

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3} 2/m$ . As subhedral crystals to 4 mm.

**Physical Properties:** *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. *Hardness =* n.d.  
D(meas.) = n.d. D(calc.) = 4.22

**Optical Properties:** Opaque. *Color:* Gray in reflected light. *Streak:* n.d. *Luster:* n.d.  
*Optical Class:* n.d.

**Cell Data:** *Space Group:*  $P\bar{3} 1c$ .  $a = 5.982$   $c = 11.509$   $Z = 2$

**X-ray Powder Pattern:** Murchison CM2 meteorite.  
2.074 (100), 2.654 (86), 1.727 (86), 2.991 (59), 1.105 (37), 4.724 (31), 1.327 (20)

Chemistry:	(1)	(2)
Cr	53.32	57.47
S	42.87	42.53
V	1.44	
Fe	1.14	
P	0.10	
Ni	0.10	
Total	98.97	100.00

(1) Murchison CM2 meteorite; average electron microprobe analysis; corresponds to  $(Cr_{4.60}V_{0.13}Fe_{0.09}Ni_{0.01})_{\Sigma=4.83}(S_{6.00}P_{0.01})_{\Sigma=6.01}$ . (2) Cr<sub>5</sub>S<sub>6</sub>.

**Occurrence:** A low-temperature phase (~327 °C in the Cr-S system), probably formed from higher temperature Cr<sub>1-x</sub>S exsolved or expelled from a Cr-S-bearing, metal-rich spherule included in forsteritic olivine grains that were probably derived from chondrule fragments.

**Association:** Low-Ni iron (“kamacite”), martensitic iron, schreibersite, Ca-Al-rich glass, forsteritic olivine (crystal 1); tochilinite, serpentine, chromite, eskolaite (crystal 2).

**Distribution:** From the Murchison CM2 meteorite.

**Name:** For the *Murchison* meteorite.

**Type Material:** National Museum of Natural History, Washington, D.C., USA (USNM 7507).

**References:** (1) Ma, C., J.R. Beckett, and G.R. Rossman (2011) Murchisite, Cr<sub>5</sub>S<sub>6</sub>, a new mineral from the Murchison meteorite. *Amer. Mineral.*, 96, 1905-1908.