



**Particle Instrument Division**

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**USA**

March 4, 2002

U.S. Nuclear Regulatory Commission  
Materials Safety Branch  
Division of Industrial and Medical Nuclear Safety  
Two White Flint North  
11545 Rockville Pike  
Rockville, MD 20852-2738

Dear Sir:

Per our telephone conversation regarding 3M Epoxy Adhesive 2216 B/A used in the fabrication of TSI Incorporated krypton-85 neutralizer models under registration certificate NR-0636-D-101-G., please note the following information:

2216 B/A Gray:

Glass Transition temperature: 13C  
Composition Part A:  
    Aliphatic Polymer Diamine  
    Kaolin  
    Carbon Black – Used for color  
Composition Part B:  
    Epoxy Resin  
    Kaolin

2216 B/A Tan:

Glass Transition temperature: Not Determined  
Composition Part A:  
    Aliphatic Polymer Diamine  
    Kaolin  
    Amorphous Silica – Used for color

Composition Part B:  
Epoxy Resin  
Kaolin

2216 B/A Translucent:

Glass Transition temperature: Not Determined

Composition Part A:

Aliphatic Polymer Diamine

Composition Part B:

Epoxy Resin

Fire:

In case of a fire the following actions will be implemented:

1. In case of a fire, the RSO will be informed and normal fire protection procedures will be utilized.
2. Following a fire or any other situation that could jeopardize the integrity of the source, the source will be surveyed to determine whether or not it has been damaged.
3. Any incidents will be completely documented and maintained in the RSO's files.
4. The NRC will be notified as required in 10 CFR 20 following any incidents regarding exposures or loss of control of material.
5. All records will be kept in accordance with the Nuclear Regulatory Commission requirements. These records will be available for review.

At a meeting with our current supplier, Isotope Products Laboratories, a detailed discussion of the fabrication process of TSI Incorporated krypton-85 neutralizers indicated that the epoxy they used in the assembly is 3M Scotch-Weld Epoxy Adhesive 2216 B/A Gray. Isotope Products had people trained at DuPont Merck prior to acquiring the license in 2001 to manufacture the neutralizers. Subsequently, I reviewed records as far back as I could and noted the following data. The initial fabricator of the sources and neutralizers was 3M beginning in 1974. In 1991, 3M made a decision to discontinue this product. DuPont Merck agreed to supply sources and neutralizers to TSI starting in 1991. DuPont assumed the assembly process developed by 3M. The epoxy specified was 3M - 2216 structural adhesive. In 2000, DuPont discontinued production and the business was transferred to Isotope Products. Therefore, 3M - 2216 adhesive is the epoxy that has been used in the assembly of TSI Incorporated krypton-85 neutralizers by all vendors.

Please review this information and call me at your convenience if you have additional questions.

Sincerely,

*Jeffrey D Swanson*

Jeffrey D. Swanson  
Radiation Safety Officer  
651-490-4066

**Mail Envelope Properties** (3C84D360.625 : 16 : 37566)

**Subject:** Re: Registry NR-0636-D-101-G; 3M 2216 B/A Epoxy  
**Creation Date:** 3/5/02 9:17AM  
**From:** CSC  
  
**Created By:** CSC@nrc.gov

**Recipients**

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**Route**

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**Files**

Adhesive.wpd

MESSAGE

**Size**

45193

1292

**Date & Time**

03/05/02 09:16AM

03/05/02 09:17AM

**Options****Expiration Date:**

None

**Priority:**

Standard

**Reply Requested:**

No

**Return Notification:**

None

**Concealed Subject:**

No

**Security:**

Standard