

**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$ ,  $mm2$ , or  $222$ . As flamelike aggregates and veinlets, to 20  $\mu\text{m}$  across, in rims and intergrowths with other tellurides and sulfides.

**Physical Properties:** Hardness = n.d.  $D(\text{meas.}) = \text{n.d.}$   $D(\text{calc.}) = 9.14$

**Optical Properties:** Opaque. *Color:* Gray in reflected light.

*Optical Class:* Biaxial.

$R_1$ – $R_2$ : (400) 25.0–26.1, (420) 25.3–26.2, (440) 25.6–26.5, (460) 25.9–27.0, (480) 26.5–27.5, (500) 27.0–27.9, (520) 27.4–28.3, (540) 27.7–28.6, (560) 28.1–29.0, (580) 28.3–29.2, (600) 28.5–29.4, (620) 28.6–29.6, (640) 28.6–29.6, (660) 28.6–29.5, (680) 28.6–29.5, (700) 28.6–29.5

**Cell Data:** *Space Group:*  $Pmmm$ ,  $Pmm2$ , or  $P222$ .  $a = 5.93(5)$   $b = 3.25(5)$   $c = 3.89(5)$   
 $Z = 1$

**X-ray Powder Pattern:** Champion Reef mine, India; by electron diffraction.

3.27 (100), 2.35 (50), 3.91 (40), 2.00 (40), 1.86 (30), 1.79 (30), 1.50 (30)

**Chemistry:**

	(1)	(2)
Pb	50.05	51.07
Te	32.87	31.45
S	0.00	
Cl	16.88	17.48
Total	[99.80]	100.00

(1) Champion Reef mine, India; by electron microprobe, original total given as 99.60%; leading to  $\text{Pb}_{1.00}\text{Te}_{1.06}\text{Cl}_{1.94}$ . (2)  $\text{PbTeCl}_2$ .

**Occurrence:** Of primary origin, in a hydrothermal gold-quartz vein containing sulfides and selenides.

**Association:** Galena, altaite, cotunnite, radhakrishnaite, volynskite, hessite, pyrrotite, chalcopyrite, ullmannite, hawleyite, cadmian tetrahedrite, cadmian sphalerite.

**Distribution:** From the Champion Reef mine, Kolar Gold Fields, Karnataka, India.

**Name:** For its occurrence in the Kolar deposit, India.

**Type Material:** Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry, Moscow; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

**References:** (1) Genkin, A.D., Y.G. Safonov, V.N. Vasudev, B. Krishna Rao, V.A. Boronikhin, L.N. Vyalsov, A.I. Gorshkov, and A.V. Mokhov (1985) Kolarite  $\text{PbTeCl}_2$  and radhakrishnaite  $\text{PbTe}_3(\text{Cl}, \text{S})_2$ , new mineral species from the Kolar gold deposit, India. *Can. Mineral.*, 23, 501–506. (2) (1986) *Amer. Mineral.*, 71, 1545 (abs. ref. 1).