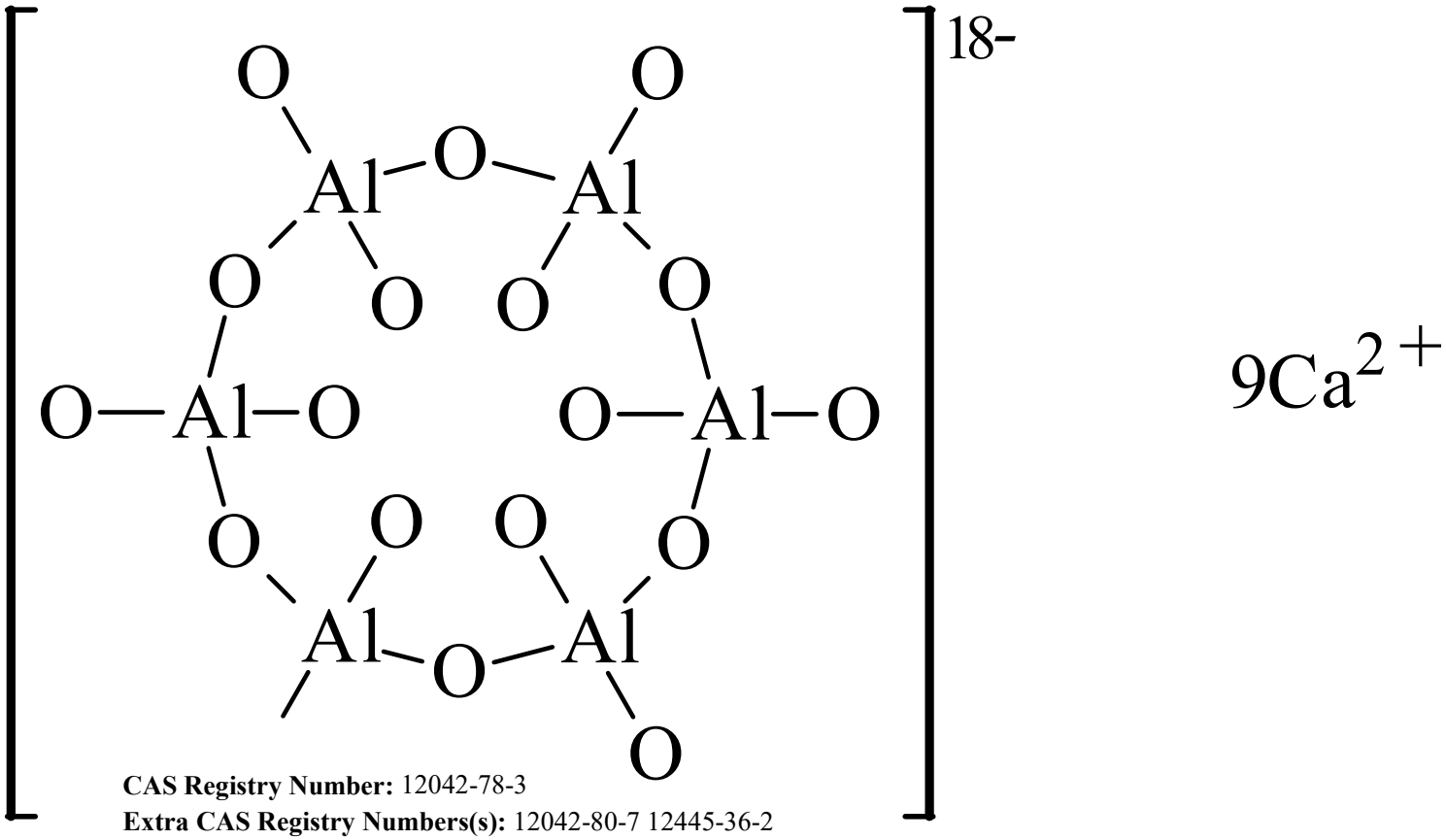
>>**Entry Name: Aluminium calcium oxide ($Al_2Ca_3O_6$)**
Synonym(s): C_3A. Calcium aluminate



CAS Registry Number: 12042-78-3
Extra CAS Registry Numbers(s): 12042-80-7 12445-36-2

Molecular Formula: $Al_2Ca_3O_6$
Molecular Weight: 270.193
Accurate Mass: 269.820341
Percentage Composition: Al 19.97%; Ca 44.50%; O 35.53%
Source/Synthesis: Synth. by sudden chilling of $CaO\text{-}Al_2O_3$ melt from 1539°
Use/Importance: Component of Portland cement
Physical Description: White cryst. (melt)
Melting Point: Mp 1539°
Other Data: Several similar compds. including hydrates descr. Reacts with water to give $2CaO.Al_2O_3.8H_2O$ <20° and $3CaO.Al_2O_3.6H_2O$ >20°. Dec. to CaO + liq. at 1535°. $\Delta H^{\circ}_{f\,298}$ –3587.8 kJ mol^{-1}, S°_{298} 204.0 J K^{-1} mol^{-1}

References: