



WANZHI STEEL

2022

彩涂产品介绍

PPGI, PPGL, GI, GL, CR, HR, Whiteboard

—— 万智 · 集团 ——

WANZHI GROUP



万众同心，智慧先行

UNITE AS ONE.

LEAD WITH

WISDOM.

万智钢铁是中国领先的钢铁产品生产商，负责协调销售，仓储，深加工，分销，出口，以满足客户对钢铁供应链的需求。

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公司概况

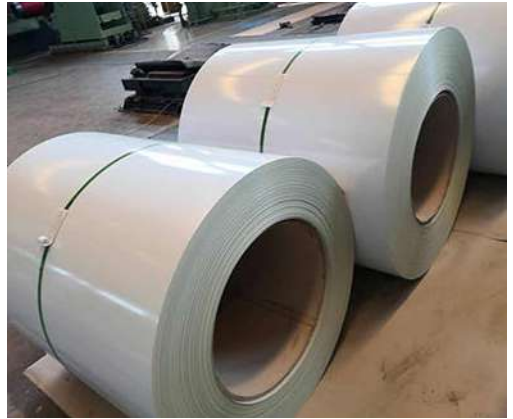
Company Profile

Wanzhi Steel, established in 2011, is a leading manufacturer and supplier of diverse steel products in China. Our main products include carbon steel, galvanized steel, galvalume steel, pre-painted steel (PPGI and PPGL), and stainless steel in coil, strip, sheet, plate, tube, bar, and so on.

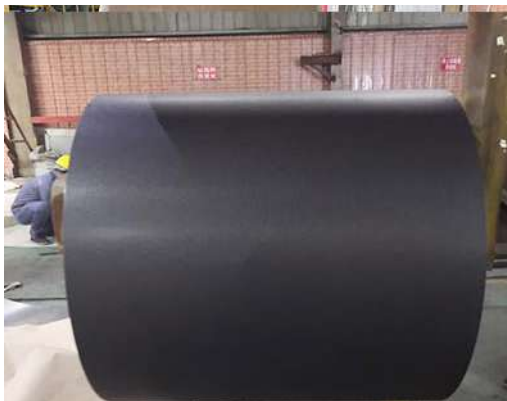
Our headquarter is situated in Zhengzhou, Henan Province, and our factory is located in Boxing County, Shandong Province. We have two hot-dip galvanizing lines, one galvalume and ZAM (zinc-aluminum-magnesium) coating line with an annual output of 300,000 tons. Besides, there are two color coating lines and one writing board production line, and the yearly output is more than 220,000 tons. We also have a strict quality inspection system with 20+ professional inspectors and various sophisticated testing instruments. Third-party quality tests, such as SGS, BV, CE, etc., are acceptable. More than that, we offer further processing services, such as cutting, slitting, profiling, punching, bending, etc.



工厂车间
Factory Workshop



工厂车间
Factory Workshop



彩涂镀锌卷

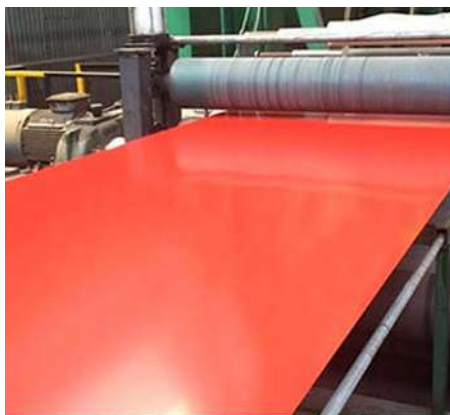
PPGI

彩涂镀锌卷是以热镀锌板为基板，经表面预处理（化学脱脂及化学转化处理）之后，在表面涂敷一层或几层有机涂料，随后经过烘烤固化而成的产品。因涂有各种不同颜色的有机涂料彩色钢卷板而得名。

使用热镀锌钢带为基材的彩色涂层钢带除有锌层保护外，锌层上的有机涂料起了覆盖和保护作用，防止钢带生锈，使用寿命比镀锌带长，约1.5倍。

PPGI is a product made of hot-dip galvanized sheet as the substrate, after surface pretreatment (chemical degreasing and chemical conversion treatment), one or several layers of organic coatings are applied on the surface, and then baked and cured. It is named after the colored steel coil coated with various organic coatings of different colors.

The color-coated steel strip using hot-dip galvanized steel strip as the base material is protected by the zinc layer, and the organic coating on the zinc layer plays a role of covering and protection to prevent the steel strip from rusting, and the service life is about 1.5 longer than that of the galvanized strip.



纯色彩涂：Prepainted Coil



浮雕 / 哑光彩涂卷：Embossed/Matt PPGI Coil



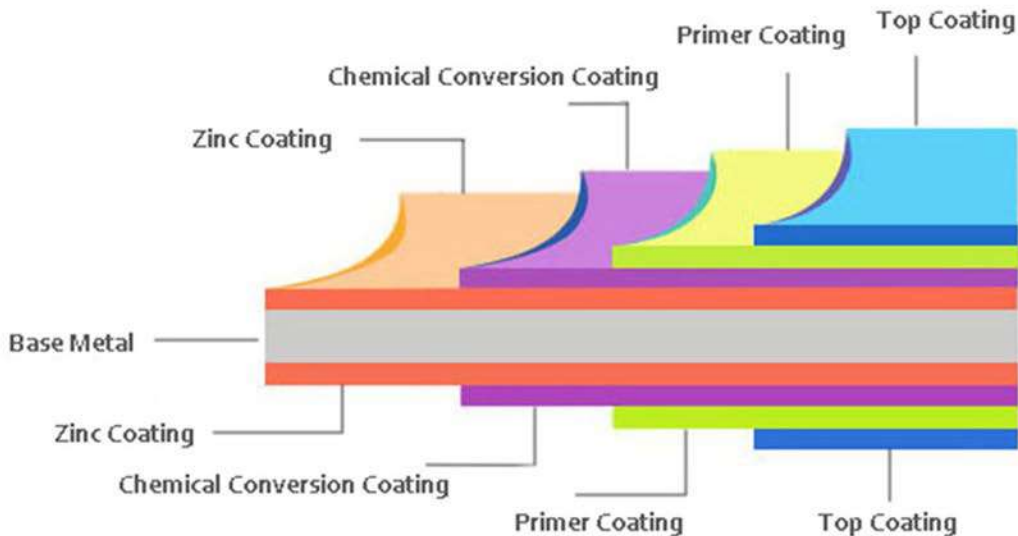
项 (Item)	产品参数 (Product Parameter)
基板 (Substrate)	GI
厚度 (Thickness)	0.12 mm-1.2 mm
宽度 (Width)	600 mm-1250 mm
卷重 (Coil Weight)	3-5 吨可定做 (3-5 tons , can be customized)
涂料层 (Coatings)	PE, SMP, HDP, PVDF
涂层厚度 (Coating Thickness)	上层 (Top) : 11-35 μm 下层 (Back): 5-14 μm
漆面 (Paint Surface)	哑光 / 皱纹 / 光泽 (matt/wrinkled/glossy)
颜色 (Colors)	根据 RAL, 可来图定做 As per RAL Color , can be customized
月产量 (Monthly Production)	5,000-10,000 吨 (tons)
证书 (Certificates)	ISO 9001, SGS, CE, BV
包装 (Package)	标准出口包装 (Standard Export Package)

彩涂镀锌卷通常使用热镀锌板 (GI) 作为基板, 清洁, 预处理并盘绕形式的GI薄板, 并涂上有机涂料层, 例如 PE, SMP, HDP, PVDF等。喷涂过程是连续的, 这被称为卷材涂覆过程。

因此, PPGI由几层组成, 即基板, 锌涂层, 化学转化涂层, 底漆涂层和顶部/背面涂层。以下是PPGI的结构图。

PPGI usually uses hot-dip galvanized sheet (GI) as the substrate, cleans, pretreats and coils the GI sheet, then coats it with an organic coating layer, such as PE, SMP, HDP, PVDF, etc. The spraying process is continuous, which is called the coil coating process.

