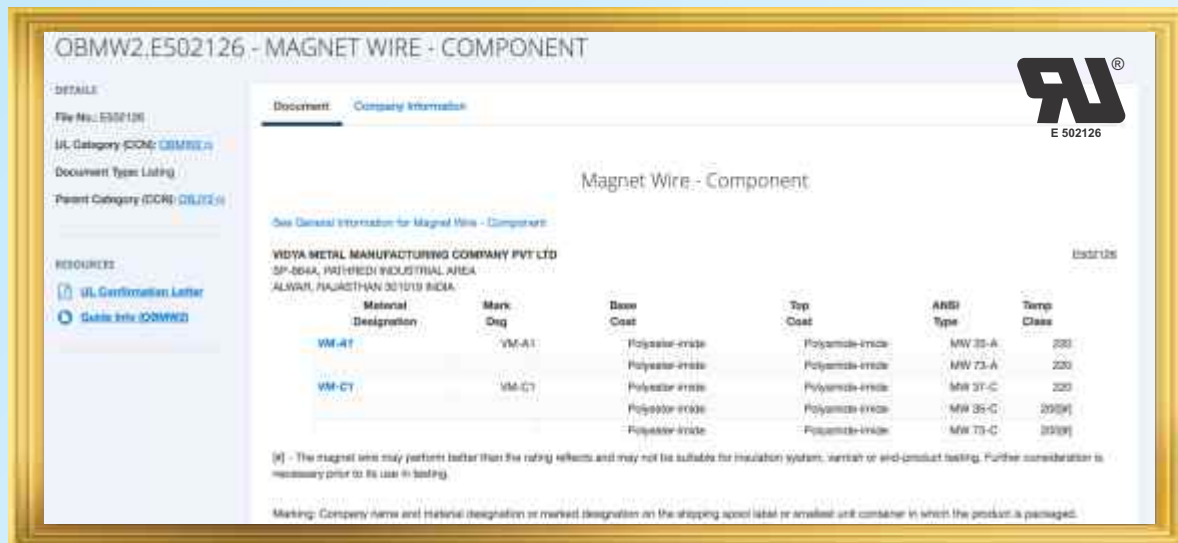
Insulation Continuity Testing.



Tan Delta Tester

Temperature class of Insulation testing.

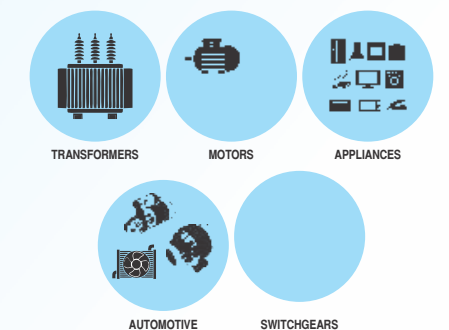
As an **ISO 9001: 2015** certified company, has the assurance of professionalism and expertise in the development and manufacture of the highest quality Enamelled Copper & Aluminum Wires & Strips. At VM Insulation we are dedicated to quality, customer service and the continual improvement of our business. We are constantly reviewing our products and services as per your need & requirements.



CERTIFICATIONS



APPLICATIONS



We have "UL" Certification for our Enamelled Round and Rectangular Copper and Aluminum Conductors Under the UL File No- E502126.

