

### **N313. Water-Soluble Glues Qualified for BWRs**

The material commonly referred to as "Elmer's Glue" or "white glue" is generically polyvinyl acetate. Two specific brand name versions are currently regarded as "nuclear quality" and are acceptable for use inside a reactor, the assumption being made that some of the material might not be removed but might find its way into an interior crevice and be left there during operation.

"Cascorez" is the Borden Chemical (Resins & Chemicals Division, Bellvue, WA) version that may be requested as "nuclear quality". Air Products and Chemicals, Inc. (Allentown, PA) offers it as "VINAC RP251".

These glues are intended for use only in holding purge gas dam materials in place for inert gas welding. The intent is that they be removed completely after welding so that they never enter the Reactor Pressure Vessel (RPV) nor contact the reactor coolant. That is why both the purge gas dam materials and the adhesives for them are selected for their ready solubility in water.

No other polyvinyl acetates are currently known which might be "nuclear quality" since there was limited demand for them. But recently various utilities or nuclear sites have begun using these adhesives as a temporary coating to hold radioactive debris in place on interior surfaces near places where some maintenance work must be done. This practice has not been recommended by GE Nuclear Energy and there is no current plan to endorse it. GE doesn't want large quantities of Elmer's Glue used unless it is all removed. The concern is about organics and their effect on the fuel oxides.

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