Therefore, PPGI consists of several layers, including substrate, zinc coating, chemical conversion coating, primer coating and top/back coating. The following is the structure diagram of PPGI.





油漆涂料 (Paints)

常见的涂层类型是聚酯 (PE)，有机硅改性聚酯 (SMP)，高耐久性聚酯 (HDP) 和聚偏二氟乙烯 (PVDF)。

聚酯 (PE)：附着力良好，颜色丰富，在成型性和室外耐久性方面范围较宽，耐化学药品性中等，成本低。

有机硅改性聚酯 (SMP)：涂膜的硬度，耐磨性和耐热性良好，以及良好的外部耐久性和抗粉化性，光泽保持性，柔韧性一般，成本中等。

高耐久性聚酯 (HDP)：优良的颜色保持性和抗紫外线性能，优良的室外耐久性和抗粉化性，漆膜附着力好，颜色丰富，优异的性价比。

聚偏氟乙烯 (PVDF)：优异的颜色保持性和抗紫外线性能，优异的室外耐久性和抗粉化性，优良的抗溶剂性，良好的成型性，抗脏性，颜色有限，成本高。

Polyester (PE), Silicone Modified Polyester (SMP), High Durability Polyester, and Polyvinylidene Fluoride (PVDF) are common coating types.

Polyester (PE) has the characteristics of good adhesion, rich colors and low cost. And it has a wide range of moldability and outdoor durability, and has moderate chemical resistance.

Silicone-modified polyester (SMP): It has good abrasion resistance, heat resistance, external durability, chalking resistance and gloss retention, moderate flexibility and moderate cost.

High Durability Polyester (HDP): Excellent color retention, UV resistance, outdoor durability and chalking resistance, and good film adhesion, rich colors, and cost-effective.

Polyvinylidene fluoride (PVDF): Excellent color retention, UV resistance, outdoor durability and chalking resistance, excellent solvent resistance, moldability and stain resistance, but the color is limited and the cost is high.

彩涂镀锌卷具有轻质、美观和良好的防腐性能，又可直接加工，颜色一般分为灰白、海蓝、砖红等。如果您喜欢其他颜色，请向我们发送RAL颜色代码或样品，我们会根据你的要求进行设计。

PPGI has light weight, beautiful appearance and good anti-corrosion performance, and it can be directly processed. The color is generally divided into gray white, sea blue, brick red, etc. If you like other colors, please send us RAL color codes or samples, and we will design according to your requirements.



Yellow Green
(RAL 6018)



Moss Green
(RAL 6005)



Sky Blue
(RAL 5015)



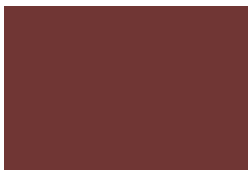
Signal Blue
(RAL 5005)



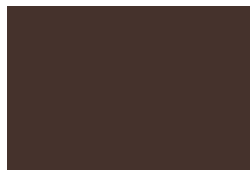
Golza Green
(RAL 1021)



Traffic Red
(RAL 3020)



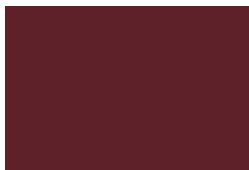
Oxide Red
(RAL 3009)



Chocolate Brown
(RAL 8017)



Cement Grey
(RAL 7033)



Wine Red
(RAL 3005)



Signal Black
(RAL 9004)



Pure White
(RAL 9010)

印花彩涂卷

Pattern PPGI

印花彩涂卷是指通过转印或覆膜技术等手段将各类花纹印刷在镀锌板、镀铝锌等基板上的一种彩涂卷。分别为花纹彩涂卷、木纹彩涂卷、瓷砖彩涂卷、迷彩彩涂卷、交通彩涂卷、还可以自定义图案。

Pattern PPGI refer to product in which various patterns are printed on substrates such as galvanized steel coil and Galvalume steel coil through transfer or film coating techniques. Its pattern stone grain, wood grain, ceramic tiles, camouflage, traffic and can be customized the pattern.



花纹彩涂卷

Flower Printing PPGI Coil



木纹彩涂卷

Wood Grain PPGI Coil



瓷砖彩涂卷

Imitate Brick Pattern PPGI



迷彩彩涂卷

Color Military Printed Metal Coil



交通彩涂卷

Warning Tape Traffic Sign PPGI



自定义图案

Design Pattern Series



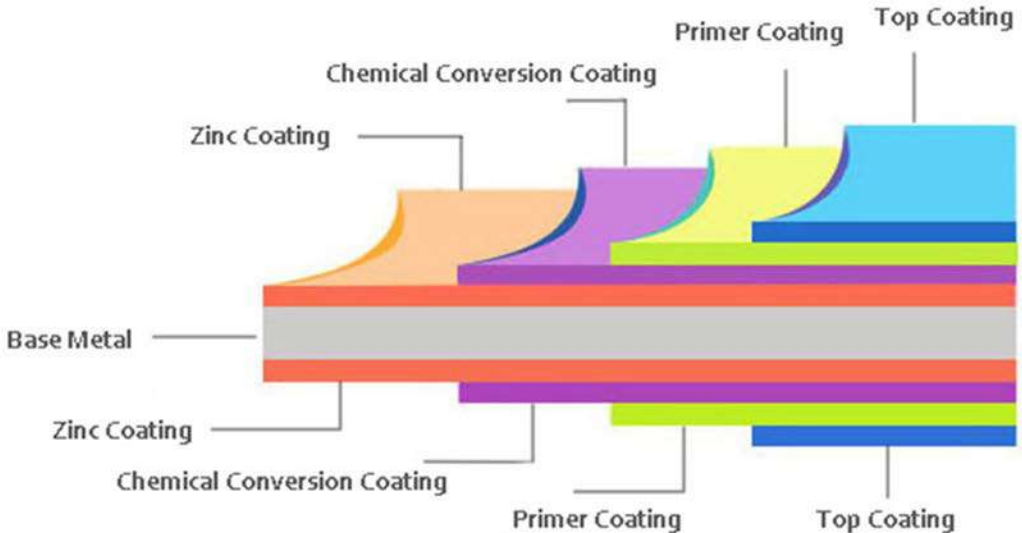
项 (Item)	产品参数 (Product Parameter)
基板 (Substrate)	GI
厚度 (Thickness)	0.14mm-0.6mm
宽度 (Width)	600mm-1250mm
卷重 (Coil Weight)	3-5 吨可定做 (3-5 tons , can be customized)
涂料层 (Coatings)	PE, SMP, HDP, PVDF
涂层厚度 (Coating Thickness)	上层 (Top) : 11-35 μm 下层 (Back): 5-14 μm
漆面 (Paint Surface)	哑光 / 皱纹 / 光泽 (matt/wrinkled/glossy)
表面处理 (Surface Treatment)	花纹、木纹、迷彩、瓷砖、交通 (flower print, wood print, Camouflage, Imitate Brick, Warning Tape Traffic Sign)
颜色 (Colors)	来图定做 Customized
包装 (Package)	标准出口包装 (Standard Export Package)

印花彩涂卷通常使用热镀锌板（GI）作为基板，清洁，预处理并盘绕形式的GI薄板，并涂上有机涂料层，例如PE，SMP，HDP，PVDF等。喷涂过程是连续的，这被称为卷材涂覆过程。

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聚偏氟乙烯(PVDF)：优异的颜色保持性和抗紫外线性能，优异的室外耐久性和抗粉化性，优良的抗溶剂性，良好的成型性，抗脏性，颜色有限，成本高。

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Polyvinylidene fluoride (PVDF): Excellent color retention, UV resistance, outdoor durability and chalking resistance, excellent solvent resistance, moldability and stain resistance, but the color is limited and the cost is high.

