



# Metallic Pigment

Zhangqiu Metallic Pigment Co.,Ltd.

# Company Overview



Zhangqiu Metallic Pigment Co.,Ltd., the largest specialized manufacturer of aluminium pigments in China was founded by Mr. Liu Enwei in 1987.

Zhangqiu Metallic has over 30 years of manufacturing experiences with a current workforce of over 400 employees.

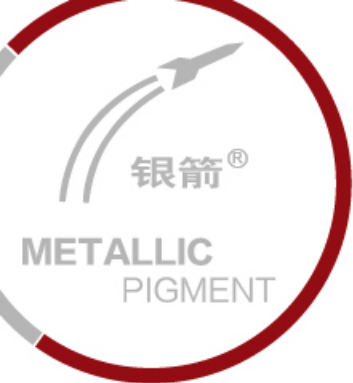
The company has five manufacturing plants covering a total area of 150,000 square meters. The annual output grew by double digits yearly over the last 10years.We now have 16 sales offices in China and are represented by our agents in many countries.

Zhangqiu Metallic Pigment Co.,Ltd. is managed by a professional management and technical team with strong competency in research & development. Zhangqiu Metallic Pigment is ISO9001:2008, ISO14001:2004 and OHSAS18001:2007 certified.

We maintain a consistent quality and stability assurance policy for our range of products.

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## Sparkling Aluminium Paste

### ■ Characteristics

SPARKLING series is for OEM and Refinish coatings and coil coatings. They are manufactured using spherical aluminium powders and our newly installed equipments. SPARKLING series is classified to provide an evenly distributed average particle size distribution. SPARKLING series imparts a bright metallic effect coupled with strong hiding power.

### ■ Performance Parameter

Grades	Non Volatile Content (±2%)	Average Particle Size (um) (D50)	Screen Analysis (325mesh<%)	Applications							
				3C	MAC Wheel	OEM	Refinish	Coil	Industry	Plastic	Non-stick
ZQ-11217	72	12	1.0			0	0	0	0		
ZQ-11523	72	15	1.0			0	0	0	0	0	
ZQ-11718	72	16	1.0			0	0	0	0	0	
ZQ-11819	72	18	1.0	0		0	0	0	0		
ZQ-12020	72	20	1.0	0		0	0	0	0		
ZQ-12511	72	25	1.0		0		0	0	0	0	0
ZQ-12621	72	26	1.0		0		0	0	0	0	0
ZQ-1280	72	28	1.0		0		0	0	0	0	0
ZQ-1281	72	28	1.0	0		0	0	0	0		
ZQ-12826	72	28	1.0		0	0	0	0	0	0	0
ZQ-13514	72	35	1.0 (200 mesh)		0		0	0	0	0	0
ZQ-13625	72	36	1.0 (200mesh)		0	0	0	0	0	0	0
ZQ-14215	72	42	1.5 (200 mesh)		0				0	0	0
ZQ-14225	72	42	2.0 (200 mesh)		0	0	0	0	0	0	0
ZQ-14812	72	48	1.5 (200mesh)		0		0	0	0	0	0
ZQ-15316	72	53	1.5 (200 mesh)		0				0	0	0
ZQ-15527	72	55	1.0		0	0					0
ZQ-16524	72	65	1.0 (100mesh)		0				0		0
ZQ-15513	72	65	1.5 (100mesh)						0	0	0

Solvent

HA: High Boiling Point Aromatic Hydrocarbon Solvent

# 02 | METALLIC PIGMENT

## Bright Effect Aluminium Paste



### ■ Characteristics

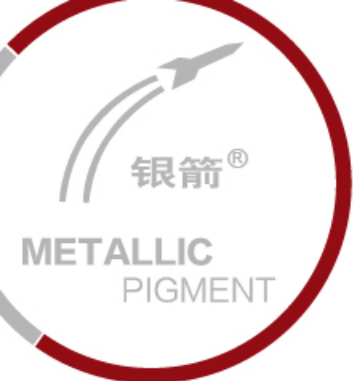
BRIGHT EFFECT is manufactured using fine grinding processes to ensure that the surface of the particles is smooth with minimum rough edges. Specially selected spherical powders are used in the making of this series. The particles' diameter to thickness ratio is maintained at a constant level to ensure a brilliant and high reflective appearance. Advanced equipment and fine grinding processes are adopted in the company to produce aluminium particle in a silver-dollar like structure with smooth surface and edges, adequate diameter to thickness ratio, and even particle size distribution. Therefore, this series has high reflectivity and superior capability of positioning arrangement to give the paint film a bright appearance and smooth surface with a basic electroplating effect.

