

# TERBIUM OXIDE NANOPOWDER



Purity  
**99.9%**



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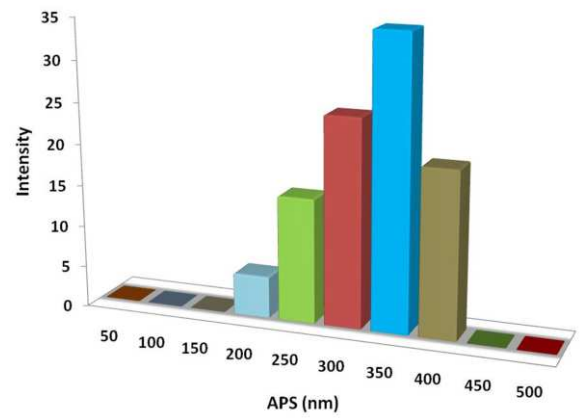
NS6130-10-1098

NEXT

## TERBIUM OXIDE NANOPOWDER

Terbium oxide is also known as tetraterbium heptaoxide and it has the formula  $Tb_4O_7$ .  $Tb_4O_7$  exists in two oxidation states +4 and +3 but the  $Tb(III)$  is more stable. All the rare earth metal has luminescence properties due to the 4f shells. It has a distinct number of applications such as magneto-optical recording devices and magneto-optical glasses.

It is also used in the preparation of other terbium compounds because of its stability. It also acts as activation agent for fluorescent powders and used as catalytic automobile exhaust converters. It is utilized in making of glass materials for optical and laser-based devices.



### ADDITIONAL POWDER CHARACTERISTICS

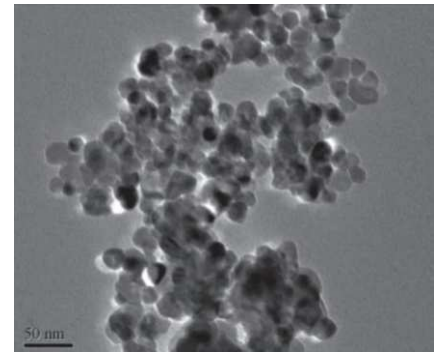
Stock No.	Purity	APS
NS6130-10-1098	99.9%	<300nm

### TECHNICAL SPECIFICATION

Molecular Formula	Molecular Weight	Density	SSA
$Tb_4O_7$	747.70 g/mol	7.3 g/cm <sup>3</sup>	13-20 m <sup>2</sup> /g

### CHEMICAL COMPOSITION

Product	Weight Percent (nominal)	
	$Tb_4O_7$	Other Metal
Terbium Oxide Nanopowder	99.9%	1000ppm



### APPLICATIONS

- > Used in the preparation of other terbium compounds due to its stability
- > As an activation agent for fluorescent powders
- > Composite of  $CeO_2$ - $Tb_4O_7$  is used as catalytic automobile exhaust converters
- > As magneto-optical recording devices and magneto-optical glasses
- > Making of glass materials (with a Faraday effect) for optical and laser-based devices.

## QuickFACTS

Product	:	Terbium Oxide Nanopowder
Stock No	:	NS6130-10-1098
CAS	:	12037-01-3
Color	:	Dark Brown-Black
Form	:	Powder
Symbol	:	$Tb_4O_7$
Group	:	Terbium 3/Oxygen 16

### Electronic Configuration:

Terbium [Xe] 4f<sup>9</sup> 6s<sup>2</sup> / Oxygen [He] 2s<sup>2</sup> 2p<sup>4</sup>



20ZICE4589C



19ZAZGO1274G



20ZICE4588M

ISO 9001:2015  
CERTIFIED COMPANY

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