花纹印花彩涂卷 (Flower Printing PPGI Coil)



木纹彩涂卷 (Wood Grain PPGI Coil)



瓷砖彩涂卷 (Brick Design Prepainted PPGI)



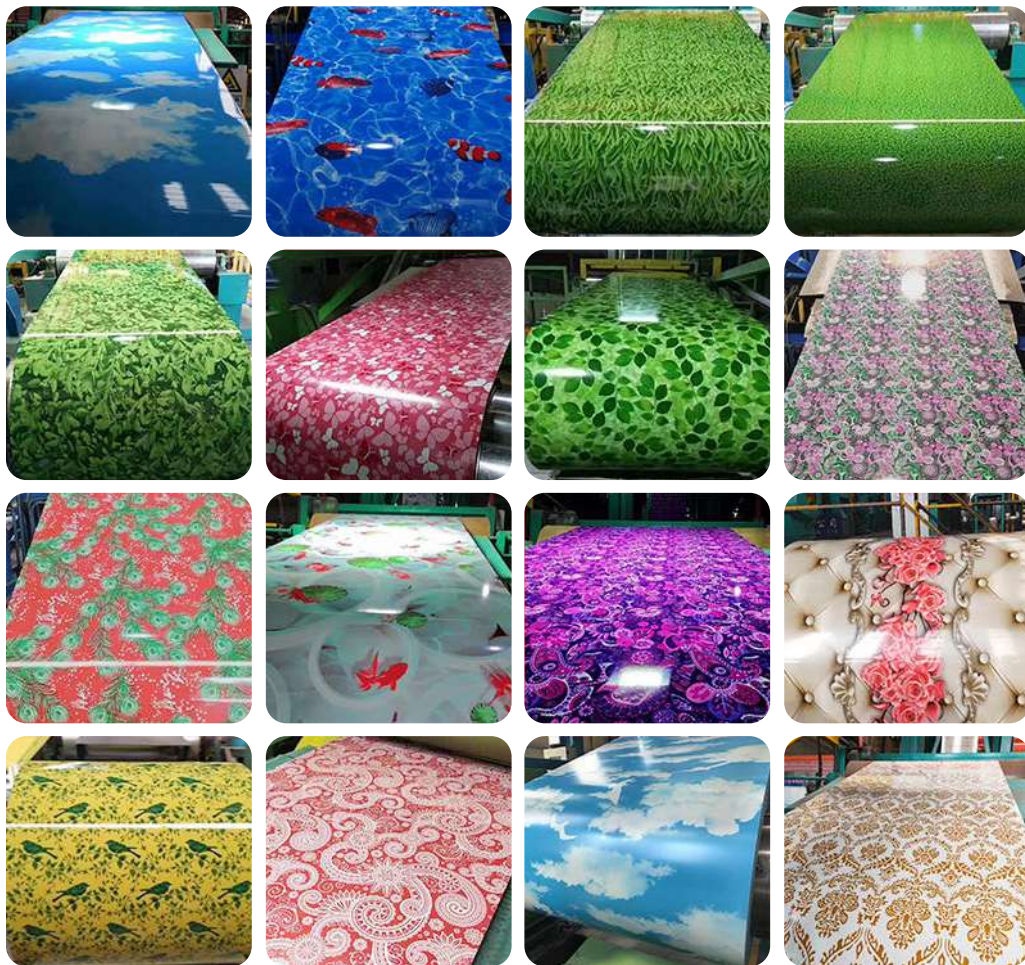
迷彩印花彩涂卷 (Color Military Printed Metal Coil)



交通印花彩涂卷 (Warning Tape Traffic Sign PPGI)



设计图案 (Design Pattern Series)



镀锌卷

GI

镀锌卷，将薄钢板浸入熔解的锌槽中，使其表面粘附一层锌的薄钢板。主要采用连续镀锌工艺生产，即把成卷的钢板连续浸在熔解有锌的镀槽中制成镀锌钢板；合金化镀锌钢板。这种钢板也是用热浸法制造，但在出槽后，立即把它加热到500°C左右，使其生成锌和铁的合金被膜。这种镀锌卷具有良好的涂料的密着性和焊接性。

Galvanized steel coil is to dip the thin steel in zinc ditch, makes the steel's surface have a layer of zinc. It is mainly produced by continuous galvanizing process, that is, the rolled steel sheet is continuously immersed in a galvanized bath with molten zinc, then makes galvanized steel sheet; Alloyed galvanized steel sheet, this kind of steel sheet is also manufactured by hot-dip method, but after exiting the tank, it needs to be heated to about 500°C immediately to form an alloy film of zinc and iron. This galvanized coil has good paint adhesion and weldability.



Galvanized Steel Coil



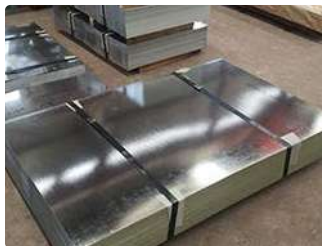
Galvanized Steel Sheet



Galvanized Steel Strip



Galvanized Steel Coil



Galvanized Steel Sheet



Galvanized Steel Strip

项 (Item)	产品参数 (Product Parameter)
类型 (Type)	卷 / 板 / 条 (Coil/Sheet/Strip)
厚度 (Thickness)	0.12-6.00mm, 或客户要求 (or customer's requirement)
宽度 (Width)	600mm-1500mm, 或客户要求 (or customer's requirement)
卷重 (Coil Weight)	每卷 3-20 公吨 (3-20 metric ton per coil)
镀锌层 (Coatings)	30-275 克 / 平方米 (30-275g/m ²)
表面结构 (Surface Structure)	正常锌花、小锌花、无锌花 (spangle coating,minimized spangle coating,spangle-free)
表面处理 (Surface Treatment)	钝化 (C), 上油 (O), 漆封 (L), 磷化 (P), 未处理 (U) (Passivation(C), Oiling(O), Lacquer sealing(L), Phosphating(P), Untreated(U))
质量	通过 SGS, ISO 认证
包装 (Package)	标准出口包装 (Standard Export Package)

镀锌卷表面结构：分为大锌花、正常锌花、小锌花、无锌花。

Surface structure of GI:Divided into big spangle,regular spangle,small spangle,no spangle.