### ■ Performance Parameter

Grades	Non Volatile Content (±2%)	Average Particle Size (um)(D50)	Screen Analysis (325mesh<%)	Applications							
				3C	MAC Wheel	OEM	Refinish	Coil	Industry	Plastic	Non-stick
ZQ-2070	70	7	0.5	0		0	0	0	0		
ZQ-20714	70	7	1.0	0		0	0	0	0		
ZQ-2085	70	8	0.5	0		0	0	0	0		
ZQ-2096	70	9	1.0	0		0	0	0	0		
ZQ-2097	70	9	1.0	0		0	0	0	0		
ZQ-2102	70	10	1.0	0		0	0	0	0		
ZQ-21015	70	10	1.0	0		0	0	0	0		
ZQ-2103	70	10	1.0	0		0	0	0	0		
ZQ-2121	70	12	1.0	0		0	0	0	0		
ZQ-21713	65	17	1.0	0		0	0	0	0		

Solvent

HA: High Boiling Point Aromatic Hydrocarbon Solvent



## 03 | METALLIC PIGMENT

### Corn-Flake Aluminium Paste

#### ■ Characteristics

CORN-FLAKE SERIES imparts a strong metallic effect coupled with high brightness. Most of the grades in the series also possess good coverage ability.

#### ■ Performance Parameter

Grades	Non Volatile Content (±2%)	Average Particle Size (um) (D50)	Screen Analysis (325mesh<%)	Applications					
				3C	OEM	Refinish	Coil	Industry	Plastic
ZQ-40610	62	6	0.5	0	0	0	0	0	0
ZQ-4085	62	8	0.5	0	0	0	0	0	0
ZQ-4089	62	8	1.0	0	0	0	0	0	0
ZQ-40813	62	8	1.0	0	0	0	0	0	0
ZQ-4101	65	10	1.0		0	0	0	0	0
ZQ-4106	65	10	1.0	0	0	0	0	0	0
ZQ-4120	65	12	1.0		0	0	0	0	0
ZQ-4122	65	12	1.0		0	0	0	0	0
ZQ-4123	65	12	1.0		0	0	0	0	0
ZQ-4154	65	15	1.0		0	0	0	0	0
ZQ-4177	65	17	1.0	0	0	0	0	0	0
ZQ-4208	65	20	1.0	0	0	0	0	0	0

Solvent HA: High Boiling Point Aromatic Hydrocarbon Solvent

### Automotive Speciality Aluminium Paste

#### ■ Characteristics

AUTOMOTIVE SPECIALITY is manufactured using our best in-house powder. Only spherical powder is used to manufacture grades that have a narrow particle size distribution curve. Advanced equipments are adopted in the company to produce aluminium particle in a silver-dollar like structure with smooth surface and edges and consistent diameter to thickness ratio. Therefore, this series imparts high reflectivity and good orientation capability to give the paint film a bright appearance and smooth surface look.

#### ■ Performance Parameter

Grades	Non Volatile Content (±2%)	Average Particle Size(um)(D50)	Screen Analysis (325mesh<%)	Applications
ZQ-405	70	5	0.5	OEM, Refinish, Coil, Plastic
ZQ-406	70	6	0.5	
ZQ-407	70	7	0.5	
ZQ-408	70	9	1.0	
ZQ-409	72	9	1.0	
ZQ-410	72	10	1.0	
ZQ-412	72	12	1.0	

Solvent HA: High Boiling Point Aromatic Hydrocarbon Solvent



# 04 | METALLIC PIGMENT

## Standard Non-Leafing Aluminium Paste



### ■ Characteristics

STANDARD NON-LEAFING is produced specially for protective coatings. The technology adopted allows our grades to impart good brightness and whiteness while maintaining a well balanced cost structure.

### ■ Performance Parameter

Grades	Non Volatile Content (±2%)	Average Particle Size(um) (D50)	Screen Analysis (325mesh<%)	Applications
ZQ-5150	65	15	1.0	General Industrial, Hammer tone effect
ZQ-5151	63	15	1.0	General Industrial, Hammer tone effect
ZQ-5152	63	16	1.0	General Industrial, toy, Hammer tone effect
ZQ-5166	65	16	1.0	General Industrial, Hammer tone effect

Solvent HA: High Boiling Point Aromatic Hydrocarbon Solvent

Note: We can tailor make the non-volatile content and solvent according to customer needs.

