

FRP Services & Co.

(Zinc pigment)

Zinc Dust	Zinc Flake
ZD-13	ZF-130
ZD-35	ZF-180
ZD-46	
ZD-57	
ZD-69	

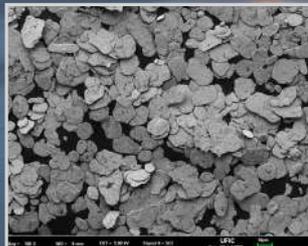
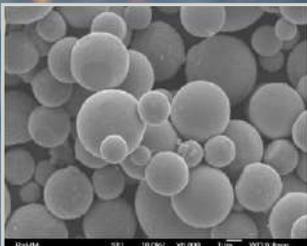


Company Introduction

GTC Co.,LTD is a metal pigment chemical industry which focuses on corrosion technology with zinc powder. Our GTC has been dedicating to research on excellent zinc pigment, and now is continually supplying high-quality products customers with standardized operation management, efficient professional services, perfect material control system.



FRP Services & Co.





Major Clients





Product Use

Shipbuilding, Hevy industry, Automobile industry, Steel industry, Construction, Steel-related industries: Used as an ingredient in anti-corrosion Coatings.

More than 50% of anti-rust paint composition consists of zinc dust.

We supply zinc to internal and external major anti-corrosion paint manufacturing companies.

Product

Zinc Dust

High-quality/High purity
/High function Anti-Corrosion
Performance is excellent.



Use	Zinc powder with an average particle size of 1 ~ 9 μ m used for rust preventive paints such as steel structures.
Packing Unit	25kg PP Bag/20~40Pail Can/500kg PP bag

Lead (Pb) can be adjusted to less than 100 ppm.

ZD-13

Average Particle Size 1~3 μ m

Quality Requirement

NO	TEST ITEMS	QUALITY RANGE	UNIT	TEST METHODS
1	APPEARANCE	Gray Power		VISUAL
2	MOISTURE	Max. 0.05	%	ASTM D521
3	OIL ABSORPTION	5 - 7	%	ASTM D281
4	PARTICLE SIZE	1.0 - 3.0	μ m	PSA
5	SIEVE RESIDUE		%	ASTM D521
	100 MESH	Nil		
	200 MESH	Nil		
	325 MESH	Nil		
6	METAL ZINC	Min. 94	%	ASTM D521
7	TOTAL ZINC	Min. 99	%	ASTM D521
8	Pb	Max. 0.10	%	ASTM D521
9	Fe	Max. 0.05	%	ASTM D521
10	Cd	Max. 0.05	%	ASTM D521
11	Cl	Max. 0.01	%	ASTM D521
12	ZnO	Max. 6.00	%	ASTM D521
13	OIL MATERIALS	Max. 0.05	%	ASTM D521
14	SP/GR	7.0 - 7.2		ASTM D153

ZD-35

Average Particle Size 3~5 μ m

Quality Requirement

NO	TEST ITEMS	QUALITY RANGE	UNIT	TEST METHODS
1	APPEARANCE	Gray Power		VISUAL
2	MOISTURE	Max. 0.05	%	ASTM D521
3	OIL ABSORPTION	5 - 7	%	ASTM D281
4	PARTICLE SIZE	3.0 - 5.0	μ m	PSA
5	SIEVE RESIDUE		%	ASTM D521
	100 MESH	Nil		
	200 MESH	Nil		
	325 MESH	Nil		
6	METAL ZINC	Min. 96	%	ASTM D521
7	TOTAL ZINC	Min. 99	%	ASTM D521
8	Pb	Max. 0.10	%	ASTM D521
9	Fe	Max. 0.05	%	ASTM D521
10	Cd	Max. 0.05	%	ASTM D521
11	Cl	Max. 0.01	%	ASTM D521
12	ZnO	Max. 4.00	%	ASTM D521
13	OIL MATERIALS	Max. 0.05	%	ASTM D521
14	SP/GR	7.0 - 7.2		ASTM D153