Big spangle



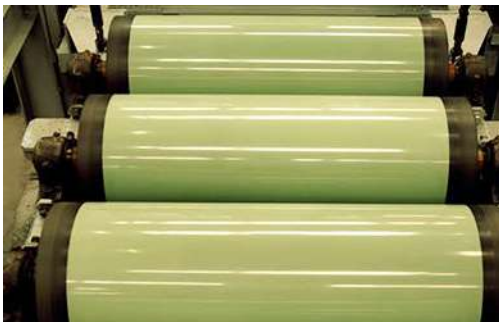
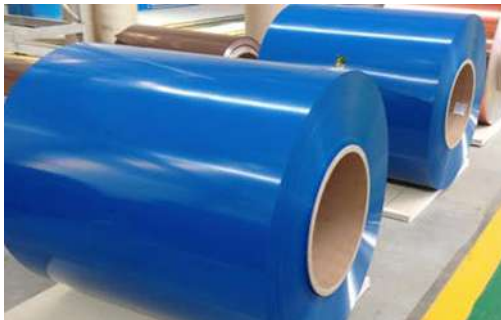
Regular spangle



Small spangle



No spangle



彩涂铝锌卷

PPGL

镀铝锌彩涂卷是近年来国内由于高端应用而产生的新型材料，是由较镀锌更具耐腐蚀性能的镀铝锌钢板（55%铝、43%锌与1.6%硅）作为基板经过表面脱脂、磷化、络酸盐处理后，涂上有机涂料经烘烤而制成的产品。

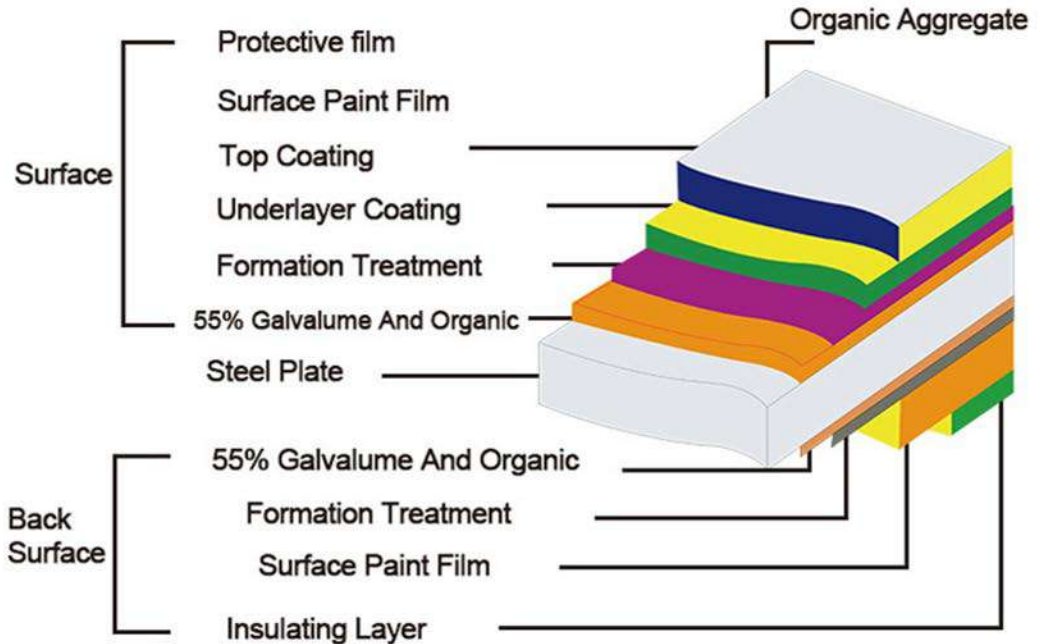
PPGL coil is a new type of material that has been produced due to high-end applications in China recent years. It is made of aluminum-zinc steel (55% aluminum, 43% zinc and 1.6% silicon) that is more corrosion resistant than galvanized. After surface degreasing, phosphating, and complex salt treatment, then coating with organic paint and baking, becomes the PPGL.



项 (Item)	产品参数 (Product Parameter)
基板 (Substrate)	GL
厚度 (Thickness)	0.12 mm-1.2 mm
宽度 (Width)	600 mm-1250 mm
卷重 (Coil Weight)	3-5 吨可定做 (3-5 tons , can be customized)
涂料层 (Coatings)	PE, SMP, HDP, PVDF
涂层厚度 (Coating Thickness)	上层 (Top) : 11-35 μm 下层 (Back): 5-14 μm
漆面 (Paint Surface)	哑光 / 皱纹 / 光泽 (matt/wrinkled/glossy)
颜色 (Colors)	根据 RAL, 可来图定做 As per RAL Color , can be customized
月产量 (Monthly Production)	5,000-10,000 吨 (tons)
证书 (Certificates)	ISO 9001, SGS, CE, BV
包装 (Package)	标准出口包装 (Standard Export Package)

PPGL通常使用热镀锌板（GL）作为基板，清洁，预处理并盘绕形式的GL薄板，并涂上有机涂料层，例如PE, SMP, HDP, PVDF等。

PPGL usually uses hot-dip galvanized sheet (GL) as the substrate, cleans, pretreats and coils the GL sheet, then coats it with an organic coating layer, such as PE, SMP, HDP, PVDF, etc. The spraying process is continuous, which is called the coil coating process.



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Yellow Green
(RAL 6018)



Moss Green
(RAL 6005)



Sky Blue
(RAL 5015)



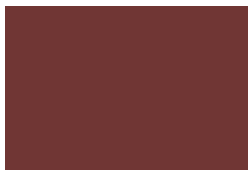
Signal Blue
(RAL 5005)



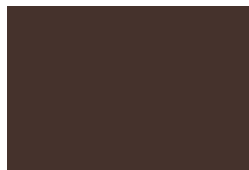
Golza Green
(RAL 1021)



Traffic Red
(RAL 3020)



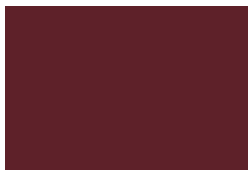
Oxide Red
(RAL 3009)



Chocolate Brown
(RAL 8017)



Cement Grey
(RAL 7033)



Wine Red
(RAL 3005)



Signal Black
(RAL 9004)



Pure White
(RAL 9010)

彩涂镀铝锌的优势 (Advantages of PPGL)

1. 优异的耐腐蚀性

由于铝含量为55%，因此PPGL的耐腐蚀性远优于PPGI，可大大延长使用寿命。

2. 极高的热反射率

良好的耐热性可使建筑物在炎热的夏天保持凉爽。

3. 耐候性

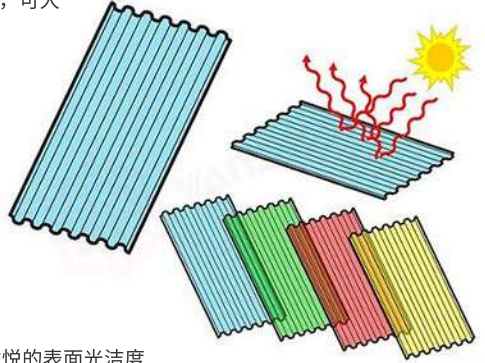
镀铝锌合金钢可以承受恶劣的天气条件，例如极端的夏季，冬季或降雨。

4. 良好的加工性能

彩涂镀铝锌易于掌握，例如剪切，压型等。

5. 美观的外观

它们看起来具有吸引力和令人印象深刻，并具有令人愉悦的表面光洁度和美观性。



1.Excellent corrosion resistance

Because of the 55% Aluminum, the corrosion resistance of PPGL is much better than PPGI, makes the using life longer.

2.High heat reflectivity

High heat resistance makes the building structure cool in hot summer.

3.Weathering resistance

Aluminum-zinc alloy steel can bear severe weather conditions, such as extreme hot Summer, cold Winter or rain.

4.Good processing performance

Prepainted aluminum-zinc plating is easy to deform, such as cutting, profiling, etc.