## Standard Leafing Aluminium Paste



### ■ Characteristics

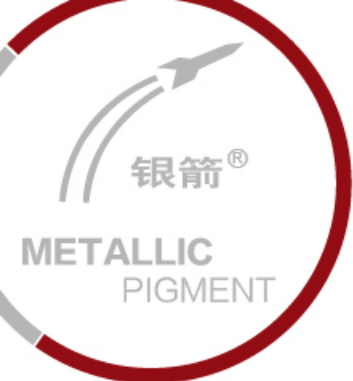
STANDRAD LEAFING is specially made to impart a brilliant appearance. The various grades possess good leafing stability and working pot life. It is also capable of withstanding adverse weather conditions. The formulation with silicon types of resin will confer high heat resistance to the coatings.

### ■ Performance Parameter

Grades	Non Volatile Content (±2%)	Leafing Value (Min %)	Water coverage (Min cm <sup>2</sup> /g)	Screen Analysis (325mesh<%)	Applications					
					Marine	Protective	Roof	Ink	Aerosol	Dip coating
ZQ-6120	65	80	17000	1.0	0	0	0			
ZQ-6082	64	80	40000	0.1	0	0	0	0	0	
ZQ-6122	65	85	20000	1.0	0	0	0			
ZQ-6083	65	80	28000	0.1		0	0	0	0	
ZQ-6084	65	80	32000	0.1		0	0	0	0	
ZQ-6084B	65	80	32000	0.1				0	0	0

Solvent

HA: High Boiling Point Aromatic Hydrocarbon Solvent



## 05 | METALLIC PIGMENT

### Premium Leafing Aluminium Paste

#### ■ Characteristics

PREMIUM LEAFING is manufactured with spherical aluminium powders using special milling technology. When formulated with the appropriate resin systems, it has an excellent leafing stability with bright appearance and sparkling effect.

#### ■ Performance Parameter

Grades	Non Volatile Content (±2%)	Average Particle Size(um) (D50)	Screen Analysis (325mesh<%)	Applications				
				Decorative	Ink	Bicycle	Aerosol	Headlamp reflector
ZQ-7044	70	4	1.0	0	0	0	0	0
ZQ-7073	70	7	1.0	0	0	0	0	0
ZQ-7092	70	9	1.0	0	0	0	0	0
ZQ-7106	70	10	1.0	0	0	0		0
ZQ-7131	72	13	1.0	0	0	0		0

Solvent

HA: High Boiling Point Aromatic Hydrocarbon Solvent

### Water-Borne Aluminium Paste

#### ■ Characteristics

WATER BORNE uses aluminium powder of a narrow particle size distribution which has undergone inorganic treatment to ensure a minimum production of gases. It has good storage stability when formulated in the resin of choice.

#### ■ Performance Parameter

Grades	Non Volatile Content (±2%)	Average Particle Size(um) (D50)	Screen Analysis (325mesh<%)	Applications				
				Waterborne automotive OEM	Refinish	Coil	Plastic	Decorative
ZQ-3081	63	8	1.0	0	0	0	0	0
ZQ-3132	65	13	1.0	0	0	0	0	0
ZQ-3183	65	18	1.0	0	0	0	0	0
ZQ-3314	65	42	1.5	0	0	0	0	0

Solvent: IPA: Isopropanol



# 06 | METALLIC PIGMENT

## Vacuum Metallized Pigment



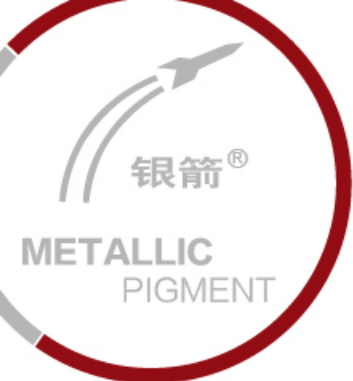
### ■ Characteristics

This series imparts smooth surface, chrome-like mirror effect and high-reflective effect as well as good hiding power.

### ■ Performance Parameter

Grade	Non Volatile Content(%)	Average Particle Size(D50)	Applications
VMP-1061EA	10	6	car paint, spray paint, ink, nail polish etc
VMP-1074EA	10	7	
VMP-1082EA	10	8	
ZV-2101EA	10	10	
VMP-1065PM	10	6	
VMP-1073PM	10	7	
VMP-1115PM	10	11	
VMP-1054MMB	10	5	
VMP-1066PMA	10	6	
VMP-1069PMA	10	6	
VMP-1074PMA	10	11	
VMP-2071PM	10	7	
VMP-2065PM	10	6	
VMP-2032PM	10	3	

Solvent: EAC/PM/MMB/PMA



## Ink Speciality Aluminium Pigment



### ■ Characteristics

ZK INKS are made especially for the ink industries. They are carried in ethyl acetate or ink oil. These pigments are made from specially selected spherical aluminium powders. The average particle size curve is narrowly controlled and under proper formulation, they impart a bright appearance with good coverage ability.

