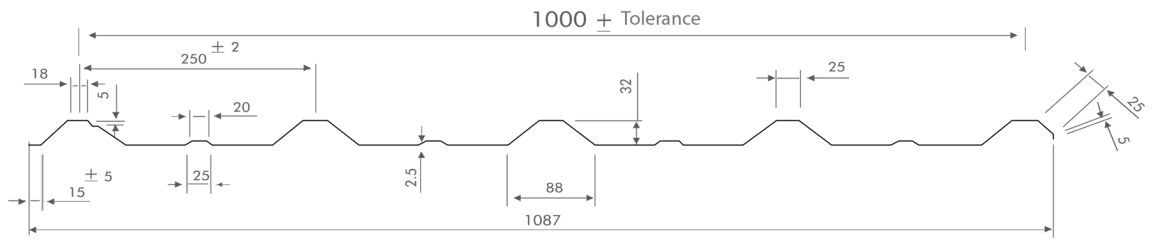


Tomorrow's Roofing Solutions *Today*

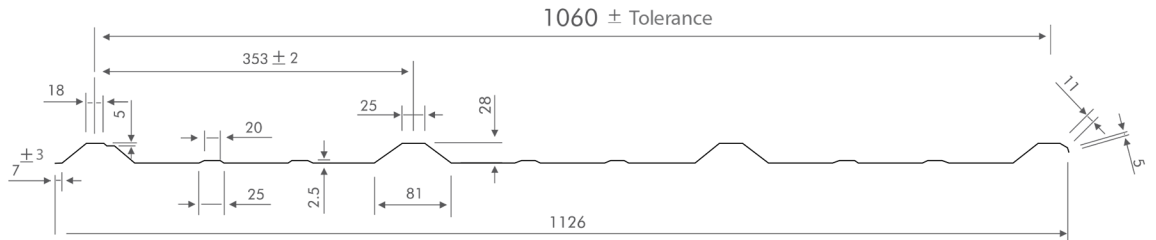



SUPERCOLOR[®]
The Future of Roofing

SUPERCOLOR PROFILES: TECHNICAL SPECIFICATIONS


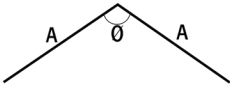



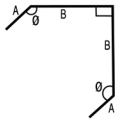

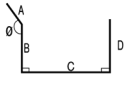

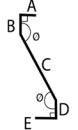

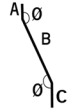

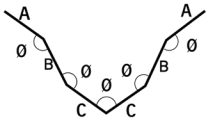


Thickness	Ixx	Zxx	Zxx	Span for Deflection		U.D.L. Kg/m ² for span															
						W/m ² =70 Kg	1 meter			1.4 meter			1.6 meter			1.8 meter			2.0 meter		
							Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span
mm	cm ⁴	cm ³	cm ³	L/100	L/200	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	
0.40	4.80	2.02	6.00	2.19m	1.74m	368	372	376	134	138	146	100	110	130	64	84	120	46	56	80	
0.45	5.40	2.26	6.70	2.28m	1.81m	414	420	427	151	156	166	112	122	142	84	92	135	52	63	90	
0.47	5.70	2.40	7.10	2.32m	1.84m	437	443	449	159	165	178	118	127	145	86	103	142	54	66	95	
0.50	6.00	2.53	7.50	2.36m	1.87m	461	467	472	168	175	190	125	133	149	88	115	150	57	70	100	
0.55	6.60	2.79	8.30	2.43m	1.95m	507	512	516	184	189	200	138	150	170	96	127	165	63	77	110	
0.60	7.20	3.03	9.00	2.51m	2.00m	553	556	559	201	207	219	150	160	180	105	138	180	69	84	120	
0.63	7.50	3.16	9.38	2.54m	2.02m	575	579	581	209	217	233	157	167	182	110	144	188	72	87	125	
0.65	7.80	3.28	9.76	2.58m	2.04m	598	602	604	218	228	248	165	175	185	116	150	196	75	90	130	
0.70	8.40	3.54	10.50	2.64m	2.09m	645	648	655	235	243	260	180	190	200	127	161	210	80	98	140	
0.80	9.60	4.04	12.00	2.76m	2.19m	737	741	744	268	276	292	200	205	235	139	184	240	92	112	160	
0.90	10.80	4.55	13.50	2.87m	2.28m	830	832	835	302	310	336	225	240	270	152	207	270	103	126	180	
1.00	12.00	5.05	15.00	2.97m	2.36m	922	935	944	336	346	366	250	275	305	167	230	300	115	140	200	




