

Gemcohesive

Gemcohesive Material Overview

Gemcohesive is Refractory Specialties Inc's Fiber insulation bonding system. It is useful for applications requiring complex shapes than cannot be done with a single custom tool, or machineable part. Gemcohesive makes a superior strength bond between **Gemcolite®** products, which results in the base material breaking before the bonded surfaces do (cohesive failure of the substrate). A variety of formulations are available;

Gemcohesive (RS-360 F) is Refractory Specialty's standard formulation, useable on all **Gemcolite®** materials, and bonds up to 2300° F. It is best utilized on the 2300° F rated materials, **Gemcolite®** and **No-Smoke®**. It can also be made into a paste that can be utilized as a patch for minor repairs to **Gemcolite®** insulation material.

Gemcohesive Alumina (RS360-A) is an alumina-based glue for use with all **Gemcolite®** materials, good to temperatures up to 2300° F.

Gemcohesive HT (RS-360 HT) is our high temperature variant, functional up to 3000° F. It should be used on the **Gemcolite®** AZS and Alumina product lines

Gemcohesive **C –Cast®** is specially formulated to work with our **C-Cast®** product line.

Gemcohesive All-Alumina (AAF-G) is specially formulated for use with **T-Cast®**.

Gemcohesive All-Alumina Paste (AAF-1) is designed to repair minor flaws or chips in **T-Cast®** products.

Gemcohesive is designed to bond **Gemcolite®** products to each other, and cannot be used to bond **Gemcolite®** insulation to metals or plastics.

To use Gemcohesive, prepare each surface to be bonded by removing contaminants and dust using a vacuum. Mix the Gemcohesive well, since material may settle while transported or sitting. Apply Gemcohesive to each surface to be bonded, and contact surfaces together. Apply light but firm pressure for 1 minute to allow for initial set, and then gently place the bonded piece aside in such a fashion that the bonding plane does not have any force acting on it except in the normal direction to the bonding plane. Excess glue may seep from the bond site. It may be cleaned by disposable rag while wet. Allow to dry at room temperature for about 24 hours. Humidity levels will affect the drying rate. Bonded parts can be dried quicker in an oven or dryer. Do not exceed 275° F if oven drying. Do not let Gemcohesive freeze. To answer any questions, or if you have special requirements that aren't covered by this product, call for our expert assistance at (330) 938-2101.

Gemcohesive Technical Information

<u>Property</u>	<u>RS-360 F</u>	<u>RS-360 A</u>	<u>RS-360 HT</u>	<u>C-Cast</u>	<u>AAF-G</u>	<u>AAF-1</u>
Density	11 lb/gal	13lb/gal	12 lb/gal	12 lb/gal	9 lb/gal	10 lb/gal
Maximum Continuous Use Temperature	2300° F	2300° F	3000° F	2300° F	2900° F	2900° F
Typical Chemical Analysis (After Use)						
SiO ₂ (Weight Percent)	70 %	33 %	65 %	75 %	1 %	1 %
Al ₂ O ₃ (Weight Percent)	25 %	63 %	30 %	15 %	96 %	96 %
Other (Weight Percent)	5%	4 %	5 %	10 %	3 %	3 %

Other Information

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