### ■ Performance Parameter

#### Aluminium Paste

Grades	Non Volatile Content (±2%)	Average Particle Size(um)(D50)	Screen Analysis (325mesh<%)	Applications
ZK-907	70	7	0.5	Gravure Ink
ZK-9083	80	8	1.0	Gravure Ink
ZK-9061	80	6	1.0	Gravure Ink
OP-9041	65	4	0.2	Offset Ink
OP-9052	65	5	0.5	Offset Ink
OP-9053	65	5	0.2	Offset Ink
OP-9064	65	6	0.5	Offset Ink

Solvent: Ethyl acetate or Ink Oil

#### Aluminium Granule

Grades	Non Volatile Content (±2%)	Average Particle Size(um)(D50)	Screen Analysis (325mesh<%)	Applications
ZAS-9061	85	6	1.0	Gravure Ink
ZAS-9072	85	7	1.0	Gravure Ink
ZAS-9083	85	8	1.0	Gravure Ink

For aluminium granule we use resin as binder.

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METALLIC PIGMENT

## Aluminium Pigment For Masterbatch



### ■ Characteristics

This series is made especially for the masterbatch application. Currently, aluminium paste, aluminium powder and aluminium pellet are available. It is compatible with kinds of polymers and can be used to make masterbatch or use by different procedures such as injection, extruder and calender, etc.

### ■ Performance Parameter

#### Aluminium Paste

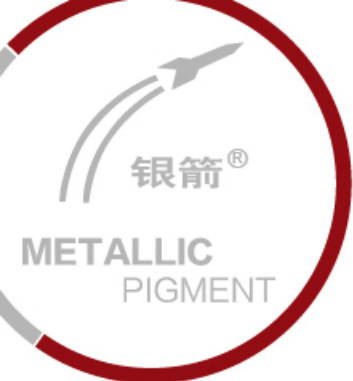
Performance Parameter		Non Volatile Content(±2%)	Leafing Value (Min%)	Water coverage (Min cm <sup>2</sup> /g)	Screen Analysis (325mesh<%)	Solvent
Grade	ZQ-6120S	65	75	24000	1.0	HA
	ZQ-6120	65	80	17000	1.0	HA
	ZQ-6122	65	80	20000	1.0	HA

#### Aluminium Pellets

Performance Parameter		Non Volatile Content(±2%)	Average Particle Size (±1um)(D50)	Screen Analysis (325mesh<%)	Carrier
Grade	ZWP-9155WAX	70	15	1.0	PE Wax
	ZWP-9126WAX	70	12	1.0	PE Wax

#### Aluminum Powder

Performance Parameter		Non Volatile Content(±2%)	Leafing Value (Min%)	Water coverage (Min cm <sup>2</sup> /g)	Screen Analysis (45 um >%)
Grade	ZLG-101	99	65	6500	98
	ZLG-102	99.5	65	7500	99



## Non-Leafing Aluminium Powder



### ■ Characteristics

This series is aluminum powder coated with  $\text{SiO}_2$  with narrow particle size distribution, smooth surface and silver-dollar structure. This series imparts brilliant metallic effects, strong hiding powder possessing reliable stability, oxidation-resistance and weather-resistance ability.

### ■ Performance Parameter

Grades	Non volatile Content (%)	Average Particle Size (um) (D50) $\pm 1$ um	Applications
ZPC-212	99.9	65	Epoxy resin powder coatings, polyester resin powder coating, and acrylic resin powder coatings
ZPC-214	99.9	28	

## Leafing Aluminium Powder



### ■ Characteristics

It adopts dry grinding, which is easy to disperse, good hiding powder and particle size dispersion, the surface is fine and smooth, with strong metallic effect.

### ■ Performance Parameter

Grades	Non volatile Content (%)	Average particle Size(um)	Applications
ZQ-810	99.6	80	Powder coating, ink, master batch, printing, textile industries
ZQ-820	99.6	60	
ZQ-840	99.6	40	
ZQ-860	99.6	30	
ZQ-880	99.6	22	
ZQ-8100	99.6	15	
ZQ-8120	99.6	12	
ZQ-8250	99.6	9	
ZQ-8150	99.6	7	

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## METALLIC PIGMENT

## Leafing Aluminium Powder



### ■ Characteristics

Adopted with the dry grinding process, this series impart high metal contents, little volatile organic solvents, and good environmental performance.

