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(54) Title: IMPROVED DOUBLE METAL CYANIDE CATALYSTS AND METHODS FOR MAKING THEM

(57) Abstract

Improved double metal cyanide (DMC) catalysts useful for making epoxide polymers are disclosed. One catalyst is a paste of a double metal cyanide (DMC) compound, an organic complexing agent, and water. The paste comprises at least about 90 wt.% of particles having a particle size within the range of about 0.1 to about 10 microns as measured by light scattering in polyether polyol dispersions of the catalyst particles. Preferred catalysts have a bimodal particle size distribution. The paste catalyst is more active and simpler to prepare than powder DMC catalysts. Polyols made from the paste catalyst have low unsaturations, low viscosities, and narrow molecular weight distributions, and are useful in making a variety of polyurethane products. Improved results are also obtained with DMC catalysts in powder form of very small particle size.