ZD-46

Average Particle Size 4~6 μ m

Quality Requirement

NO	TEST ITEMS	QUALITY RANGE	UNIT	TEST METHODS
1	APPEARANCE	Gray Power		VISUAL
2	MOISTURE	Max. 0.05	%	ASTM D521
3	OIL ABSORPTION	5 - 7	%	ASTM D281
4	PARTICLE SIZE	4.0 - 6.0	μ m	PSA
5	SIEVE RESIDUE		%	ASTM D521
	100 MESH	Nil		
	200 MESH	Nil		
	325 MESH	Max. 0.03		
6	METAL ZINC	Min. 96	%	ASTM D521
7	TOTAL ZINC	Min. 99	%	ASTM D521
8	Pb	Max. 0.10	%	ASTM D521
9	Fe	Max. 0.05	%	ASTM D521
10	Cd	Max. 0.05	%	ASTM D521
11	Cl	Max. 0.01	%	ASTM D521
12	ZnO	Max. 4.00	%	ASTM D521
13	OIL MATERIALS	Max. 0.05	%	ASTM D521
14	SP/GR	7.0 - 7.2		ASTM D153

ZD-57

Average Particle Size 5~7 μ m

Quality Requirement

NO	TEST ITEMS	QUALITY RANGE	UNIT	TEST METHODS
1	APPEARANCE	Gray Power		VISUAL
2	MOISTURE	Max. 0.05	%	ASTM D521
3	OIL ABSORPTION	5 - 7	%	ASTM D281
4	PARTICLE SIZE	5.0 - 7.0	μ m	PSA
5	SIEVE RESIDUE		%	ASTM D521
	100 MESH	Nil		
	200 MESH	Nil		
	325 MESH	Nil		
6	METAL ZINC	Min. 94	%	ASTM D521
7	TOTAL ZINC	Min. 99	%	ASTM D521
8	Pb	Max. 0.10	%	ASTM D521
9	Fe	Max. 0.05	%	ASTM D521
10	Cd	Max. 0.05	%	ASTM D521
11	Cl	Max. 0.01	%	ASTM D521
12	ZnO	Max. 6.00	%	ASTM D521
13	OIL MATERIALS	Max. 0.05	%	ASTM D521
14	SP/GR	7.0 - 7.2		ASTM D153



ZD-69

Average Particle Size 6~9 μ m

Quality Requirement

NO	TEST ITEMS	QUALITY RANGE	UNIT	TEST METHODS
1	APPEARANCE	Gray Power		VISUAL
2	MOISTURE	Max. 0.05	%	ASTM D521
3	OIL ABSORPTION	5 - 7	%	ASTM D281
4	PARTICLE SIZE	6.0 - 9.0	μ m	PSA
5	SIEVE RESIDUE		%	ASTM D521
	100 MESH	Nil		
	200 MESH	Nil		
	325 MESH	Max. 0.03		
6	METAL ZINC	Min. 96	%	ASTM D521
7	TOTAL ZINC	Min. 99	%	ASTM D521
8	Pb	Max. 0.10	%	ASTM D521
9	Fe	Max. 0.05	%	ASTM D521
10	Cd	Max. 0.05	%	ASTM D521
11	Cl	Max. 0.01	%	ASTM D521
12	ZnO	Max. 3.00	%	ASTM D521
13	OIL MATERIALS	Max. 0.05	%	ASTM D521
14	SP/GR	7.0 - 7.2		ASTM D153

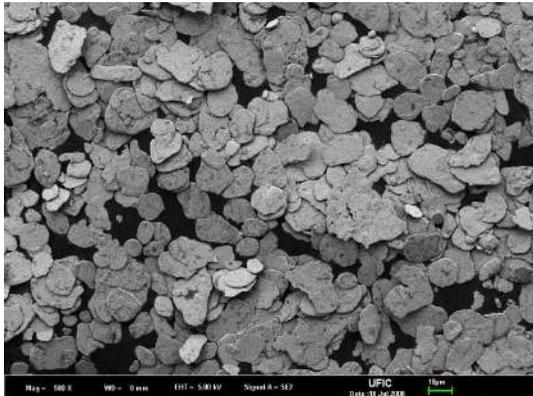


Zinc Flake

Corrosion Protection Propertion of Zinc Flake

Because of their lamellar shape, zinc flakes have a fundamentally higher specific surface area than spherical zinc dust.