### ■ Performance Parameter

Grades	Non volatile Content (%)	Leafing Value (min%)	water covering (min cm <sup>2</sup> /g±10%)	Screen Analysis (45 um >%)	Applications
ZLG-101	99	65	6500	98	Powder coatings, anti-corrosive coatings, etc
ZLG-102	99.5	65	7500	99	
ZLG-11L	99.5	80	40000	99	

## Aluminium Powder /Paste For AAC

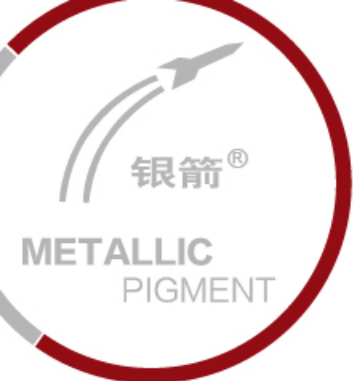


### ■ Characteristics

Aluminium powder is produced by dry grinding process. It has the advantages such as high active aluminium content, fast gas generating speed, easy dispersion, and long storage time. In addition, the particle size distribution can be controlled or adjusted based on different formula.

### ■ Performance Parameter

Grades	Metal Content (>%)	Active Al Content (>%)	Stearic Acid (<%)	Gas Extraction Time(min)	Gas Extraction Volume (>ml)	Applications
ZL-201W-B04	98.2	90	2.0	10-14	75	AAC, light block, etc
ZL-201W-B05	98.4	92	2.0	14-18	75	
ZL-201W-B06	98.4	94	2.0	18-22	75	
Grades	Metal Content (>%)	Active Al Content (>%)	Screen Analysis (<%)	Gas Extraction Volume (ml)	Solvent	
ZQ-65W	65	85	3 (75um)	65-70	water	
ZQ-D7074	65	80	4-6(45um)	65-70	DEG	



## Aluminium Powder For Conductive Paste

### ■ Characteristics

This series is spherical aluminium powder with high purity. It is made especially for solar conductive aluminium powder, ceramic industry, high precision alloy, pharmaceutical industry, etc.

### ■ Performance Parameter

Grades	Average Particle Size(um) (D50)	Density ≥g/cm³	Chemical Compositions					Applications
			Activated Aluminum≥%	Impurities Content ≤%				
				Cu	Fe	Si	H2O	
Apsolar 01	1-2	1.4	98	0.015	0.20	0.20	0.10	solar cell, etc.
Apsolar 02	2-3	1.4	98	0.015	0.20	0.20	0.10	
Apsolar 03	3-4	1.4	98	0.015	0.20	0.20	0.10	
Apsolar 04	4-5	1.4	98	0.015	0.20	0.20	0.10	
Apsolar 05	5-6	1.4	98	0.015	0.20	0.20	0.10	
Apsolar 06	6-7	1.4	98	0.015	0.20	0.20	0.10	

## Bronze Powder

### ■ Characteristics

This series is leafing flaky pigment, which is composed of copper, zinc, and aluminium powder. Bronze powder imparts good brilliance and metallic effect. Rich gold, pale gold, rich pale gold and copper powder are available. Customer can choose color and particle size according to their application and required effect.

### ■ Performance Parameter

Grades	Average Particle Size (um)	water-covering (cm <sup>2</sup> /g)	Applications:
ZG-1034P/R	3.1-3.6	12000	Coatings, paints, inks, plastics, toys, textile printing, etc
ZG-2030P/R	3.5	10000	
ZG-2072P/R/RP	5.6-7	8000	
ZG-2041P/R/RP	4.9-5.6	10000	
ZG-WB3101P/R	6-8	9000	
ZG-1073P/R	6.5-11	7000	
ZG-2103C	10	4500	
ZG-1102P/R	9-13	5000	
ZG-1201P/R	18-24	2500	
ZG-1420C	25	1800	
ZG-1420P/R	30-40	1800	

R:Rich Gold P:Pale Gold RP:Rich Pale Gold C:Copper



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## METALLIC PIGMENT

# Package, Storage And Transportation Guide



## ■ Package

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Packing: 25 kgs metal drum of good integrity with plastic inline where applicable.

## ■ Storage

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Keep lids tightly sealed.

Store in cool and dry place in tightly closed lid.

Keep away from heat and direct sunlight.

Prevent formation of dust.

Ensure good ventilation.

After long time storage, the paste becomes drier than before. Please recheck the products before use to avoid any loss.

## ■ Transportation

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Handle gently, and no acute collision. Transport in strict accordance with local transport regulations.

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