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Gelling Mechanism of Aluminum Di-Soaps in Oils XIAORONG WANG, Bridgestone Americas, Center for Research and Technology, 1200 Firestone Parkway, Akron, OH 44317, MINDAUGAS RACKAITIS — This work demonstrates that aluminum di-soaps form nano-sized spherical micelles in the oils and that the aggregation of these micelles forms a network that gives rise to a gel formation – thereby refuting a long-held belief that the gel formation was the result of linear polymeric chains of aluminum association. The discovery of such aluminum nano-particles could expand application of these materials to new technologies because these materials are chemically inert, odorless and nontoxic, and have been widely used in greases, paints, gels, cosmetics, drugs and foods.

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