The correspondingly higher binder content is decided by formulations with lower pigment volume concentration. As a result this provides advantages for both handling of pigments and paint properties.



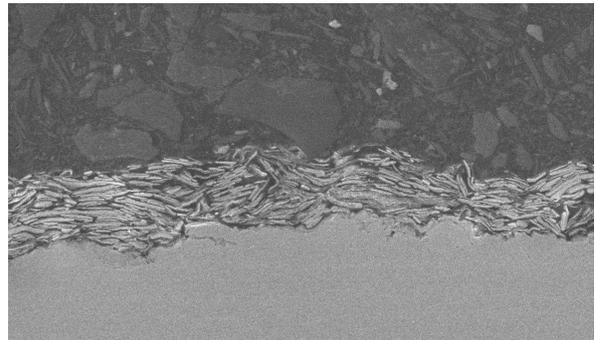
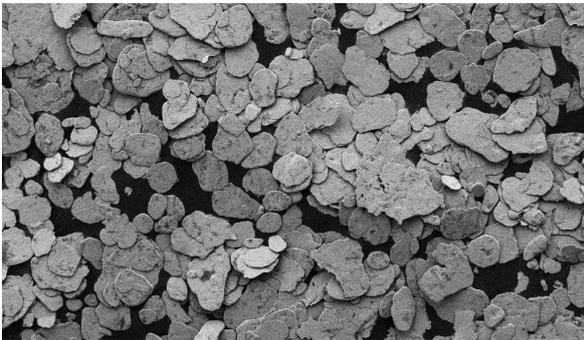
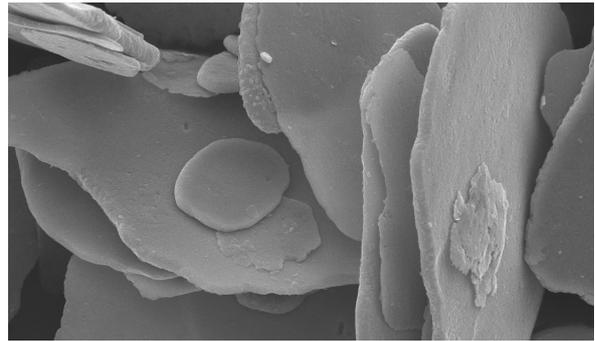
Zinc flake

TECHNICAL DATA	
TEST	TYPICAL VALUE
Particle	Lamella, flake
Bulk density (kg/l)	approx. 1.1.
Non volatile contact(%) ASTM D521	100

• Packing Unit : 25kg PP Bag / 20~40 Pail Can / 500kg PP Bag

ELEMENTS	SPECIFICATION	UNIT	NORMS	ZF-130	ZF-180
Appearance	Silver grey	-	VISUAL	Silver grey	Silver grey
MOISTURE	Max. 0.05	%	ASTM D 521	0-0.01	0-0.01
PARTICLE SIZE	aver. 15-20	µm	PSA	12~14	17~20
SIEVE RESIDUE			ASTM D 521		
100 MESH	Nil	%		-	-
200 MESH	Nil	%		-	-
300 MESH	Max. 3.0	%		1.0	3.0

Less zinc content in paint (higher binder content)
Improved edge/corner protection and flexibility due to higher binder content
No blistering
Smooth surface
Lower weight
Greater flexibility
Better adhesive property with substrate
Good overcoatability
Low porosity and permeability
Metallic appearance Significantly less tendency to settle
Easily re-stirrable sediment



Test Report

TEST RESULT

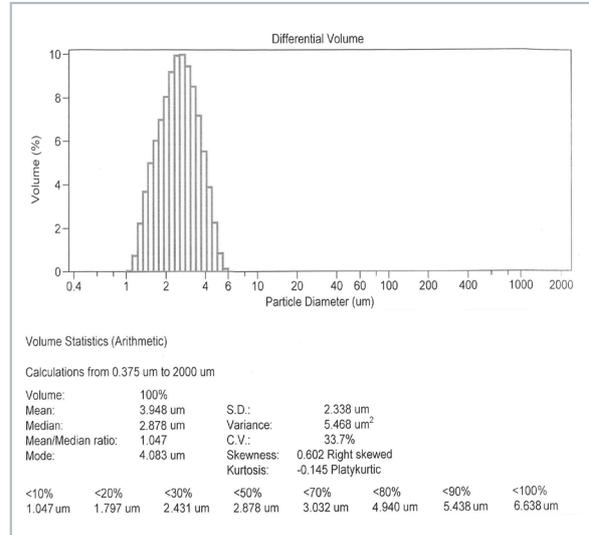
TITLE : ZINC DUST
GRADE : ZD-13C1.0-3.0 (A) (TYPE-D)