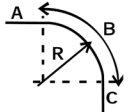




Thickness	Ixx	Zxx	Zxx	Span for Deflection		U.D.L. Kg/m ² for span															
						W/m ² =70 Kg	1 meter			1.4 meter			1.6 meter			1.8 meter			2.0 meter		
							Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span
mm	cm ⁴	cm ³	cm ³	L/100	L/200	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	Single Span	Double Span	Multi Span	
0.40	3.16	1.40	5.70	1.90m	1.51m	242	272	320	88	100	128	48	60	88	40	56	80	30	36	60	
0.45	3.50	1.58	6.41	1.98m	1.57m	272	306	360	99	112	144	56	67	99	45	62	90	34	40	68	
0.47	3.72	1.67	6.77	2.01m	1.60m	287	323	380	104	118	152	58	71	104	47	66	95	36	42	71	
0.50	3.95	1.76	7.13	2.05m	1.63m	302	340	400	110	125	160	60	75	110	50	70	100	38	45	75	
0.55	4.34	1.93	7.85	2.09m	1.68m	332	374	440	121	137	176	66	83	121	55	77	110	42	50	82	
0.60	4.73	2.11	8.57	2.18m	1.73m	363	408	480	132	150	192	72	90	132	60	84	120	45	54	90	
0.63	4.92	2.20	9.11	2.22m	1.75m	378	425	500	137	156	200	75	93	137	62	87	125	46	56	94	
0.65	5.12	2.29	9.65	2.27m	1.78m	394	442	520	143	163	208	78	97	143	65	91	130	48	58	98	
0.70	5.52	2.46	9.98	2.29m	1.82m	423	476	560	154	175	224	84	105	154	70	98	140	53	63	105	
0.80	6.31	2.81	11.41	2.40m	1.90m	484	544	640	176	200	256	96	120	176	80	112	160	60	72	120	
0.90	7.10	3.16	12.83	2.49m	1.98m	544	612	720	198	225	288	108	135	198	90	126	180	68	81	135	
1.00	7.89	3.51	14.26	2.58m	2.05m	605	680	800	220	250	320	120	150	220	100	140	200	75	90	150	

SUPERCOLOR® Plain Accessories

Plain Ridge			A = 300/400/600 mm \varnothing = Roof Angle (Min 110°) L = 2440 mm max
Barge Board			A = 200 /300mm $\infty = 90^\circ$ L = 2440 mm max
Corner Flashing (Wall To Wall)			A =30 Mm B =120mm $\varnothing = 120^\circ$ $\infty = 90^\circ$ L= 2440 mm max
End Eave Gutter			A =100 mm B =175 mm C = 325 mm D=200 mm L = 2440 mm max. ∞ & \varnothing = As Per Requirement
Louver (A)			A =30 mm $\infty = 90^\circ$ B =30 mm C =180 mm D = 30 mm E =30 mm L = 2440 mm max. \varnothing = As Per Requirement
Louver (B)			A =50 mm B =250 mm C =100 mm \varnothing = As Per Requirement L = 2440 mm max.
Valley Gutter			A =150 mm B =250 mm C = 200 mm \varnothing = As Per Requirement L = 2440 mm max

SUPERCOLOR® Trapezoidal Accessories

Profile Ridge			A = 300/400/600 mm $\varnothing = 140^\circ$ min. Upto 0.50 mm Thk $\varnothing = 150^\circ$ min. Upto 0.60 mm Thk Length = 1087/1126 mm (Effective Length=1000/1060mm)
Profile Northlight Curvature			A= 150/200 mm B = 300 mm C = 150/200 mm R = min 500 mm W = 1087 mm/1126 mm (Effective Width = 1000/1060mm)
Profile Curvature			R = min 1000 mm Sheet Length=4500 mm max W = 1087 mm/1126 mm (Effective Width = 1000/1060mm)

These recommendations have been made with an objective to secure an everlasting, weather resistant permanent roof with maximum economy keeping in mind Indian and other standards. Super Color suggests that roofing contractors, team of skilled installers should keep in mind all these factors while installing the Super Color Profiles to give a long lasting and weather resistant shade.

