

Technical Data Sheet

PRAEPAGEN® HY

CLARIANT INTERNATIONAL LTD

Rothausstrasse 61
4132 Muttenz
SwitzerlandBUSINESS UNIT INDUSTRIAL &
CONSUMER SPECIALTIESwww.ics.clariant.com
www.clariant.com

Special surfactant for the detergent industry

Composition	Alkyl dimethyl hydroxyethyl ammonium chloride
INCI Name	Hydroxyethyl laurdimonium chloride

Product properties ¹

Appearance (20°C)	liquid
Active substance	Approx. 40 %
pH (as is)	Approx. 7

Manufacture

Reaction of dimethyl lauryl amine with ethylene oxide.

Profile

Characteristics

Praepagen® HY could be classified as a typical cationic surfactant whose solubility or hydrophilic characteristics are improved by the presence of a hydroxyl group in its structure. This characteristic allows its use in typical anionic formulations, and shows particular benefits of synergistic action on removal of difficult stains like oily and fatty ones from fabrics or other surfaces, even after ageing.

Synergistic action

Praepagen® HY presents a synergistic effect when incorporated with anionic, amphoteric and/or non-ionic surfactants preferably in manual dishwashing detergents.

Labeling under GHS/CLP

Praepagen® HY is classified with H373 (May cause damage to organs through prolonged or repeated exposure if swallowed.) This classification is negligible

¹ These characteristics are for guidance only and not to be taken as product specifications. The tolerances are given in the product specification sheet. For further product properties, specifications, safety and ecological data, please refer to the MSDS.

for the labeling of formulations containing less than 10% (active) Praepagen® HY. Standard concentrations are 1% active and below.

Complete labeling under CLP for Praepagen® HY, is shown below

Table1: CLP labeling of the main ingredient of Praepagen® HY

Hazard class	Category	H
Acute toxicity	4	H302
Skin corrosion	1C	H314
Specific target organ toxicity – repeated exposure	2	H373
Acute aquatic toxicity	1	H410
Chronic aquatic toxicity	2	H411

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Use in laundry powder detergents

Praepagen® HY is a detergency booster for use in all laundry detergent powders and liquids for clothes washing in household, industrial and institutional areas.

Praepagen® HY can be added in the slurry stage or can be adsorbed in zeolite, layered silicate or other inorganic material for post-dosage. Praepagen® HY is recommended to be used at a dosage of 0.5 – 1.5 % (active material) in the powder detergent formulation. The washing tests were carried out with different soils (tomato sauce, raw palm oil, curry and chocolate) and different fabrics, 100% cotton and miscellaneous CO/PES (poplin, knitting, gabardine, sheet and tergal).

To reproduce difficult spots, one chose those frequently found in day-to-day soils, mainly the ones found in children’s clothes and kitchen towels.

The exact time of aging that the soil has in practice (the time the dirt remains in the fabric until it is washed) was also simulated.

The tests were carried out in three types of washing equipment: Linitest, Jar test modified and top loader washing machine – Brastemp.

Certain washing conditions, such as type and concentration of detergent, washing ratio, temperature and water hardness were found to affect the washing result.

In this work, the positive influence of Praepagen® HY when added to HDP can be easily observed. The results of spot removal were observed visually, which

is important bearing in mind that this is the evaluation parameter used by the consumer, in final analysis when making his choice.

Use in hard surface cleaners

Main characteristics: Compatible in non-ionic and anionic liquid systems, even in the presence of builders. Can be used as detergency booster.

Advantages: Detergency increase in presence of anionic surfactants (including LAS). Benefits observed in low concentration.

Disadvantages: Relatively high cloud point. Usage limited by LAS concentration (narrow compatibility range) and electrolytes. In association with non-ionic surfactants no significant benefits have been observed.

Use in dishwashing detergents

Main characteristics: High water solubility. Good compatibility with anionic, non-ionic and amphoteric surfactants. High stability at low and high temperatures. Good degreasing effect.

Advantages: Detergency increase in presence of anionic surfactants (including LAS). High viscosity increment using small quantity of electrolyte (NaCl). Foam improvement, sometimes with stabilization effect.

Disadvantages: Narrow compatibility range with LAS. Can cause skin irritation when used at higher concentrations.

Storage

Praepagen® HY can be stored for at least 2 years in original sealed containers at room temperature under the recommended conditions. Protect from exposure to cold during transport and storage. The properties of Praepagen® HY are reversibly altered by exposure to cold. If Praepagen® HY becomes turbid, thickens or freezes through exposure to cold, thaw slowly at room temperature and afterwards stir briefly.

Preservation

No preservative is added to Praepagen® HY as it is self-preserving.

Safety

Please see Material Safety Data Sheet before handling the material.

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