5.Beautiful appearance

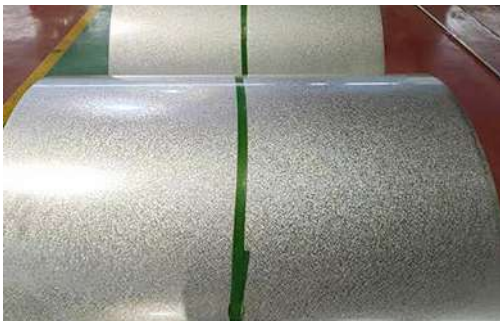
PPGL looks attractive and impressive,and finished with pleasant surface and aesthetics.

镀铝锌卷

GL

镀铝锌卷是镀层成份按重量比率分别由55%的铝和43.4%的锌，1.6%的硅组成。镀铝锌钢板的生产工艺与镀锌钢板和镀铝板的工艺相似，是连续熔融镀层工艺。55%铝锌合金镀层的镀铝锌钢板当双面暴露于同样的环境时与相同厚度的镀锌钢板相比具有更优越的耐腐蚀性。

Galvalume Steel Coil is composed of 55% aluminum, 43.4% zinc, and 1.6% silicon by weight. The production process of Galvalume sheet is similar to that of galvanized steel sheet and Galvalume sheet, which is a continuous molten coating process. The Galvalume steel sheet with 55% aluminum-zinc alloy coating has better corrosion resistance than galvanized steel sheet of the same thickness when exposed to the same environment on both sides.



项 (Item)	产品参数 (Product Parameter)
类型 (Type)	卷 (Coil)
厚度 (Thickness)	0.12-4.0mm, 或客户要求 (or customer's requirement)
宽度 (Width)	600mm-1250mm, 或客户要求 (or customer's requirement)
卷重 (Coil Weight)	每卷 3-20 公吨 (3-20 metric ton per coil)
镀铝锌层 (Alu-Zinc coating)	30-275 克 / 平方米 (30-275g/m ²)
表面处理 (Surface Treatment)	涂层, 镀铬, 上油, 抗指纹 (coated, chromated, oiled, anti-finger print)
质量	通过 SGS, ISO 认证
包装 (Package)	标准出口包装 (Standard Export Package)

镀铝锌卷表面呈特有的光滑、平坦和华丽的星花，基色为银白色。特殊的镀层结构使其具有优良的耐腐蚀性。镀铝锌卷正常使用寿命可达25年,耐热性很好,可用于315°C的高温环境;镀层与漆膜的附着力好,具有良好的加工性能,可以进行冲压、剪切、焊接等;表面导电性很好。

The surface of Galvalume Steel Coil is uniquely smooth, flat and gorgeous spangles, and its base color is silver white. The special coating structure makes it have excellent corrosion resistance. The normal service life of Galvalume Steel Coil can reach 25 years, and it has good heat resistance and can be used in a high temperature environment of 315°C; the adhesion of the coating and the paint film is good, and it has good processing properties, and can be stamped, cut, welded, etc. The surface conductivity is very good.

镀铝锌的主要功能 (Great Features of GL)

1.热反射性:

镀铝锌钢板的热反射率很高，是镀锌钢板的两倍，人们经常用它来作隔热的材料。

2.耐热性:

铝锌合金钢板具有良好的耐热性，可以承受300多摄氏度的高温，与镀铝钢板的抗高温氧化性很类似，经常应用于 烟囱管，烤箱、照明器和日光灯罩。

3.耐腐蚀性:

镀铝锌钢卷的耐腐蚀性主要是因为铝的保护功能。当锌受到磨损时，铝便形成一层致密的氧化铝，阻止耐腐蚀性物质进一步的腐蚀内部。

4.经济性:

因为55%AL-Zn的密度比Zn的密度小,所以在重量相同和镀金层厚度相同的情况下，镀铝锌钢板比镀锌钢板的面积大3%以上。

5.易上漆

镀铝锌板和油漆之间具有优异的附着力，不需预处理和风化处理就可上漆。镀铝锌钢板镀金层的涂料附着力较为优秀，因此未经风化处理，也可以直接在广告板和一般用板材上进行涂布。

6.镀铝锌钢板具有银白色的华丽表面。

7. 镀铝锌钢板与镀锌钢板具有相近的加工性能和喷涂性能。

1. Heat reflectivity:

The heat reflectivity of Galvalume Steel sheet is very high, which is twice that of galvanized steel sheet. People often use it as a material for heat insulation.

2. Heat resistance:

Aluminum-zinc alloy steel plate has good heat resistance and can withstand high temperatures of more than 300 degrees Celsius. It is very similar to the high-temperature oxidation resistance of aluminized steel plate. It is often used in chimney pipes, ovens, luminaires and fluorescent lampshades.

3. Corrosion resistance:

The corrosion resistance of Galvalume Steel Coil is mainly due to the protective function of aluminum. When zinc is worn, aluminum forms a dense layer of aluminum oxide, which prevents corrosion-resistant substances from further corroding the interior.

4. Economy:

Because the density of 55% AL-Zn is lower than that of Zn, the area of the Galvalume Steel sheet is 3% larger than galvanized steel sheet under the same weight and the same thickness of the GL coating.

5. Easy to paint

The Galvalume Steel sheet has excellent adhesion between the paint and the paint can be painted without pretreatment and weathering. The coating adhesion of the Galvalume Steel sheet is relatively good, so it can also be directly coated on advertising boards and general-purpose boards without pre-treatment such as weathering.

6. The Galvalume Steel sheet has a gorgeous silver-white surface.

7. The Galvalume Steel sheet and the galvanized steel sheet have similar processing performance and spraying performance.

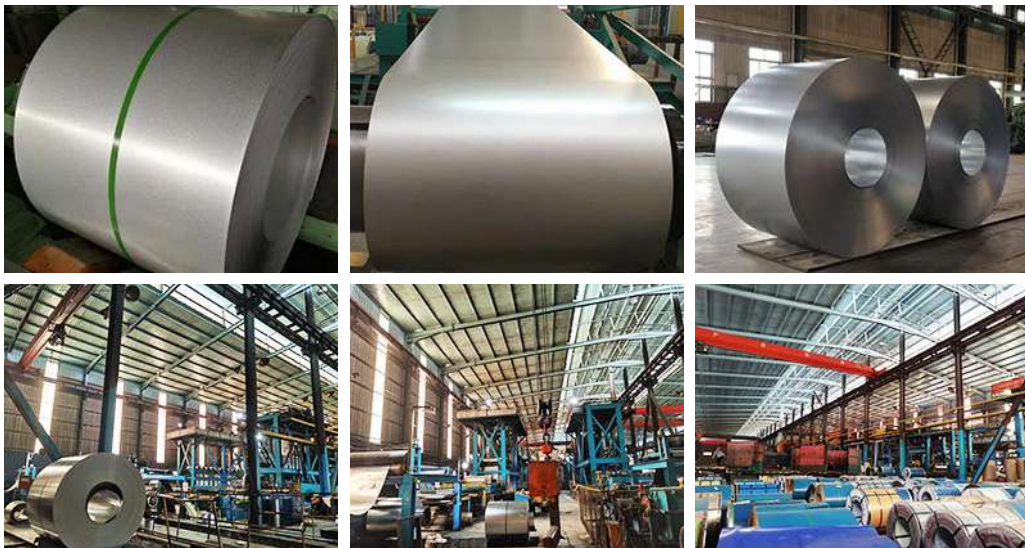


镀铝镁锌卷

SuperDyma Steel

镀铝镁锌卷是一种新型的高耐腐蚀涂层钢板。其涂层主要由锌、11%的铝、3%的镁和微量的硅组成。故又称锌镁铝涂层钢（ZAM钢）。这种材料具有超强的耐腐蚀性能、良好的抗划伤性能和优良的耐化学性等多重优良性能。因此，它是海边建筑、化工厂、畜牧圈等恶劣环境的理想材料。万智钢铁可提供厚度范围为0.3mm至2.5mm，宽度范围为600mm至1550mm。

SuperDyma steel is a new type of highly corrosion-resistant coated steel plate. Its coating mainly consists of zinc, 11% aluminium, 3% magnesium and a trace amount of silicon. So it is also known as zinc magnesium aluminium coated steel (ZAM steel). This kind of material has multiple excellent properties, such as super corrosion resistance, good scratch resistance and excellent chemical resistance. Therefore, it is a perfect material for harsh environments such as seaside buildings, chemical plants, animal husbandry pens, etc. At Wanzhi Steel, the available thickness range is 0.3mm to 2.5mm, and the width range is 600mm to 1,550mm.



