



DERMOTHIX

A WORLD OF POSSIBILITIES

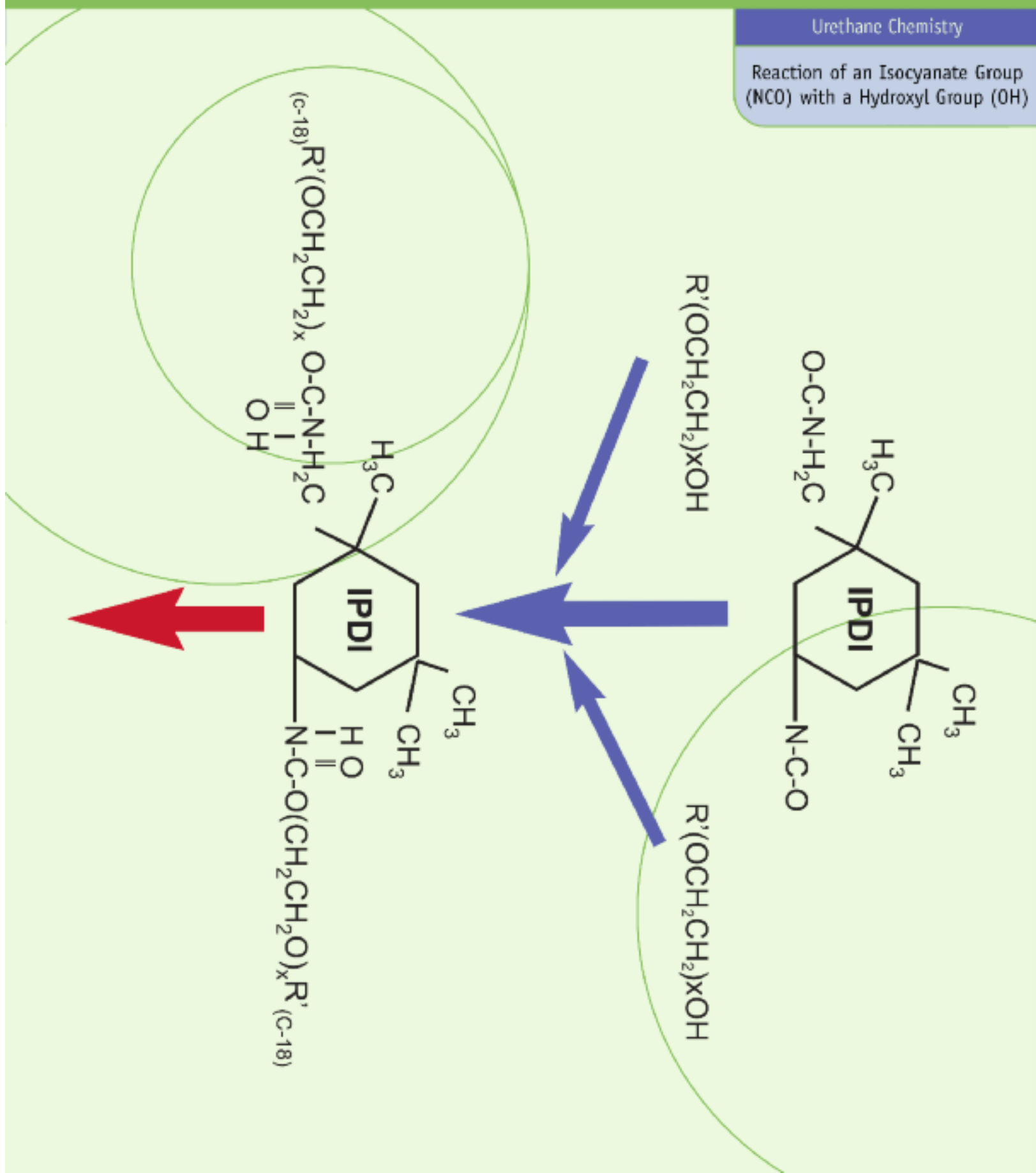


ALZO International Inc.

