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analysis for barium with the excess sulfur being reported in the elemental form as part of the curative system. The elemental data for barium and sulfur would suggest that the BaSO_4 content could be between 3.8 and 9.5%.

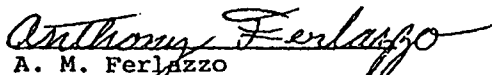
Optical microscopic examination showed steel wool fibers .125 mm x 1.75 mm (.005 x .07 in.) which were magnetic. Measurements suggest a grade 1 fiber analogous to ABD-1104 or ABD-1147. The fibers were discolored with a light straw color suggesting that the steel wool may have been annealed. After pulverizing a small sample, the steel wool could be separated from a second magnetic component which was thought to be a fine grain iron powder. The ratio of steel wool to iron powder was estimated at roughly 1:1, however, this estimate was very subjective.

Microscopic examination showed two types of particles present. One of the particles was thought to be black cashew friction particle. They had a maximum size of 0.5 mm (35 mesh) and were easily crushed.

The second particle type was crystalline and clear to white in color. Its maximum size was .04 mm (325 mesh). In accordance with the elemental analysis the crystals were probably fused magnesium oxide.

Microscopic examination also showed a flake graphite to be present and it was thought to be present as a fine flake as opposed to a nodular form.

Infrared analysis indicates that the binder system was a nitrile rubber-phenolic resin combination. Cashew was thought to be present by microscopic examination and its presence is consistent with the IR spectra, however, the cashew contribution was too weak to make a positive identification.


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AMF/FWR/jb/Attachment
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