>>**Entry Name: Illite**

CAS Registry Number: 12173-60-3
$K_{0.9}[Mg_{0.3}Al_{1.7}(Al_{0.6}Si_{3.4}O_{10})(OH)_2]$

Molecular Formula: $[Al_2.3H_2K_0.9Mg_0.3O_{12}Si_3.4]$
Molecular Weight: 394.037
Percentage Composition: Al 15.75%; H 0.51%; K 8.93%; Mg 1.85%; O 48.72%; Si 24.23%

formulae
Source/Synthesis: May be made hydrothermally from ammonium luminosilicate gels
Use/Importance: Used in ceramics
Physical Description: Dull white solid; may also show various pale colours
Other Data: Cation exchange capacity 0.2-0.4 eq kg^{-1}

References:

Barrer, R.M. *et al.*, *J.C.S.*, 1961, 971, *(synth)*
Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, **2**, 190; **5**, 238; **6**, 200, *(rev, use)*
Kinsey, R.A. *et al.*, *Am. Mineral.*, 1985, **70**, 537, *(Al-27, Si-29 nmr)*
Turner, G.L.*, Am. Ceram. Soc. Bull.*, 1987, **66**, 6561, *(Al-27, Si-29 nmr)*