项 (Item)	产品参数 (Product Parameter)
类型 (Type)	镀铝镁锌卷 (SuperDyma Steel)
基础金属 (Based Metal)	Cold Rolled Steel
厚度 (Thickness)	0.3mm-2.5mm
宽度 (Width)	600mm-1,550mm
涂层厚度 (Coating Thickness)	60-180 g / m ²
标准 (Standard)	AISI, ASTM, DIN, GB, JIS, BS
表面处理 (Surface Treatment)	铬化过皮 / 油性 / 非油性 / 干性 / 防指纹 (Chromated skinpassed / oiled/non-oiled / dry / Anti-finger printing)
应用 (Applications)	主要用于建筑、汽车、家电、五金配件、基础金属等。 (Mainly used in construction, automobiles, home appliances, hardware accessories, base metal, etc.)
包装 (Package)	标准出口包装 (内防水纸外钢带) (Standard export package (waterproof paper inside and steel strips outside))

镀铝镁锌卷生产线 (Production Line)

万智工厂拥有两条ZAM生产线。一个有3个热浸镀锌槽，用于制造纯锌钢(GI)和ZAM钢。厚度从0.4毫米到2.5毫米不等，宽度从1,000毫米到1,500毫米不等。产品适用于家电面板和汽车板。而另一个有2个热浸镀锌槽来生产铝锌钢(GL)和ZAM钢。它的厚度从0.3毫米到2.0毫米，宽度从600毫米到1,550毫米。产品主要用作彩钢板和建筑材料的基材。

Wanzhi Factory has two ZAM production lines. One has 3 hot-dip galvanizing baths to make pure zinc steel (GI) and ZAM steel. The thickness covers from 0.4mm to 2.5mm and the width varies from 1,000mm to 1,500mm. The products are suitable for home appliance panels and automotive boards. While the other one has 2 hot-dip galvanizing baths to produce aluminium zinc steel (GL) and ZAM steel. Its thickness is from 0.3mm to 2.0mm and the width is from 600mm to 1,550mm. The products are mainly used as the substrate of color-coated steel and building materials.



冷轧钢卷

Cold Rolled Steel Coil

冷轧钢卷就是经过冷轧生产的钢。冷轧是在室温条件下将No.1钢板进一步轧薄至为目标厚度的钢板。和热轧钢板比较，冷轧钢板厚度更加精确，而且表面光滑、漂亮，同时还具有各种优越的机械性能，特别是加工性能方面。因为冷轧原卷比较脆硬，不太适合加工，所以通常情况下冷轧钢板要求经过退火、酸洗及表面平整之后才交给客户。

简单来说，冷轧，是在热轧板卷的基础上加工轧制出来的，一般来讲是热轧---酸洗---冷轧这样的加工过程。

Cold rolled steel coil is the steel produced by cold rolling process. Cold rolling is a steel sheet that is further thinned to the target thickness of No. 1 steel sheet under room temperature conditions. Compared with hot-rolled steel plates, cold-rolled steel plates are more accurate in thickness, and have smooth and beautiful surfaces. At the same time, they also have various superior mechanical properties, especially in terms of processing properties. Because cold-rolled raw coils are relatively brittle and hard, and not suitable for processing, cold-rolled steel sheets are usually required to be annealed, pickled, and surface smoothed before being delivered to customers.

To put it simply, cold rolling is processed and rolled on the basis of hot rolled coils. Generally speaking, it is a process of hot rolling---pickling---cold rolling.





项 (Item)	产品参数 (Product Parameter)
硬度 (Hardness)	柔软, 半硬, 硬质 (Softy, Half hard ,Hard quality)
厚度 (Thickness)	0.12-6.0mm
宽度 (Width)	600-1,500mm
卷重 (Coil Weight)	2.5-3 吨可定做 (2.5-3 tons , can be customized)
表面 (Surface)	光滑的 (Plain)
流程 (Workflow)	热轧卷-酸洗-冷轧-覆盖退火-表面光整-卷取 (Hot rolled coil-Pickling - Cold rolling - Cover annealing Skin pass - Coiling)
应用 (Application)	汽车制造, 电器, 机车和汽车, 航空公司, 精密仪表, 食品罐头包装等 (Automobile making, Electrical appliance, Locomotive and car, Airlines,)
生产能力 (Production Capacity)	每月 10,000 吨 (10,000Tons per Month)
包装 (Package)	标准出口包装 (Standard Export Package)

产品优势 (Product Advantages)

1. 冷轧卷产品尺寸准确，厚度均匀，卷板厚度一般不超过0.01-0.03mm或更小，可以满足高精度公差的要求。
 2. 可以获得非常薄的带材，这些带材不能通过热轧生产（最大0.001毫米或更小）。
 3. 冷轧产品的表面质量优越，没有热轧卷和表面粗糙度不同（光泽或麻）的卷材经常出现的点蚀，热压氧化铁等缺陷。），可根据用户要求生产。粗糙的表面等，以利于下一道工序的加工。
 4. 冷轧板具有良好的机械性能和加工性能（例如更高的强度，更低的屈服极限，良好的深冲性等）。
 5. 可以实现高速轧制和全连续轧制，生产率高。
1. The size of cold-rolled coil products is accurate, and the thickness is uniform. The thickness of the coil is generally not more than 0.01-0.03mm or less, which can meet the requirements of high-precision tolerance.
 2. Very thin strips can be obtained, which cannot be produced by hot rolling (maximum 0.001 mm or less).
 3. The surface quality of cold-rolled products is superior, and there are no defects such as pitting corrosion and hot-pressed iron oxide that often occur in hot-rolled coils and coils with different surface roughness (gloss or hemp).), can be produced according to user requirements. Rough surface, etc., in order to facilitate the processing of the next process.
 4. The cold-rolled sheet has good mechanical properties and processing properties (such as higher strength, lower yield limit, good deep drawability, etc.).
 5. It can realize high-speed rolling and full continuous rolling with high productivity.



热轧钢卷

Hot Rolled Steel Coil

热轧钢卷是以板坯（主要为连铸坯）为原料，经加热后由粗轧机组及精轧机组制成带钢。从精轧最后一架轧机出来的热钢带通过层流冷却至设定温度，由卷取机卷成钢带卷，冷却后的钢带卷。

Hot rolled steel coil is made of slab (mainly continuous casting billet) as raw material. After heating, it is made into strip steel by the rough rolling mill and the finishing mill. The hot steel strip from the last rolling mill of finishing rolling is cooled to a set temperature by laminar flow, and then coiled into a steel strip coil by a coiler, and the cooled steel strip coil.





