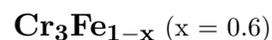


## Ferchromide



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**Crystal Data:** Cubic. *Point Group:*  $4/m\bar{3}2/m$ . As small grains forming aggregates, to several hundred  $\mu\text{m}$ .

**Physical Properties:** Hardness = n.d. VHN = 900 (100 g load). D(meas.) = n.d. D(calc.) = 6.18 Ferromagnetic.

**Optical Properties:** Opaque. *Color:* Pale gray. *Luster:* Metallic.

R: (400) —, (420) —, (440) 55.2, (460) 55.4, (480) 56.2, (500) 56.9, (520) 58.0, (540) 58.8, (560) 59.5, (580) 60.4, (600) 61.0, (620) 61.0, (640) 61.8, (660) 62.3, (680) 62.8, (700) 63.2

**Cell Data:** *Space Group:*  $Pm\bar{3}m$ .  $a = 2.882(5)$   $Z = 1$

**X-ray Powder Pattern:** Efim area, Russia.

2.04 (100), 1.17 (90), 0.77 (80), 1.02 (70), 1.44 (60), 1.66 (50), 1.29 (50)

### Chemistry:

|       |        |
|-------|--------|
|       | (1)    |
| Fe    | 12.60  |
| Cr    | 87.58  |
| Total | 100.18 |

(1) Efim area, Russia; by electron microprobe, corresponding to  $\text{Cr}_{3.0}\text{Fe}_{1-x}$ , with  $x = 0.6$ .

**Occurrence:** In quartz veins within brecciated amphibolites and schist.

**Association:** Iron, copper, bismuth, gold, chromferide, graphite, cohenite, halite, sylvite, marialite, quartz.

**Distribution:** From a gold deposit in the Efim area, Kumak district, 110 km east of Orsk, Southern Ural Mountains, Russia [TL].

**Name:** For the chemical composition, FERrum, *iron*, and CHROMium.

**Type Material:** A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

**References:** (1) Novgorodova, M.I., A.I. Gorshkov, N.V. Trubkin, A.I. Tsepina, and M.T. Dmitrieva (1986) New natural intermetallic compounds of iron and chromium – chromferide and ferchromide. *Zap. Vses. Mineral. Obshch.*, 115, 355–360 (in Russian). (2) (1988) *Amer. Mineral.*, 73, 191 (abs. ref. 1).