Preparation of Mounting Work

Super Color Profiles are suitable for being installed on supporting structure made of steel and concrete. The supporting structure should always be checked for perpendicularity, rectangularity and flatness. For proper mounting, it is necessary that the structure should be properly leveled.

Pitch of Roof

The pitch of roof, should be preferably between 15 degree and 18 degree, as recommended by Indian Standards. The end laps shall be increased suitably in case of roofs with higher pitch.

Purlin Spacing

The spacing of purlins in roofs shall generally be restricted to 1400mm c/c ,but can be extended to 1600 mm c/c for high tensile(550 MPA, Galvalume) steel.

The maximum recommended purlin spacing for side cladding is 1700mm.

Ridge purlins shall be fixed at a maximum distance of 150 mm (recommended) or 250mm from the apex of the roof.

Thickness of Sheets

Thickness of sheets is a function of strength of the material and it in turn determines the strength of the roof in terms of dead load and wind load. Heavy metal has better weight bearing strength and wind load carrying capacity. Indian Pre-painted Galvanized steel usually has yield strength varying from 180Mpa to 240Mpa.

Cutting Tools and Accessories

Compass saw should be used for cutting profiles at site. Only if suitable saw disc and precise guidelines are not available should circular saw be used. There is a chance that the cutting area heats up, which should be avoided since this may cause burning of the zinc layer and the coatings, which leads to a loss of corrosion protection. Drilling and cutting chips should be removed immediately to protect the high quality surface of the Super Color profiles against corrosion.

Lap Direction

There is an underlap leg and an overlap leg on most panels (see below). It is therefore important to determine in advance of installing the first panel, which is which. The end leg on the overlap side does not reach the deck/purlins when in place. The end leg on the underlap side touches the deck/purlins when in place. This underlap side is called the purlin leg. The overlap leg will always be the outside leg on your first panel, regardless if starting on the right or left side of the building.

Fasteners

The purlin section used and the type of coating determines the choice of fasteners to be used on the sheets.

Super Color Galvanized color profiles should be fixed using self drilling and tapping screws(HP, Hilti, Pooja) as per AS 3566 or equivalent.

Super Color Galvalume coated profiles should be fixed using Class 3 of AS 3566(ITW Buildex or Corroshield make) fasteners.

Storage

Super Color profiles should be stored with a slight inclination in the longitudinal direction to allow drainage of water, if any (standing water may cause serious damage to the profiles). Stacks should never be piled one upon the other. Profiles should be stored in such a way that they are protected from rain, storm or dirt. Textile covers are recommended as they are permeable to air and allow humidity to dry rapidly.

Handling

Care should be taken that Super Color Profiles are never dragged from the stack. Profiles should always be lifted from all four edges and carefully carried to ensure that there is not damage.

Inspection

Profiles should be inspected for minor mounting damages, left-over tools, screws etc. Any slightest damage should be repaired immediately or in cases where it is necessary, the complete profile should be replaced. The surface of profile should be cleaned and made free from metallic chips and foreign particles.

SUPERCOLOR Pre-Painted Profile Sheets

Finish & Final Coat Options

SUPERCOLOR Pre Painted Profile Sheets come in several kinds of coatings on the base metal. The finish coat of each kind has its own properties in terms of formation, durability, flexibility, chemical resistance, retention of color, chalking resistance and cost. The finish or final coat should be applied taking into consideration the climatic conditions of the region where it is to be used.

Polyester

The finish coat of this kind has strong adhesive force, a wide variety of colors, wide scope of properties in formation and durability outdoors, moderate chemical resistance and low cost.

Silicon Modified Polyester

The membrane of finish coat of this kind has excellent rigidity, abrasion resistance, thermal resistance, good outside durability, chalking resistance, high retention of color and luster, ordinary flexibility, moderate cost etc.

High-Durability Polyester

The finish coat of this kind has excellent retention of color, resistance of ultra-violet radiation, strong outdoors durability, chalking resistance, strong adhesion to the base metal, plenty of colors and relatively lower cost compared to the same quality.

Polyvinylidene Fluoride

The finish coat of this kind features in its excellent retention of color, resistance of ultra-violet radiation, outdoors durability, chalking resistance, resistance to solvent, formability, good dirt resistance, finite colors and high cost.

