

Interoffice
Communication

To: Tom Grumbles

From: W. J. Murray
Date: August 16, 1989

Subject: FILLERS/REINFORCING/COUPLING AGENTS

VISTA

As I mentioned to you in our hallway conversation, we are looking at fillers/reinforcing/coupling agents as a new business development. Would you review the environmental/hazardous status of these materials. At this point, I'm not looking for a detailed analysis but more of an overview and identification of major issues. These materials are:

Fillers:

1. Calcium carbonate (open pit mining)
2. Kaolin
3. Mica
4. Wollastonite
5. Organophilic clays

Reinforcing Materials:

1. Microspheres (glass, ceramic)
2. Whiskers (alumina, silicon carbide)
3. Fibers (aramid, carbon)

Coupling Agents:

1. Stearic acid
2. Organo Silanes
 - a. Raw materials are silicon tetrachloride
 - b. Products
 - i. dichloro octyl silane
 - ii. aminopropyltrethoxy silane - Aminopropyltriethoxysilane
 - iii. hexamethyl disilane - hexamethyldisilane
 - iv. 3(amino propyl)triethoxysilane
3. Tallow fatty acid quats, e.g., dialkyldimethylammonium salts

Some potential issues I'm aware of are reclamation in open pit mining, health hazards of whiskers, and flammability of organosilane materials. I'd appreciate your comments about these issues or others you may uncover.

W. J. Murray, mg

W. J. Murray
/mg

CC: BEAL, RTF, JRR, RJA, JAD, RLJ, PVA, RWT, MJS

VVV 000014079