>>**Entry Name: Zinc perchlorate ($Zn(ClO_4)_2$)**

CAS Registry Number: 13637-61-1
$Zn(ClO_4)_2$

Molecular Formula: Cl_2O_8Zn
Molecular Weight: 264.291
Accurate Mass: 261.826169
Percentage Composition: Cl 26.83%; O 48.43%; Zn 24.74%

Source/Synthesis: Synth. by dec. of $NO_2[Zn(ClO_4)_3]$ and careful dehydration of the dihydrate
Use/Importance: Component of battery electrolytes; cross-linking catalysts; explosive emulsions
Physical Description: White cryst.: α-form by desolvation of dihydrate or di-$MeNO_2$ < 100°. β-form is formed at higher temps.
Melting Point: Mp 0 262°°
Solubility: Sol. H_2O
Hazard & Toxicity: Explosive

>>**Derivative:** Dihydrate

CAS Registry Number: 17031-35-5
Source/Synthesis: Obt. by dehydration of the hexahydrate
Physical Description: Cryst. (H_2O, > 25°)
Melting Point: Mp 195-200°
Other Data: Dec. at 130° to $ZnCl_2$; can be dehydrated to anhydrous salt with care. ClO_4 groups are monodentate: octahedral zinc

>>**Derivative:** Tetrahydrate

CAS Registry Number: 114896-28-5
Source/Synthesis: Obt. by hydration of dihydrate in the presence of 83% H_2SO_4 *in vacuo* at 200°
Physical Description: Cryst.
Melting Point: Mp 105-110°

>>**Derivative:** Hexahydrate
Synonym(s): Hexaaquazinc(2+) perchlorate

CAS Registry Number: 10025-64-6
Source/Synthesis: From ZnO and 77% aq. $HClO_4$
Physical Description: Cryst. (H_2O at 20-50°)
Melting Point: Mp 163°
Other Data: Dehydrates at 160° or 80° *in vacuo* to dihydrate. Formulated as $[Zn(OH_2)_6](ClO_4)_2$

Aldrich: 40143-9
Sigma: Z0753

>>**Derivative:** Heptahydrate

Physical Description: Cryst. (H_2O)

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