Urethane Chemistry=ALZO Specialty

Urethane Chemistry

Reaction of an Isocyanate Group (NCO) with a Hydroxyl Group (OH)



DERMOTHIX 75

Unique chemistry
Exceptional thickener
Patented

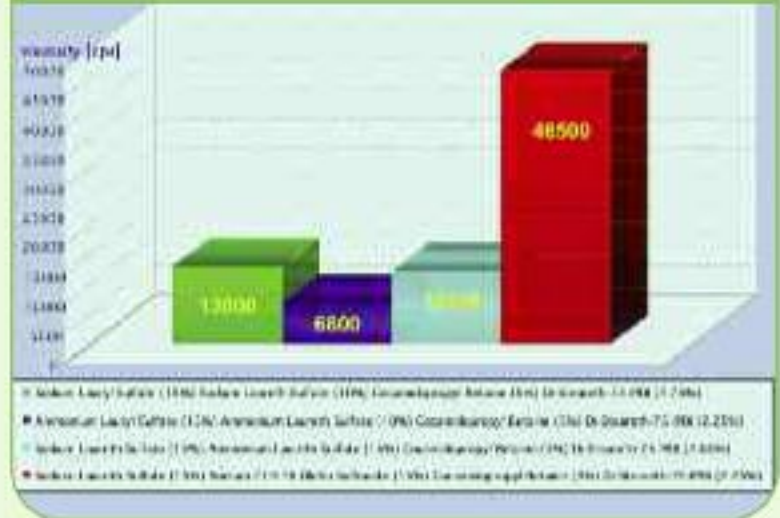
Unique rheology
Chemically and thermally stable



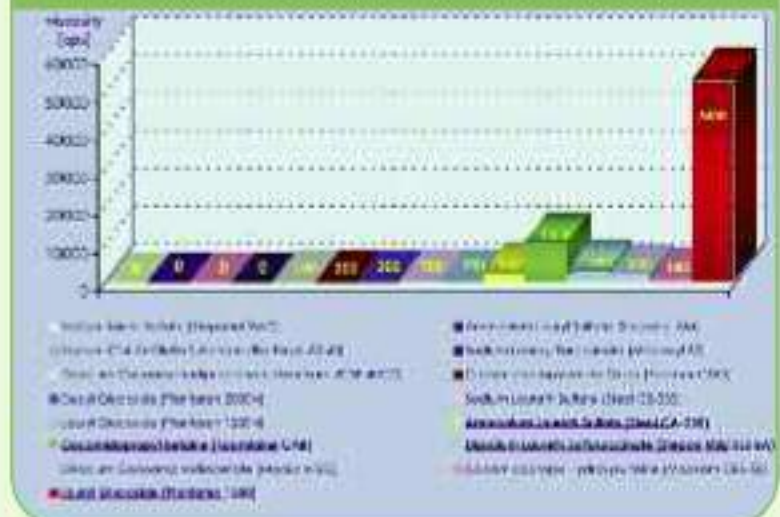
- INCI Name: Distareth-75 IPDI
- Description: A water dispersible dimeric urethane where the alcohol is a 75 mole ethoxylated stearyl alcohol
- Applications/Properties:
 - Flaked solid; mp ~ 65°C
 - Viscosity builder for aqueous surfactant systems.
 - Not water soluble - produces cloudy dispersions in water with gel particles.
 - Soluble in surfactant solutions.
 - Unique, stable, high internal phase o/w emulsifier.



Thickening effects of DERMOTHIX 75 on common shampoo systems



Thickening effects of 2% DERMOTHIX 75 in 30% Surfactant solutions



DERMOTHIX 100

Unique rheology
Pigment suspension
High internal phase

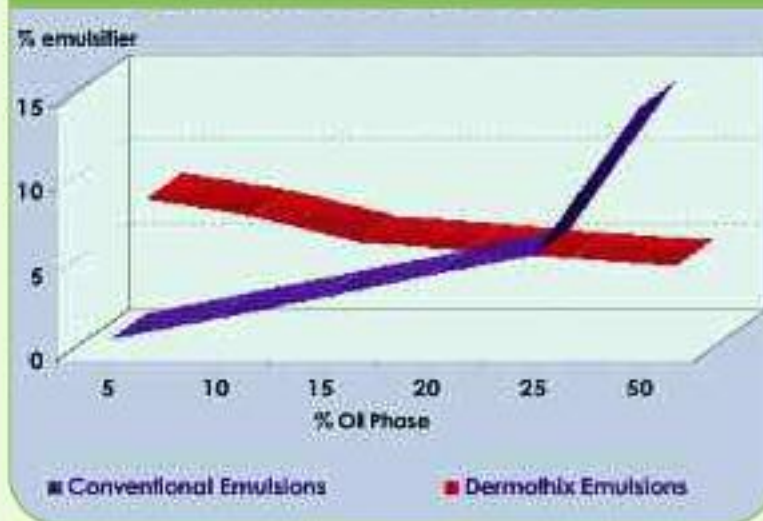
Exceptional emulsifier
Chemically and thermally stable
Patented



