



# Pana-Tetra Zinc Oxide Single Crystal

Remarkable effects of compound by single crystal property and tetrapod shape

Rubber: Braking ability and abrasion-resistant effect Paint: Anti-static and excellent water repellence effect

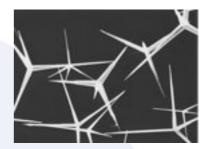
Resin: Abrasion-resistant and Thermal conductivity effect

Filter: Filtration performance effect

#### Product features

Tetra pod shape Zinc Oxide Single Crystal CAS# 1324-13-2
Purity 99.999%
Appearance: White powder

Appearance: White powder Packing: 10kg or 15kg, paper bag



# Characteristics of Pana-Tetra

Material name	Zinc oxide
Chemical formula	ZnO
Structure	Single crystal
Shape	Tetrapod Shape
Average length of leg	10 μm, 20 μm (L-grades)
Specific gravity	5.78 g/cm³
Bulk density	0.1 g/cm <sup>3</sup>
Melting point under pressure	2.000 °C
Sublimation point	1.720 °C
Specific heat	0.522 KJ/(kg • K)
Thermal conductivity	25.3 W/m k
Thermal expansion coefficient	3.18 x 10 <sup>-6</sup> / K
Refractive index	1.9 ~ 2.0
Electricity induction (2.4 x 10 <sup>10</sup> Hz)	ε = 8.5
Volume resistance	$10\Omega\text{cm}$
Mohs Hardness	~ 4

# Pana-Tetra Grade Overview

Grade	Specification	Main recommended compound matrix		
WZ-0501 WZ-0501L	Untreated surface	Rubber , Elastomer , Fluoroplastics , Paint		
WZ-0511 WZ-0511L	Treated surface General resin (PP , PS , ABS , PA , PPS , LCP , etc.)			
WZ-0531	Treated surface	General resin (POM , PBT , etc.)		
WZ-05E1	Treated surface	Only for polycarbonate resin		
:\W/-05F1		General resin (PP, PS, ABS, PA, PPS, LCP, etc.), Paint		





# Pana-Tetra Compound Resin

Unparalleled efficient compound resin has been achieved by high level of material compound technology.

#### Product features

- ✓ Metal-Substitute, Precision Molding Grade
  Superior precise molding ability is performed by the low shrinkage rate and high fluidity
  By anisotropy relief of molding, plane degree and truth disc degree are improved and warping is prevented
- ✓ Sliding and Abrasion-resistant Resin Grade Low friction coefficient is achieved by the superior surface smoothness Abrasion-resistant ability is much improved by compound of Pana-Tetra
- ✓ Electrification prevention, Conductive Resin Grade High level of stable electrification prevention and conductivity. Superior static electricity diffusion performance
- ✓ Electromagnetic Radiation Shield Resin Grade
  Excellent shield by adoption of special conductive filler
  Steady mold process-ability and molded product's surface condition



#### Pana-Tetra Compound Overview

Function	Grade	Base Resin	Features	Use example
Metal-Substitute, Precision Molding	MD15S	PPS	High rigidity / Size stability / Heatproof	Optical pickup for CD; PPS, LCP, PEEK
	MD102	PPS	High rigidity / Low specific gravity / Conductivity / Heatproof	Gear pump; PPS, LCP, PEEK
	MD401C	PPS	High rigidity / High Sliding / Conductivity / Heatproof	Audio tape head holder; PPS, LCP, PEEK
Sliding and Abrasion-resistant	MO10B	РОМ	High Sliding / Abrasion resistance	Precise gear; POM, PA, ABS, PPS
	MN20K66	РА	High Sliding / Abrasion resistance	Precise gear; POM, PA, ABS, PPS
Electrification prevention, Conductive	MP20A	PP	Conductivity / Size stability [Carbon compound materials]	Tray for IC; PP, PS, ABS, PBT, PPS
	MB10A	ABS	Electrification prevention / Extrusion processing [ Non-carbon materials]	Tray for liquid crystal; PP, PS, ABS, PBT, PPS
	MB10AN	ABS	Electrification prevention / Extrusion processing [Non-carbon materials]	Tray for liquid crystal; PP, PS, ABS, PBT, PPS
Electromagnetic Radiation Shield	EC-100	ABS	EMI Shield / Metal-Substitute [Carbon fiber Compound]	Shielding Case
	EC-400	ABS/PC	High Sliding / Metal-Substitute [Carbon fiber Compound]	Shielding Case