

A method for producing substantially spherical energetic compounds such as ammonium dinitramide (ADN) which minimizes the time during which the ADN is melted involves providing solid ADN, feeding the ADN at a controlled continuous rate to a heating means, melting the ADN, the melted ADN being fed continuously to a non-solvent cooling fluid maintained at a temperature below the temperature of solidification of the ADN, the cooling fluid agitated in a manner which promotes the formation of droplets of controlled size which solidify in the cooling fluid to produce substantially spherical ammonium dinitramide in a particle size corresponding to the droplet size.