- INCI Name: Disteareth-100 IPDI
- Description: A water soluble dimeric urethane where the alcohol is a 100 mole ethoxylated stearyl alcohol
- Applications:
 - Flaked solid; mp ~ 65°C
 - Viscosity builder for aqueous systems.
 - Clearly water soluble - produces clear viscous solutions in water.
 - Soluble in surfactant solutions, but produces less viscosity than Dermothix 75.
 - Unique, stable, high internal phase o/w emulsifier.



% Emulsifiers vs. % Oil Phase



DERMOTHIX 100 Emulsions

- Can make very high internal phase emulsions:
 - 50% oil phase is simple and requires ~ 3.5% Dermothix 100.
 - 90% oil phase is more difficult, but can still be accomplished and requires ~ 1.0% Dermothix 100.
 - 10% oil phase is somewhat more difficult and requires ~ 8.0% (or more) Dermothix 100.
- Thus, the more oil phase, the less Dermothix is needed.
- To make low oil phase emulsions, we recommend using additional emulsifiers and using Dermothix to stabilize and provide viscosity for the emulsion.

Gelling effects of DERMOTHIX 100



DERMOTHIX 75 LIQUID

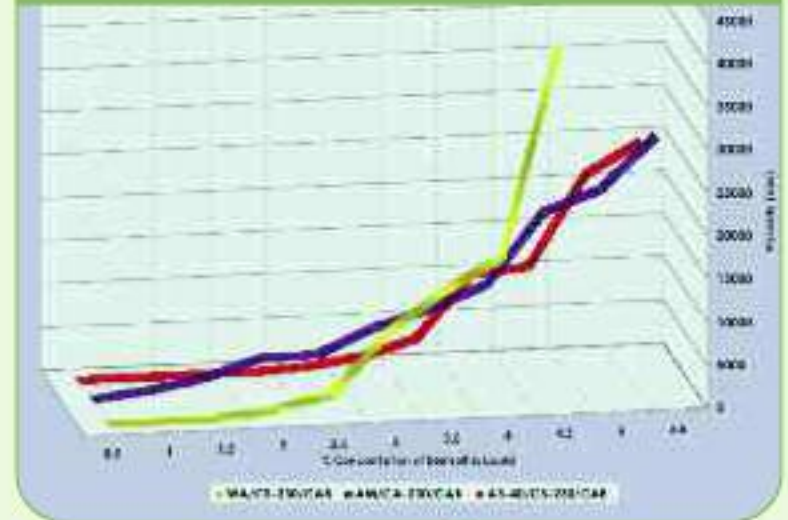
Nonionic
Unique chemistry
Efficient thickening

Surfactant compatible
Exceptional viscosity control
Patented

- INCI Name: Disteareth-75 IPDI (and) Glycereth-7 Caprylate/Caprate (and) water
- Description: A liquid version of Dermothix 75
- Applications:
 - Clear, straw colored viscous liquid.
 - Viscosity builder for aqueous systems.
 - Compatible with anionic and nonionic surfactant systems.
 - The viscosity achieved is very dependant upon the specific surfactant or emulsifier system chosen.
 - Useful to adjust a product's final viscosity.



Effects of DERMOTHIX 75 Liquid on viscosity



cd sleeve



Pharmetic *Mfg. Company, LLC*

650 Jernee Mill Road
Sayreville, NJ 08872

Tel: 732 - 254 - 1901
Fax: 732 - 254 - 4423

www.aizointernational.com

The information contained herein is accurate and based upon experience and practices known to AIZO International, Inc. We make no warranty, express or implied, as to the product's merchantability or fitness for any particular purpose suggested in this brochure. Freedom from patent infringement cannot be assumed.