



>>Entry Name: Zinc perchlorate ($\text{Zn}(\text{ClO}_4)_2$)

CAS Registry Number: 13637-61-1

$\text{Zn}(\text{ClO}_4)_2$

Molecular Formula: $\text{Cl}_2\text{O}_8\text{Zn}$

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 $\text{NO}_2[\text{Zn}(\text{ClO}_4)_3]$ 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- $\text{MeNO}_2 < 100^\circ$. β -form is formed at higher temps.

Melting Point: Mp 0 262 $^\circ$

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 , $> 25^\circ$)

Melting Point: Mp 195-200 $^\circ$

Other Data: Dec. at 130 $^\circ$ 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 $^\circ$

Physical Description: Cryst.

Melting Point: Mp 105-110 $^\circ$

>>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 $^\circ$)

Melting Point: Mp 163 $^\circ$

Other Data: Dehydrates at 160 $^\circ$ or 80 $^\circ$ *in vacuo* to dihydrate. Formulated as $[\text{Zn}(\text{OH}_2)_6](\text{ClO}_4)_2$

Aldrich: 40143-9

Sigma: Z0753

>>Derivative: Heptahydrate

Physical Description: Cryst. (H_2O)

References:

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