



High Purity Elements & Compounds

□ Cadmium Telluride (CdTe)

Cadmium Telluride (CdTe), cubic zincblende crystal, is II-VI crystalline compound semiconductor formed from cadmium and tellurium with purity of 99.999%, 99.9999% and 99.99999% (5N 6N 7N). CdTe is used as an infrared optical window and lens, thin film solar cell material, and can be alloyed with mercury to make a versatile HgCdTe (MCT) infrared detector material, and alloyed with zinc to make CdZnTe solid x-ray and gamma ray detector.



Cadmium Telluride	CdTe
Atomic No.	240.01
Atomic Weight	112.41
Density	5.85gm/cc
Melting Point	1092 °C
Boiling Point	1130°C
CAS No.	1306-25-8
H.S Code	2853.009090

No.	Item	Standard Specification			
1	Cadmium Telluride ≥%	99.999	99.9999	99.99999	
2	Impurity PPM _{wt} Max Each	Ag	0.5	0.05	0.005
		Zn	1.0	0.05	0.020
		Pb	1.0	0.10	0.010
		Al	1.0	0.05	0.005
		Cu	0.5	0.01	0.005
		Mg	0.5	0.05	0.005
		Ni	0.5	0.05	0.005
		Fe	0.5	0.05	0.010
		As	0.5	-	-
		Bi	0.5	0.05	0.005
		In	-	0.01	-
		Ca/Se/Sn	-	-	0.010
		Cr	-	-	0.005
	Total	≤10ppm	≤1ppm	≤0.1ppm	
3	Size	① ≤1.5mm, 3-8mm irregular lump ② -100mesh powder ③ ≤25g irregular lump			
4	Packing	1kg in composite aluminum bag or plastic bottle.			

□ Cadmium Zinc Telluride (CdZnTe or CZT)

Cadmium Zinc Telluride, CdZnTe or CZT, direct bandgap semiconductor of approx 1.4-2.2 eV with a high electro-optic coefficient, CdZnTe is a compound of cadmium, zinc and tellurium 99.9999% or 99.99999% (6N 7N) purity. It is used in a variety of applications including photorefractive grating, electro-optic modulator, solar cell, terahertz generation and detection, and radiation detector. It can also be used as a substrate material for the epitaxial growth of infrared detector material-Mercury Cadmium Telluride.



No.	Item	Standard Specification	
1	Cadmium Zinc Telluride	Orientation	<111> Single crystal
		EPD	<5×10E4cm ⁻²
		Inclusion density	<1×10E4cm ⁻²
	CdZnTe (CZT)	Transmission	2-20μm >55%
		Parallelism	<10μm
		Surface finish	Polished
		Edge	No edge bevel.
2	Size/Packing	40 x 30 x 0.95 +/-0.05 mm, single piece packing	

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