

TGG: JCL: MMG: AJO: RF

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May 2, 1989

VISTA

Mr. Mike Endress
Miles, Inc.
7123 West 65th Street
Chicago, Illinois 60638

Dear Mike:

Below is general information regarding the skin irritation potential of several common surfactant materials. This information is drawn from the literature available to us, predominately a report entitled "Human Safety and Environmental Aspects of Major Surfactants", done by A. D. Little for the SDA.

Generally, the order of mildness (least to most) is as follows:

Alcohol sulfates -----> LAS -----> Ether sulfates
(SLS) (LES)

Summary information is below:

Alcohol sulfates - Rabbit skin irritation classifies it as a severe skin irritant.

Human skin irritation tests show mild irritation for concentrations of 1% or less. The C₁₂ alcohol sulfate is the strongest irritant.

Linear alkylbenzene sulfonates - Rabbit skin irritation classifies it as a moderate to severe skin irritant.

Human skin irritation tests show little or no skin irritation for concentrations of 1% or less. Human skin irritation studies have shown the C₁₂ linear alkylbenzene sulfonate to be the strongest irritant.

Ether sulfates - Rabbit skin irritant classifies it as an extremely mild skin irritant. (We are assuming a C₁₂ average with 3 moles ethylene oxide).

Human skin irritation studies showed no irritation for a 10 day exposure to 10% ether sulfates and moderate irritation for a 10 day exposure to 25% ether sulfates.

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If you need more detailed information, please contact me at 713-531-3445.

Sincerely,

Tom Grumbles

Thomas G. Grumbles, C.I.H.
Environmental Quality Manager

dlj

cc: Pat Morris, Mike Cox-Ponca City

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