项 (Item)	产品参数 (Product Parameter)
厚度 (Thickness)	1.5-25mm
宽度 (Width)	360-1650mm
标准 (Standard)	ISO/JIS/GB/ASTM/DIN
卷重 (Coil Weight)	3-10 吨, 可定做 (3-10tons , can be customized)
线圈编号 (Coil ID)	508mm、610mm
表面 (Surface)	喷砂和喷漆或根据要求 (Shot Blasted and Spray Paint or as required).
应用 (Application)	船舶, 工程, 机械制造等 (shipping building,engineer construction,mechanical manufacturing)
生产能力 (Production Capacity)	每月 10,000 吨 (10,000Tons per Month)
包装 (Package)	标准出口包装 (Standard Export Package)

写字板

Painted Steel Whiteboard

写字板越来越流行，现广泛用于学校，办公室，家庭教育等。它是一种A级彩涂钢板。常见的颜色包括白色，黑色和绿色。您也可以选择有光泽或无光泽的外观。

Painted Steel Whiteboards are becoming more and more popular, and are now widely used in schools, offices, home education and so on. It is a grade A color coated steel plate. Common colors include white, black and green. You can also choose a glossy or matte appearance.



写字白板(Whiteboard Steel Sheet/Coil)



写字绿板(Greenboard Steel Sheet/Coil)



写字黑板(Blackboard Steel Sheet/Coil)



粉笔板(Chalk Board)



纤维板(MDF Board)



背板(Back Sheet)



项 (Item)	产品参数 (Product Parameter)
基板 (Substrate)	镀锌板或者冷轧板 (Galvanized Sheet or Cold Rolled Sheet)
厚度 (Thickness)	0.135-0.4mm
宽度 (Width)	≤1300mm
卷重 (Coil Weight)	2.5-3 吨可定做 (2.5-3 tons , can be customized)
网格线 (Gridline)	5cm x 5cm, 2cm x 2cm, 1.25cm x 1.25cm 可用或不使用网格线 (Gridline available or without Gridline)
涂层厚度 (Coating Thickness)	上层 (Top) : 15-25 μm 下层 (Back): 5-14 μm
颜色 (Colors)	白色, 光面或哑黑色, 绿色等 (White, Glossy or Matte Black, Green, etc.)
产品质量 (Product Quality)	A 级 (Class A)
证书 (Certificates)	ISO 9001, SGS
包装 (Package)	标准出口包装 (Standard Export Package)

写字板的特点 (Characteristics of Painted Steel Whiteboard)

1.容易写

彩涂板的表面是光滑的。因此，白板涂漆的钢很容易书写。您可以快速流畅地在其上面写东西。

2.良好的耐用性和擦除能力

它易于清洁且非常耐磨，因此可以长时间使用而不会刮花。它的硬度为5H（由三菱铅笔测试），可以书写和擦除30,000次以上。

3.有磁性

与瓷器和玻璃白板不同，钢制白板具有磁性。这样就可以在板上放置磁性配件，例如记号笔，橡皮，箭头，高光等。

4.重量轻

磁性白板纸的重量为7-14 kg / m²。重量轻，易于安装和使用。

5.良好的加工性能

我们的大多数客户都购买白板涂漆的钢卷，然后以更高的价格出售成品白板。它容易加工，例如剪切，用合金框架磨边。

6.易于运输

与其他白板材料相比，彩绘钢白板易于运输。它比玻璃白板更坚固。

1. Easy to write

The surface of the color-coated sheet is smooth. Therefore, the painted steel on the whiteboard is easy to write. You can write on it quickly and smoothly.

2. Good durability and erasing ability

It is easy to clean and very hard-wearing, so it can be used for a long time without scratching. Its hardness is 5H (tested by Mitsubishi pencil), and it can write and erase more than 30,000 times.

3. Magnetic

Unlike porcelain and glass whiteboards, steel whiteboards are magnetic. In this way, magnetic accessories such as markers, erasers, arrows, highlights, etc. can be placed on the board.

4. Light weight

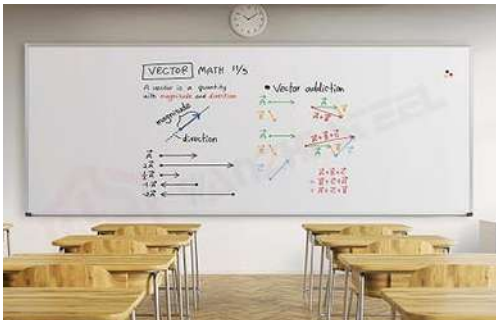
The weight of magnetic whiteboard paper is 7-14 kg/m². Light weight, easy to install and use.

5. Good processing performance

Most of our customers buy whiteboard painted steel coils and then sell the finished whiteboards at higher prices. It is easy to process, such as cutting, edging with alloy frame.

6. Easy to transport

Compared with other whiteboard materials, painted steel whiteboards are easy to transport. It is stronger than a glass white board.



写字白板

Whiteboard Steel Sheet/Coil

白板是使用白色的金属彩涂面板制造书写平面,是一种可反复擦写的书写工具。通常用于教学,会议讨论,或个人与家庭记事。白板须用专用的水笔书写。白板的使用寿命完全取决于板面的保护程度。

The whiteboard uses a white metal color-coated panel to make a writing surface, which is a writing tool that can be erased and written repeatedly. Usually used for teaching, meeting discussions, or personal and family notes. The whiteboard must be written with a special pen. The service life of the whiteboard depends entirely on the degree of protection of the board.



写字白板板(Whiteboard Steel Sheet)



写字白板板(Whiteboard Steel Sheet)



写字白板卷(Whiteboard Steel Coil)



写字白板卷(Whiteboard Steel Coil)

写字绿板

Greenboard Steel Sheet/Coil

绿板是使用绿色的金属彩涂面板制造书写平面,是一种可反复擦写的书写工具。通常用于教学,会议讨论,或
个人与家庭记事。绿板须用专用的水笔书写。绿板的使用寿命完全取决于板面的保护程度。

The greenboard is a writing surface made of a green metal color-coated panel, which is a writing tool that can be erased and written repeatedly. Usually used for teaching, meeting discussions, or personal and family notes. The green board must be written with a special pen. The service life of the greenboard depends entirely on the degree of protection of the board.



写字绿板板(Greenboard Steel Sheet)



写字绿板板(Greenboard Steel Sheet)



写字绿板卷(Greenboard Steel Coil)



写字绿板卷(Greenboard Steel Coil)

写字黑板

Blackboard Steel Sheet/Coil

黑板是使用黑色的金属彩涂面板制造书写平面,是一种可反复擦写的书写工具。通常用于教学,会议讨论,或个人与家庭记事。黑板须用专用的水笔书写。黑板的使用寿命完全取决于板面的保护程度。

The blackboard uses a black metal color-coated panel to make a writing surface, which is a writing tool that can be erased and written repeatedly. Usually used for teaching, meeting discussions, or personal and family notes. The blackboard must be written with a special pen. The service life of the blackboard depends entirely on the degree of protection of the board.