Test Items	Specifications	UNFT	Test Methods	Test Results
1 APPEARANCE	Gray Powder	%	VISUAL	
2 MOISTURE	Max. 0.05	%	ASTM D 521	0.001
3 PARTICLE SIZE	1.0 - 3.0	μ	PSA	2.878
4 SIEVE RESIDUE		%	ASTM D 521	
100 MESH	NIL			-
200 MESH	NIL			-
325 MESH	Max. 0.03	%		-
5 METALLIC ZINC	Min. 90	%	ASTM D 521	90.51
6 TOTAL ZINC	Min. 90	%		90.64
7 Pb	Max. 0.1	%		0.0036
8 Fe	Max. 0.02	%		0.0009
9 Cd	Max. 0.01	%		0.0002
10 Cl	Max. 0.01	%		0.0001
11 ZNO	Max. 4.0	%		3.13
12 SP/GR	7.0 - 7.2		ASTM D 153	7.09

*There are no items that are not filled up or analyzed.
The accuracy of analysis is different as how to use and the sensibility of component.
This is to certify that these mentioned items are correct.

Feb. 04, 2020

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TEST RESULT

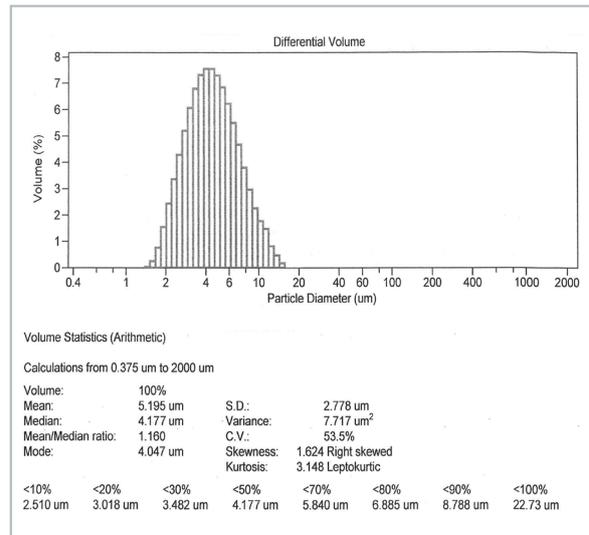
TITLE : ZINC DUST
GRADE : ZD-35C3.0-5.0 (A) (TYPE-D)

Test Items	Specifications	UNFT	Test Methods	Test Results
1 APPEARANCE	Gray Powder	%	VISUAL	
2 MOISTURE	Max. 0.05	%	ASTM D 521	0.001
3 PARTICLE SIZE	3.0 - 5.0	μ	PSA	4.177
4 SIEVE RESIDUE		%	ASTM D 521	
100 MESH	NIL			-
200 MESH	NIL			-
325 MESH	Max. 0.03	%		-
5 METALLIC ZINC	Min. 90	%	ASTM D 521	90.53
6 TOTAL ZINC	Min. 90	%		90.61
7 Pb	Max. 0.1	%		0.0036
8 Fe	Max. 0.02	%		0.0008
9 Cd	Max. 0.01	%		0.0002
10 Cl	Max. 0.01	%		0.0001
11 ZNO	Max. 4.0	%		3.08
12 SP/GR	7.0 - 7.2		ASTM D 153	7.07

