

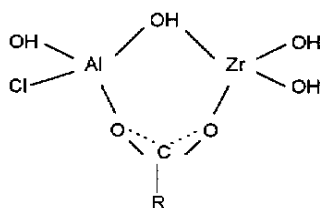
CAVCO GLAS™ APG Products

Zircoaluminate Coupling Agents for Fiberglass

Chemical Description: Amino zircoaluminate complexes at 20 to 40% by weight in solvent.

Appearance: Clear, colorless to pale yellow liquids

Theoretical Formula: $ZrAlCl(OH)_4CO_2R$



Typical Analysis:

Product Names →	Cavco Glas™ APG-2	Cavco Glas™ APG-X
Total Metals (wt. %)	4.3 ± 0.5	8.5 ± 0.5
Aluminum (wt. %)	2.8 ± 0.3	5.6 ± 0.3
Zirconium (wt. %)	1.5 ± 0.2	2.9 ± 0.2
Specific Gravity	1.16	1.26
Actives (approximate wt. %)	25	40

Product Code #	30811	30810
CAS #	125380-32-7	125904-15-6

Application: These zircoaluminates provide coupling properties for bonding of fiber reinforcements in thermoset resins. The use of APG products in forming size compositions improves coupling and chopping characteristics. APG products are recommended for coupling glass surfaces to cross linking polymers such as nylon, epoxies, phenolics, PP, PE, PBT/PET, PVC, and urethanes.

12/19/05
SMK

BEFORE USING ANY OF THESE PRODUCTS, YOU MUST BECOME COMPLETELY FAMILIAR WITH THE SAFETY AND HAZARD INFORMATION CONTAINED IN OUR MATERIAL SAFETY DATA SHEETS. McGean (the Seller) presents the information without warranty and disclaims any liability arising from its use and misuse. Seller recommends use of the information and Seller's products solely in commercial processes which are specified by Seller and which do not violate any third-party patent rights or any laws or regulations. THE SELLER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE EXCEPT AS EXPRESSLY STATED IN THE SELLER'S SALES CONTRACT OR SALES ACKNOWLEDGEMENT FORM.