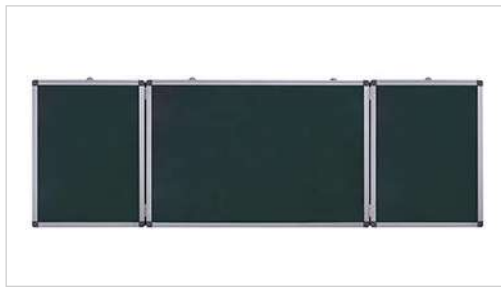
写字黑板卷(Blackboard Steel Coil)



写字黑板卷(Blackboard Steel Coil)



写字黑板板(Blackboard Steel Sheet)



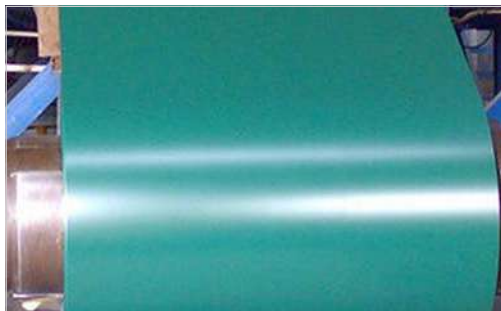
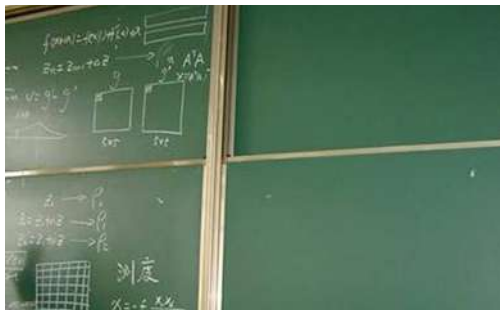
写字黑板板(Blackboard Steel Sheet)

粉笔板

Chalk Board

粉笔板是一个可以用粉笔反复书写的平面，板面坚硬，多用于教学。采用涂以耐磨涂层的优质合金钢板，板面厚度多为0.3mm-0.4mm，耐磨，不脱落，不褪色，经久耐用。书写手感好，字迹清晰，易写，易擦试，粉尘少。

The chalk board is a flat surface that can be written repeatedly with chalk. The board is hard and is mostly used for teaching. The high-quality alloy steel plate coated with wear-resistant coating is used, and the thickness of the plate surface is mostly 0.3mm-0.4mm, which is wear-resistant, does not fall off, does not fade, and is durable. The writing feel is good, the handwriting is clear, easy to write, easy to wipe and test, Less dust.

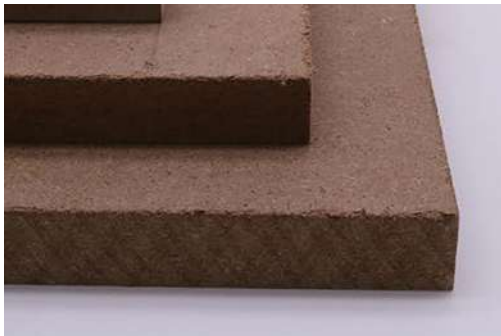


纤维板

MDF Board

纤维板是以木质纤维或其他植物素纤维为原料，施加脲醛树脂或其他适用的胶粘剂制成的人造板。制造过程中可以施加胶粘剂和（或）添加剂。纤维板具有材质均匀、纵横强度差小、不易开裂等优点，可用于写字板的支撑面。

MDF Board is an artificial board made of wood fiber or other vegetable fiber as raw material, applied with urea-formaldehyde resin or other applicable adhesives. Adhesives and/or additives can be applied during the manufacturing process. Fiberboard has the advantages of uniform material, small vertical and horizontal strength difference, and not easy to crack, and can be used as the supporting surface of writing boards.



背板

Back Sheet

背板可以用镀锌卷、镀锡卷、以及镀铬卷制作。

The back sheet can be made of galvanized coil, Tin Steel Coil, and Chroms Steel Coil.



镀锌卷(Galvanized Steel Coil)



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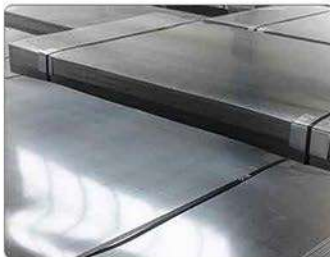
镀锡卷 Tin Steel Coil

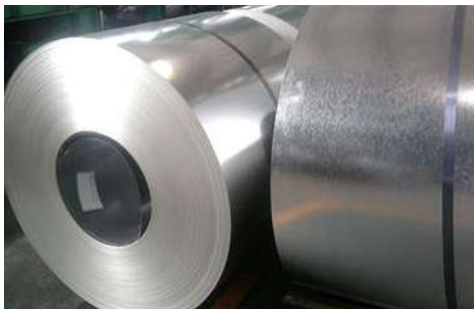
镀锡卷是指冷轧低碳钢板或两面均涂有商用纯锡的钢带。锡主要起到防止腐蚀和生锈的作用。它在具有耐腐蚀性，无毒，高强度和良好延展性的材料中，将钢的强度和可成型性与锡的耐腐蚀性，可焊性和美观相结合。

Tin Steel Coil refer to cold-rolled low-carbon steel sheets or steel strips coated with commercial pure tin on both sides. Tin mainly plays a role in preventing corrosion and rust. It combines the strength and formability of steel with the corrosion resistance, weldability and beauty of tin in materials with corrosion resistance, non-toxicity, high strength and good ductility.

镀锡铁皮包装具有良好的密封性，保鲜性，耐光性，坚固性和独特的金属装饰魅力，在包装行业具有广泛的覆盖范围。马口铁包装容器因其强大的抗氧化剂，多样的样式和精美的印刷而受到客户的欢迎，并广泛用于食品包装，药品包装，商品包装，仪器包装，工业包装等。

Tin-plated iron packaging has good airtightness, freshness, light resistance, robustness and unique metal decoration charm, and has a wide range of coverage in the packaging industry. Tinsplate packaging containers are welcomed by customers because of their powerful antioxidants, diverse styles and exquisite printing, and are widely used in food packaging, pharmaceutical packaging, commodity packaging, instrument packaging, industrial packaging, etc.





镀铬卷Chromium Steel Coils

镀铬板卷是指表面镀有一层铬的钢板，是为防止钢板表面免遭受腐蚀，延长其使用寿命，在钢板表面涂以一层金属铬，镀铬是一种经常采用而有效的防腐方法。

Chromium Steel Coils refers to the steel plate with a layer of chromium on the surface. In order to prevent the surface of the steel plate from being corroded and prolong its service life, a layer of metal chromium is coated on the surface of the steel plate. Chrome plating is a frequently used and effective anti-corrosion method.

镀铬板卷的结构有四层：钢基板、金属铬层、水合氧化铬层和油膜。由于基板相同，机械性能和镀锡板一样，但在应用上有一些自己的特点：

1. 成本比镀锡板约低10%，外观光泽不及镀锡板看好。
2. 耐蚀性不及镀锡板，镀层薄而针孔率高，因此使用时内外表面要上涂料。
3. 镀铬板附着力强，对有机涂料的附着力比镀锡板强3~6倍。抗硫化腐蚀能力也比镀锡板强。
4. 镀铬板不能锡焊，只能采用搭接电阻焊或粘合。
5. 镀层薄而韧性差，制罐易破裂，因而不宜冲拔罐，可用于深冲罐。

The structure of the chromium plated coil has four layers: a steel substrate, a metal chromium layer, a hydrated chromium oxide layer and an oil film. Since the substrate is the same, the mechanical properties are the same as the tin plate, but there are some characteristics of its own in application:

1. The cost is about 10% lower than that of tin plate, and the appearance of gloss is not as good as tin plate.
2. The corrosion resistance is not as good as tin plate, the plating layer is thin and the pinhole rate is high, so the inner and outer surfaces should be painted.
3. The chrome plate has strong adhesion, and the adhesion to organic paint is 3 to 6 times stronger than that of tin plate. The resistance to sulfide corrosion is also stronger than that of tin plate.
4. The chrome plate can not be soldered, only lap resistance welding or bonding can be used.
5. The coating is thin and the toughness is poor. If the chrome plate is made into the can, it is easy to break, so it is not suitable to flush the can, and can be used for deep-drawn cans.