>>**Entry Name: Beryllium oxide (BeO)**

CAS Registry Number: 1304-56-9

BeO

Molecular Formula: BeO
Molecular Weight: 25.012
Accurate Mass: 25.007097
Percentage Composition: Be 36.03%; O 63.97%
General Statement: Deformed wurtzite struct. type
Source/Synthesis: Prepd. by calcination of $Be(OH)_2$ or $BeSO_4$ or by oxidation of beryllium metal powders
Use/Importance: Commercially available. Used in production of ceramics, particularly in combination with silicon carbide, silicon nitride. Used in thermoluminescent dosimeters. Extensively used as a refractory material
Physical Description: White hexagonal cryst. Piezoelectric and pyroelectric. Undergoes hexagonal to tetragonal transition at 2100°. Dissolves in conc. H_2SO_4 and in fused KOH
Melting Point: Mp 2507°
Boiling Point: Bp 3900°
Solubility: Spar. sol. H_2O (2×10^{-5} g per 100 cm^3 at 30°)
Other Data: ΔH_f° –608 kJ mol^{-1}; ΔG_f° –579 kJ mol^{-1}; S° 13.8 J K^{-1} mol^{-1}
Hazard & Toxicity: Highly toxic, suspected carcinogen

Aldrich: 20277-0
Fluka: 14260
Sigma: B4760

>>**Variant:** Mineral-form
Synonym(s): Bromellite

CAS Registry Number: 13598-21-5
Molecular Formula: BeO
Molecular Weight: 25.012
Accurate Mass: 25.007097
Percentage Composition: Be 36.03%; O 63.97%
Source/Synthesis: Mineral found in calcite veinlets at sites in Sweden and USSR
Physical Description: Transparent, white trigonal cryst.

References:

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