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TEST RESULT

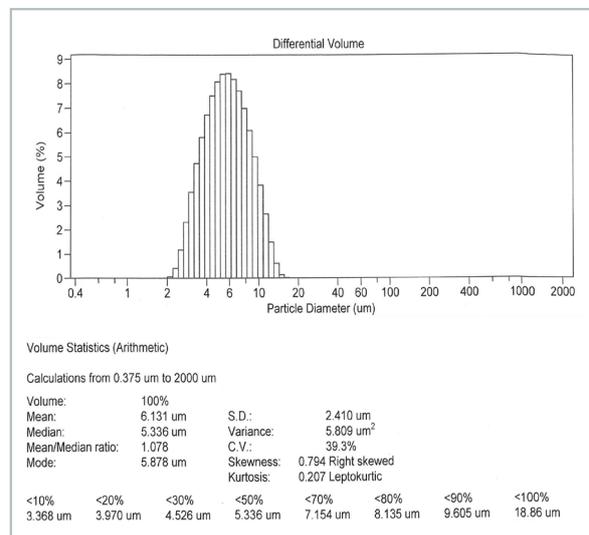
TITLE : ZINC DUST
GRADE : ZD-46C4.0-6.0 (A) (TYPE-D)

Test Items	Specifications	UNFT	Test Methods	Test Results
1 APPEARANCE	Gray Powder	%	VISUAL	
2 MOISTURE	Max. 0.05	%	ASTM D 521	0.001
3 PARTICLE SIZE	4.0 - 6.0	μ	PSA	5.336
4 SIEVE RESIDUE		%	ASTM D 521	
100 MESH	NIL			-
200 MESH	NIL			-
325 MESH	Max. 0.03	%		-
5 METALLIC ZINC	Min. 90	%	ASTM D 521	90.56
6 TOTAL ZINC	Min. 90	%		90.62
7 Pb	Max. 0.1	%		0.0034
8 Fe	Max. 0.02	%		0.0010
9 Cd	Max. 0.01	%		0.0002
10 Cl	Max. 0.01	%		0.0001
11 ZNO	Max. 4.0	%		3.00
12 SP/GR	7.0 - 7.2		ASTM D 153	7.05

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TEST RESULT

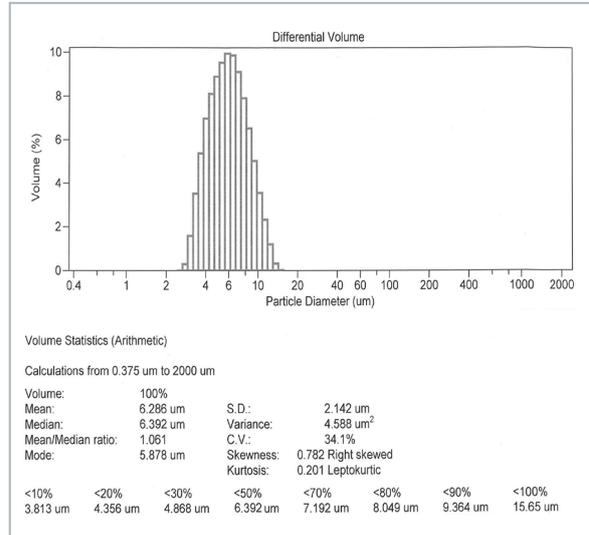
TITLE : ZINC DUST
GRADE : ZD-5765.0-7.0 µmCTYPE-D

Test Items	Specifications	UNIT	Test Methods	Test Results
1 APPEARANCE	Gray Powder	%	VISUAL	-
2 MOISTURE	Max. 0.05	%	ASTM D 521	0.001
3 PARTICLE SIZE	5.0 - 7.0	µ	PSA	6.392
4 SIEVE RESIDUE		%	ASTM D 521	-
100 MESH	NIL			-
200 MESH	NIL			-
325 MESH	Max. 0.03			-
5 METALLIC ZINC	Min. 99	%	ASTM D 521	99.51
6 TOTAL ZINC	Min. 99	%		99.64
7 Pb	Max. 0.1	%		0.0038
8 Fe	Max. 0.02	%		0.0011
9 Cd	Max. 0.01	%		0.0002
10 Cl	Max. 0.01	%		0.0001
11 ZnO	Max. 4.0	%		3.13
12 SP/GR	7.0 - 7.2		ASTM D 153	7.09

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TEST RESULT

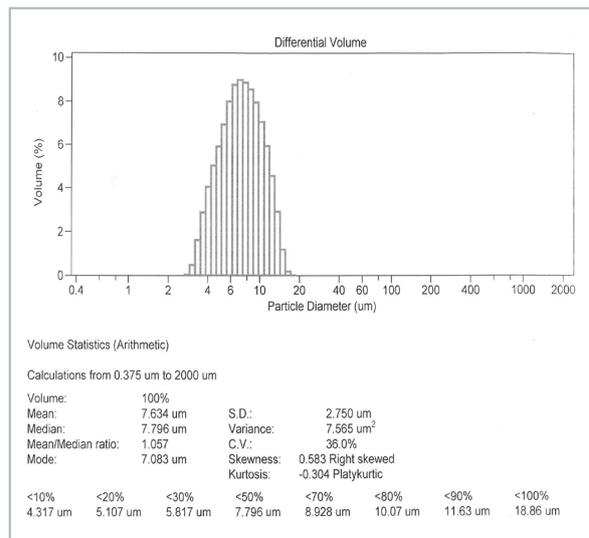
TITLE : ZINC DUST
GRADE : ZD-690.0-9.0 µmCTYPE-D

Test Items	Specifications	UNIT	Test Methods	Test Results
1 APPEARANCE	Gray Powder	%	VISUAL	-
2 MOISTURE	Max. 0.05	%	ASTM D 521	0.001
3 PARTICLE SIZE	8.0 - 9.0	µ	PSA	7.796
4 SIEVE RESIDUE		%	ASTM D 521	-
100 MESH	NIL			-
200 MESH	NIL			-
325 MESH	Max. 0.03			-
5 METALLIC ZINC	Min. 99	%	ASTM D 521	99.53
6 TOTAL ZINC	Min. 99	%		99.60
7 Pb	Max. 0.1	%		0.0038
8 Fe	Max. 0.02	%		0.0010
9 Cd	Max. 0.01	%		0.0001
10 Cl	Max. 0.01	%		0.0001
11 ZnO	Max. 4.0	%		3.27
12 SP/GR	7.0 - 7.2		ASTM D 153	7.06

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TEST RESULT

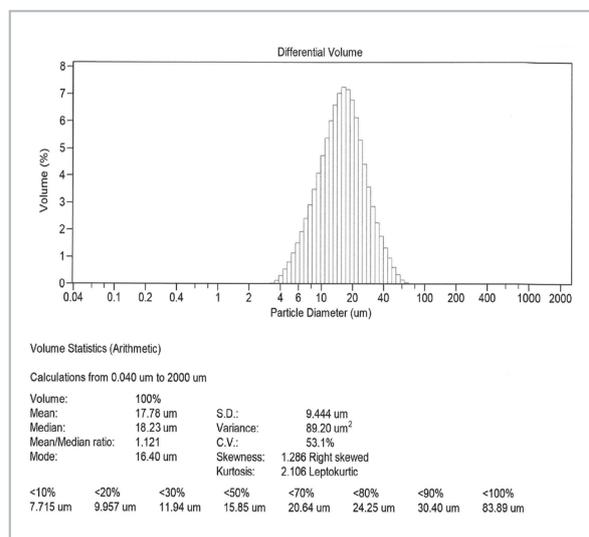
TITLE : ZINC FLAKE
GRADE : ZF-180

Test Items	Specifications	UNIT	Test Methods	Test Results
1 APPEARANCE	Gray Powder	%	VISUAL	-
2 MOISTURE	Max. 0.06	%	ASTM D 521	0.001
3 PARTICLE SIZE	16.0 - 25.0	µ	PSA	16.23
4 SIEVE RESIDUE		%	ASTM D 521	-
100 MESH	NIL			-
200 MESH	NIL			-
325 MESH	Max. 0.03			-
5 METALLIC ZINC	Min. 99	%	ASTM D 521	99.39
6 TOTAL ZINC	Min. 99	%		99.58
7 Pb	Max. 0.1	%		0.0038
8 Fe	Max. 0.02	%		0.0010
9 Cd	Max. 0.01	%		0.0001
10 Cl	Max. 0.01	%		0.0001
11 ZnO	Max. 4.0	%		3.20
12 SP/GR	7.0 - 7.2		ASTM D 153	7.03

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