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Avalure™ AC 210 Polymer Toxicology Studies

The toxicology studies summarized below were performed on polymers with chemical compositions representative of Avalure™ AC 210 polymer. Therefore, this toxicology data is expected to be predictive of the toxicity of the commercial grades of Avalure AC 210 polymer.

Skin Irritation

No skin irritation studies have been conducted on Avalure AC 210. However, skin irritation studies have been conducted on Avalure products which have similar chemistry. No skin irritation has been observed with any of these products (primary irritation score 0.0). These results are described at www.lubrizol.com/personalcare. Therefore, Avalure AC 210 polymer is expected to have a low potential to cause skin irritation.

Eye Irritation

No eye irritation studies have been conducted on Avalure AC 210. However, eye irritation studies have been conducted on Avalure products which have similar chemistry. Minimal conjunctival irritation has been observed with these products. All were Class 2 to 3 irritants (1 to 8 scale) with maximum mean scores ranging from 1.3 to 5.3 out of 110 maximum. These results are described at www.lubrizol.com/personalcare. Therefore, Avalure AC 210 polymer is expected to have a low potential to cause eye irritation.

Skin Sensitization

The skin sensitization potential of a number of samples of the test material was evaluated in mice. The method used was that described by Kimber, I., Hilton, J. and Weisenberger, C. (1989) "The Murine Local Lymph Node Assay for Identification of Contact Allergens: A Preliminary Evaluation of *in situ* Measurements of Lymphocyte Proliferation", Contact Dermatitis 21, 215-220 and Basketter, D.A. and Scholes, E.W. (1992) "Comparison of the Local Lymph Node Assay with the Guinea Pig Maximization Test for the Detection of a Range of Contact Allergens, Food and Chemical Toxicology", 30, 65-69. Groups of four mice were treated with the test material at concentrations of 0%, 5%, 15%, or 25% w/v in dimethyl formamide by daily application to the dorsal surface of each ear for three consecutive days. Five days following the first topical application, all mice were injected with 250 µl of phosphate buffered saline containing 3H-methyl thymidine (^{3}HTdr: 80µCi/ml, specific activity 2.0 Ci/mmol) via tail vein giving a total dose of 20 µCi to each mouse. A single cell suspension of pooled lymph node cells was prepared by mechanical disaggregation through a 200 mesh steel gauze. After completing the washing and centrifuging steps, the precipitates were incubated over night at 4°C, were re-centrifuged, and measured for ^{3}HTdr incorporation.

The test material was considered to be a non-sensitizer under the conditions of the test. The test/control ratios at all concentrations were less than 3.

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