

Polyaldo® HGDS KFG (6-2-S) Polyglyceryl Ester
Natural Emulsifier for Enhanced
Formulation Thickening



A Perfect Match! Polyaldo® HGDS KFG (6-2-S) and Polyaldo® 10-1-S Pastillated Polyglyceryl Esters

Extensive research has been conducted on Polyaldo® HGDS KFG (6-2-S) Polyglyceryl Ester to optimize its functionality as an emulsifier. Lonza Inc. has discovered Polyaldo® HGDS KFG (6-2-S) performs exceptionally well in the presence of another polyglyceryl ester, Polyaldo® 10-1-S Pastillated, and fatty alcohol. This patent-pending Polyaldo® emulsifier combination has been shown to outperform traditional emulsifier systems by increasing formulation viscosity and provide formulators with enhanced formulation thickening.

Evaluation of Polyaldo® 6-2-S + Polyaldo® 10-1-S Pastillated vs. Traditional Emulsifier Base

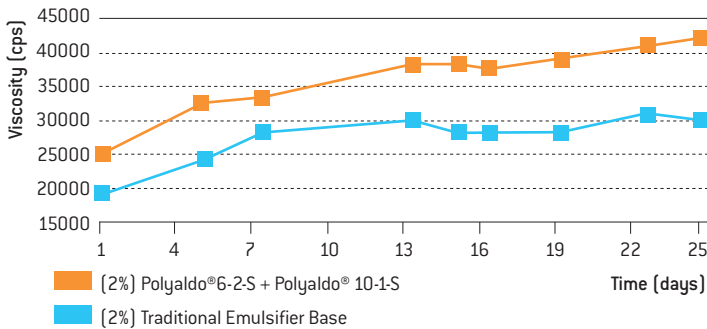


Fig. 1 Evaluation of Polyaldo® HGDS KFG (6-2-S) + Polyaldo® 10-1-S Pastillated formulation versus a traditional emulsifier base [Steareth-2 + Steareth-21]

The emulsion base made with Polyaldo® HGDS KFG (6-2-S) and Polyaldo® 10-1-S Pastillated had a higher viscosity compared to the traditional emulsifier system. The combined Polyaldo® emulsifier system had a 30% higher overall viscosity compared to the traditional emulsifier system. The improvement in viscosity provided by the Polyaldo® emulsifier system is a solution for formulators dealing with lackluster emulsion bases without having to increase the use level of costly rheology modifiers.

The results from figure 1 show when the Polyaldo® HGDS KFG (6-2-S) and Polyaldo® 10-1-S Pastillated emulsifier system is reduced by 50%, there is a direct impact to the formulation viscosity, reducing viscosity by 50% on average. Compare this to the traditional emulsifier system, which reduced viscosity by only 4% on average. The combined Polyaldo® emulsifier is directly connected with the viscosity of the emulsion and provides the formulator a variable (in this case, the emulsifier use level) to help fine tune formulation aesthetics to create the ideal formulation base.

Polyaldo® HGDS KFG (6-2-S) Skin Moisturization Study

Objective

To measure the moisturization efficacy of Polyaldo® HGDS KFG (6-2-S) against a commercial product

Clinical Testing Protocol

- Test Panel: mix of male and female subjects
- Conditions: ambient temp 20-23°C with humidity 50-55% RH
- Instrumentation: efficacy measured using the Corneometer CM 820
- Test Formulations: formulation containing 5% Polyaldo® HGDS KFG (6-2-S) and a control

- Dosage & Test Site: 50 mg of each product was applied to a 5 x 5 cm site on the inner forearms of the panelists
- Test Period: averages of 6 readings were taken per test site. A baseline measurement was taken followed by an initial reading 20 minutes after application of the product. Hourly measurements were recorded at 1, 2, 4, 5 & 6 hours

Results

Over a 6 hour period, the Polyaldo® HGDS KFG (6-2-S) formulation consistently outperformed the commercial product as demonstrated in Figure 2. The moisturization benefit from Polyaldo® HGDS KFG (6-2-S) provides a formulator a value-added benefit to utilizing Polyaldo® emulsifiers over traditional emulsifier systems.

Polyaldo® HGDS KFG (6-2-S) Moisturization Comparison

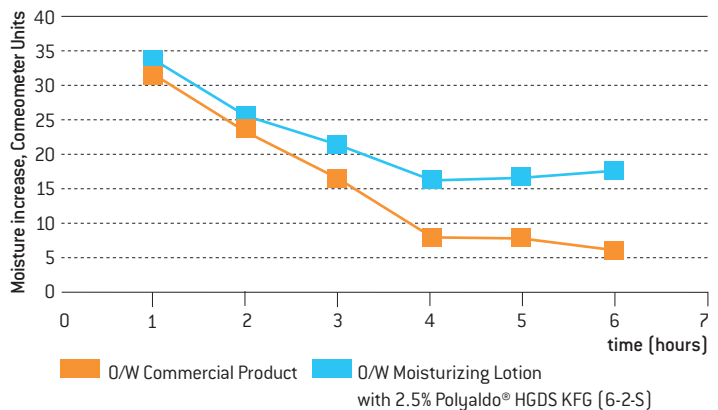


Fig. 2

USA

Lonza Consumer Care
70 Tyler Place
South Plainfield, NJ 07080
Tel +1 908 561 5200

Switzerland

Lonza Ltd
Muenchensteinerstrasse 38
4002 Basel
Tel +41 61 316 81 11

Review and follow all product safety instructions. All product information corresponds to Lonza's knowledge on the subject at the date of publication, but Lonza makes no warranty as to its accuracy or completeness and Lonza assumes no obligation to update it. Product information is intended for use by recipients experienced and knowledgeable in the field, who are capable of and responsible for independently determining the suitability of ingredients for intended uses and to ensure their compliance with applicable law. Proper use of this information is the sole responsibility of the recipient. This information relates solely to the product as an ingredient. It may not be applicable, complete or suitable for the recipient's finished product or application; therefore republication of such information or related statements is prohibited. Information provided by Lonza is not intended and should not be construed as a license to operate under or a recommendation to infringe any patent or other intellectual property right. No claims are made herein for any specific intermediate or end-use application.