Paint Specifications of Pre-painted Galvalume(PPGI)

<i>Particulars</i>	<i>Details</i>
Total Coated Thickness(TCT)	.40mm to .70mm
Zinc Coating	Standard: A Z 150gsm (AZ 100 and Higher Coatings Optional)
Chemical Composition (Metal coating)	Al-Zinc alloy with 1.5% Silicon: 55% Aluminium, 43.5% Zinc and 1.5% Silicon
Paint Coating	Regular Modified Polyester(RMP) Optional: Silicon Modified Polyester(SMP) Poly Vinylidene Fluoride(PVDF)
Paint Thickness (Top Coat)	18 to 20 microns
Paint Thickness (Bottom Coat)	5 to 7 microns
Tensile Strength	550 MPA, Standard.
Products adhering to Indian and International standards	JIS G 3322, ECCA, IS 277 ASTM A 755 & EN 10326

Coating Specifications of Bare Galvalume (No Color)

<i>Particulars</i>	<i>Details</i>
Total Coated Thickness(TCT)	.40mm to .70mm
Zinc Coating	Standard: A Z 150gsm (AZ 100 and Higher Coatings Optional)
Chemical Composition (Metal coating)	Al-Zinc alloy with 1.5% Silicon: 55% Aluminium, 43.5% Zinc and 1.5% Silicon
Color	Natural Silver Finish
Tensile Strength	550 MPA, Standard.
Products adhering to Indian and International standards	ASTM A 792, JIS G 3321, AS 1397-93 & EN 10326

Paint Specifications of Pre-painted Galvanized Iron(PPGI)

<i>Particulars</i>	<i>Details</i>
Total Coated Thickness(TCT)	.35mm to .70mm (Above that in special cases)
Zinc Coating	Standards: Z 120gsm, 100gsm (Higher Coatings Optional)
Paint Coating	Regular Modified Polyester(RMP) Optional: Silicon Modified Polyester(SMP) Poly Vinylidene Fluoride(PVDF)
Paint Thickness (Top Coat)	18 to 20 microns
Paint Thickness (Bottom Coat)	5 to 7 microns
Tensile Strength	245 to 345 MPA, Standard.
Products adhering to Indian and International standards	IS 14246-1995, JIS G 3312, ASTM A 755 & EN 10169-1

Comparative Advantage of PPGI over other alternatives				
<i>Material / Features</i>	<i>Asbestos/Cement Sheet</i>	<i>PVC Plastic</i>	<i>Galvanized Corrugated sheets</i>	<i>SUPER Color Coated Profile Sheets/Pre-painted GI</i>
<i>Design</i>	Substantial Engineering is required, Just one design.	Just one design.	Design varies with different dimensions.	Highly sophisticated designs also many colors are available to beautify the design.
<i>Lif</i>	High chances of breakage, cannot stand in extreme sunlight becomes brittle and breaks.	Turns yellow and color fades when exposed to sunlight and lasts for just 4 yrs.	Lasts for very good period of time.	Long lasting and durable shade. Lasts longer than all other roofing products and thus is the best product for roofing.
<i>Foundations</i>	Heavy foundations. Lot of TMT rods, cement and other materials are used.	Simple design and light foundations but lacks weight bearing capacity.	Simple design and light foundations.	Simple design and light foundations.
<i>Cost of the Project</i>	Heavy foundations are required for installing thus increasing the total cost of the project.	Less expensive then a concrete structure.	Least expensive and lasts longer than Asbestos and PVC.	Only15% costlier then the second best product and thus is a Value for your money.
<i>Erection Simplicity</i>	Complicated and heavy designs.	Simple and easy design.	Simple and easy design.	Simple and easy erection with variety of possible designs.
<i>Erection Time</i>	Very Time-consuming process, highly variable and unpredictable.	Fast and standardized erection process.	Fast and standardized erection process.	Fast and standardized erection process.
<i>Heat Transmission</i>	About 50%	About 67%	About 85%	About 65%
<i>Resistance to Impact</i>	Mid resistance to impact, but is brittle.	Mid resistance to impact, flexible.	High resistance to Impact	High resistance to impact, flexible.
<i>Heat Resistance</i>	Prone to cracking in extreme conditions.	Medium Resistance, starts yellowing	High Resistance	High Resistance
<i>Health Effects</i>	Very harmful to workers, banned in all developed countries.	No Harmful effects	No Harmful effects	No Harmful effects



Color Coated Steel from Super
Elements Pvt. Ltd



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Super Color Roofing Solutions | Vishisht School of Management