Specification Tables

Size (SWG)	Size (mm)	Conductor Tolerance (mm)	Resistance of 20°C (ohm/mtr)	Grade 1 Fine Covering		Grade 2 Medium		Grade 3 Thick		For Grade 2 Wire			Weight of Enamelled wire in 1000 mtrs. in kg	Size (SWG)
				Increase Diameter (min)	Overall Diameter (max)	Increase Diameter (min)	Overall Diameter (max)	Increase Diameter (min)	Overall Diameter (max)	Gain in %	BDV in KV (min)	Back in Degree (max)		
8	4.064	0.041	0.001318	0.060	4.152	0.088	4.186	0.122	4.265	35	2500	5	116.31	8
9	3.657	0.037	0.001641	0.059	3.743	0.086	3.775	0.118	3.8491	35	2500	5	94.228	9
10	3.251	0.033	0.00206	0.057	3.335	0.084	3.367	0.116	3.435	35	2500	5	74.54	10
11	2.946	0.030	0.002505	0.045	3.029	0.084	3.072	0.127	3.112	34	2500	5	61.241	11
12	2.642	0.027	0.003118	0.043	2.722	0.081	2.764	0.123	2.803	34	2500	5	49.304	12
12.5	2.489	0.025	0.003551	0.042	2.569	0.080	2.609	0.121	2.653	34	2500	5	43.759	12.5
13	2.337	0.024	0.003985	0.041	2.415	0.079	2.455	0.119	2.493	33	5000	5	38.617	13
13.5	2.184	0.022	0.00456	0.041	2.262	0.078	2.301	0.117	2.338	33	5000	5	33.726	13.5
14	2.032	0.020	0.005271	0.041	2.108	0.077	2.147	0.116	2.184	33	5000	5	29.224	14
14.5	1.930	0.019	0.005891	0.040	2.005	0.076	2.044	0.114	2.080	33	5000	5	26.363	14.5
15	1.829	0.019	0.006506	0.040	1.903	0.075	1.941	0.113	1.977	33	5000	5	23.7	15
15.5	1.727	0.018	0.0073	0.039	1.800	0.074	1.838	0.112	1.873	33	5000	5	21.131	15.5
16	1.626	0.017	0.008232	0.039	1.698	0.073	1.735	0.110	1.770	32	5000	5	18.75	16
16.5	1.524	0.017	0.00938	0.038	1.595	0.072	1.631	0.108	1.666	32	5000	5	16.472	16.5
17	1.422	0.015	0.01076	0.038	1.492	0.071	1.528	0.107	1.562	32	5000	30	14.37	17
17.5	1.320	0.014	0.12590	0.038	1.388	0.069	1.413	0.103	1.456	32	5000	30	12.382	17.5
18	1.219	0.013	0.01465	0.035	1.285	0.067	1.318	0.100	1.350	31	5000	37	10.581	18
18.5	1.117	0.011	0.01742	0.035	1.182	0.066	1.215	0.099	1.247	31	5000	37	8.884	18.5
19	1.016	0.011	0.02108	0.034	1.080	0.065	1.113	0.098	1.144	30	5000	41	7.372	19
19.5	0.965	0.011	0.02356	0.034	1.028	0.064	1.060	0.096	1.091	30	5000	41	6.651	19.5
20	0.914	0.010	0.02605	0.034	0.976	0.063	1.008	0.095	1.038	30	5000	45	5.973	20
20.5	0.863	0.009	0.02946	0.033	0.924	0.061	0.955	0.093	0.984	30	5000	45	5.324	20.5
21	0.813	0.009	0.03293	0.032	0.872	0.06	0.902	0.090	0.931	29	5000	48	4.735	21
21.5	0.762	0.008	0.0375	0.031	0.819	0.058	0.848	0.087	0.876	29	5000	48	4.16	21.5
22	0.711	0.008	0.04305	0.030	0.766	0.056	0.795	0.085	0.822	28	4900	43	3.63	22
22.5	0.661	0.007	0.04983	0.028	0.712	0.052	0.739	0.080	0.765	28	4900	43	3.137	22.5
23	0.610	0.006	0.05848	0.027	0.659	0.050	0.684	0.075	0.708	27	4800	50	2.68	23
23.5	0.584	0.006	0.06384	0.026	0.632	0.048	0.656	0.073	0.680	27	4800	50	2.457	23.5
24	0.559	0.006	0.06965	0.025	0.605	0.047	0.629	0.073	0.652	26	4600	44	2.256	24
25	0.508	0.006	0.08434	0.025	0.554	0.047	0.578	0.071	0.601	26	4600	44	1.866	25
26	0.457	0.005	0.1042	0.024	0.501	0.045	0.523	0.071	0.544	25	4600	47	1.512	26
27	0.417	0.005	0.1252	0.022	0.458	0.042	0.480	0.067	0.500	25	4400	48	1.26	27
28	0.376	0.005	0.1539	0.021	0.417	0.040	0.435	0.064	0.454	24	4400	50	1.027	28
29	0.345	0.005	0.1829	0.020	0.382	0.038	0.401	0.060	0.418	23	4300	53	0.867	29
30	0.315	0.004	0.2193	0.019	0.349	0.035	0.367	0.057	0.384	23	4100	55	0.725	30
31	0.295	0.004	0.2501	0.019	0.329	0.035	0.347	0.053	0.364	23	4100	55	0.637	31
32	0.274	0.004	0.2899	0.018	0.306	0.033	0.323	0.050	0.339	22	4000	53	0.55	32
33	0.254	0.004	0.3374	0.018	0.286	0.033	0.303	0.050	0.319	22	4000	53	0.474	33
34	0.234	0.004	0.3974	0.017	0.265	0.032	0.281	0.048	0.296	22	3900	56	0.403	34
35	0.213	0.003	0.4798	0.015	0.241	0.029	0.255	0.043	0.269	21	3700	59	0.335	35
36	0.193	0.003	0.5842	0.014	0.219	0.027	0.232	0.039	0.245	21	3500	62	0.275	36
37	0.173	0.003	0.7271	0.013	0.197	0.025	0.210	0.036	0.222	20	3300	65	0.222	37
38	0.152	0.003	0.9418	0.012	0.174	0.023	0.186	0.033	0.197	19	3200	67	0.173	38
39	0.132	0.003	0.12496	0.011	0.152	0.021	0.162	0.030	0.171	18	3000	67	0.131	39
40	0.122	0.003	0.14623	0.010	0.141	0.019	0.151	0.028	0.160	17	2800	70	0.112	40

Our major clients



VMI Group Product Range

Copper / Aluminium Rods , Paper Insulated Copper / Aluminium Conductors, Enamelled Copper / Aluminium Rectangular Winding Wires, Enamelled Copper / Aluminium Round Winding Wires / Fiber Glass Covered Rectangular / Round Wires / Submersible Copper Winding Wires / Solid / Compact Sheet (Diamond, Prism, Embossed) / Polycarbonate Sheet / Multiwall Polycarbonate Sheet / Multicell Panel System / Polycarbonate Lathi (Baton) and Poly Shield / Ventilation Base Plate & Fan / Mineral Bottles and Jars / Bare Copper / Aluminium Round Wires, Bare Copper / Aluminium Rectangular Wires, Strips & Profiles.

Our Manufacturing Plants



Office:

507, 5th Floor, D-Block, NDM-II, Netaji Subhash Place, Pitampura, Delhi-110034

E mail: support@vmigroup.org

Director :

E mail: abhinav.goyal@vmigroup.org Mob: +91-98731 98765

Works: Unit-1

SP-812 / F-39-40, RIICO Industrial Area Phase-1, Bhiwadi, Distt-Alwar, Rajasthan

Works: Unit-2

SP-864(A), Industrial Area Pathredi, Distt-Alwar, Rajasthan



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