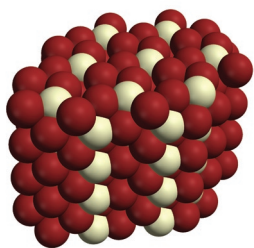


CeBr<sub>3</sub>  
 CAS # 14457-87-5  
 CeCl<sub>3</sub>  
 CAS # 7790-86-5  
 CeF<sub>3</sub>  
 CAS # 7758-88-5

# Cerium Halides

## CRYSTAL GROWTH GRADES

Representation of Structure



SAFC Hitech™ offers several rare-earth halides for the development and manufacture of high performance scintillation crystals. Cerium doped rare earth crystals produced with other SAFC Hitech materials, such as yttrium, lutetium or gadolinium iodides, exhibit excellent scintillation characteristics.

Cerium halides from SAFC Hitech are available as a high purity, anhydrous beaded material or as anhydrous powders. Material can be packaged in customer furnished containers or to custom quantity in a choice of packaging options.

### Ordering Information

Name:	Cerium Bromide	Cerium Chloride	Cerium Fluoride
Physical Form:	Anhydrous Powder	Anhydrous Beads	Anhydrous Powder
Code:	HT-CEBR320XG-CONF	HT-CECL210XG-CONF	HT-CEF310XG-CONF

### Storage

Cerium halides are hygroscopic and should be stored in air-tight containers prior to use to preserve material integrity.

### Physical Properties

Property	Cerium Bromide	Cerium Chloride	Cerium Fluoride
Formula Weight:	379.83 g/mol	246.48 g/mol	197.11 g/mol
Boiling Point:	1457°C	1730°C	2327°C
Melting Point:	730°C	817°C	1430°C
Crystal Density:	5.1 g/cc	3.92 g/cc	6.16 g/cc
Heat Capacity:	0.268 (298) J/gK @ (T)	0.356 (298) J/gK @ (T)	—

### Trace Metals Specifications 99.99%

Major Metals Impurities	ICP-MS (ppm)	ICP-MS (ppm)	ICP-MS (ppm)
Al	—	—	<20
Ca	<20	<15	<5
Cr	<20	—	<2
Fe	—	<1	<15
Ga	—	—	<2
La	—	<10	<4
Mg	<15	—	<2
Na	—	<3	<15
Nd	—	<3	—
Ni	—	—	<2
Pb	—	—	<1
Pr	—	<10	<7
Se	—	<2	—
Y	—	—	<5
Zn	<30	—	<4
Zr	—	—	<1