

Cs₃Cr₂Cl₉ Structure: A9B2C3_hP28_194_hk_f_bf-001

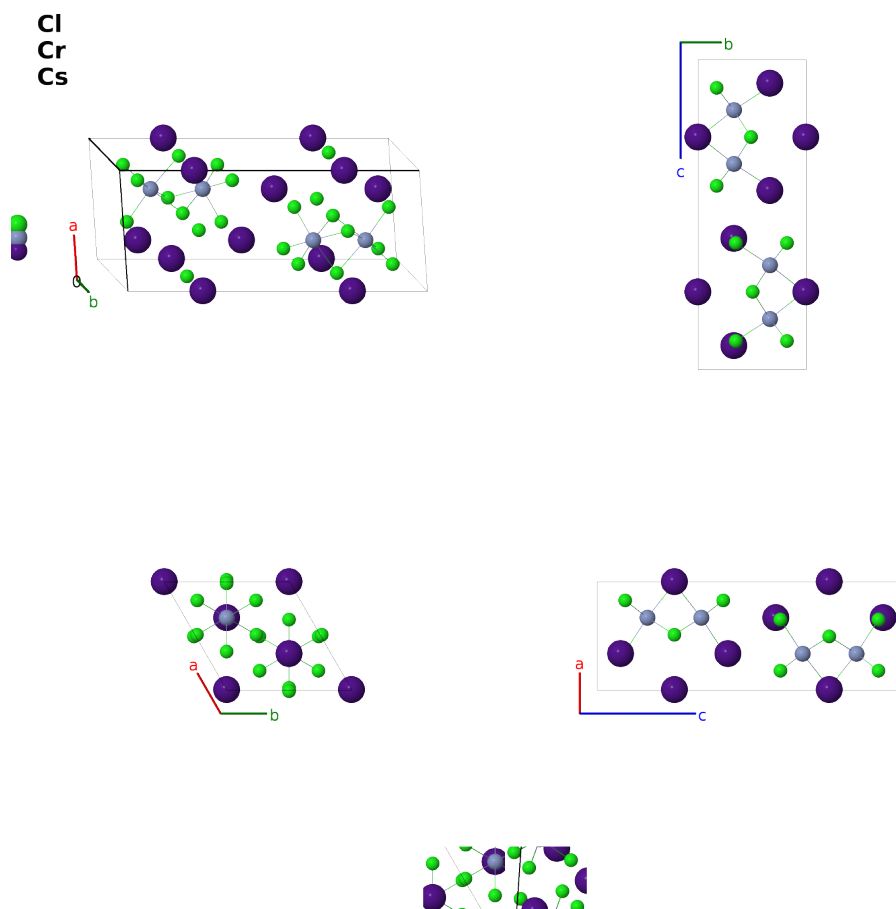
This structure previously used the label(s) **A9B2C3_hP28_194_hk_f_bf**. Calls to these addresses will be redirected here.

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<https://aflow.org/prototype-encyclopedia/77Z6>

https://aflow.org/prototype-encyclopedia/A9B2C3_hP28_194_hk_f_bf-001



Prototype	Cl ₉ Cr ₂ Cs ₃
AFLOW prototype label	A9B2C3_hP28_194_hk_f_bf-001
ICSD	16706
CCDC	1597258
Pearson symbol	hP28
Space group number	194
Space group symbol	$P6_3/mmc$

$$\mathbf{B}_{25} = -x_5 \mathbf{a}_1 + x_5 \mathbf{a}_2 - z_5 \mathbf{a}_3 = \sqrt{3}ax_5 \hat{\mathbf{y}} - cz_5 \hat{\mathbf{z}} \quad (12k) \quad \text{Cl II}$$

$$\mathbf{B}_{26} = -2x_5 \mathbf{a}_1 - x_5 \mathbf{a}_2 - \left(z_5 - \frac{1}{2}\right) \mathbf{a}_3 = -\frac{3}{2}ax_5 \hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_5 \hat{\mathbf{y}} - c\left(z_5 - \frac{1}{2}\right) \hat{\mathbf{z}} \quad (12k) \quad \text{Cl II}$$

$$\mathbf{B}_{27} = x_5 \mathbf{a}_1 + 2x_5 \mathbf{a}_2 - \left(z_5 - \frac{1}{2}\right) \mathbf{a}_3 = \frac{3}{2}ax_5 \hat{\mathbf{x}} + \frac{\sqrt{3}}{2}ax_5 \hat{\mathbf{y}} - c\left(z_5 - \frac{1}{2}\right) \hat{\mathbf{z}} \quad (12k) \quad \text{Cl II}$$

$$\mathbf{B}_{28} = x_5 \mathbf{a}_1 - x_5 \mathbf{a}_2 - \left(z_5 - \frac{1}{2}\right) \mathbf{a}_3 = -\sqrt{3}ax_5 \hat{\mathbf{y}} - c\left(z_5 - \frac{1}{2}\right) \hat{\mathbf{z}} \quad (12k) \quad \text{Cl II}$$

References

- [1] G. G. Wessel and D. J. W. IJdo, *The Crystal Structure of $\text{Cs}_3\text{Cr}_2\text{Cl}_9$* , Acta Cryst. **10**, 466–468 (1957), doi:10.1107/S0365110X57001577.

Found in

- [1] A. Dönni, A. Furrer, and H. U. Güdel, *Structure of the dimer compounds $\text{Cs}_3\text{R}_2\text{Br}_9$ ($R = \text{Tb}, \text{Dy}, \text{Ho}, \text{Er}, \text{Yb}$) at 8 and 295 K studied by neutron diffraction*, J. Solid State Chem. **81**, 278–284 (1989), doi:10.1016/0022-4596(89)90015-7.

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