

## VARISOFT® 432 PPG VARISOFT® 432 CG

Quaternary ammonium compound recommended for excellent wet comb and feel

- Excellent conditioning properties
- Improves especially wet comb and wet feel
- Makes hair soft and silky
- Easy to handle

Personal Care

## INCI Name (CTFA Name)

Dicetyldimonium Chloride

Both products differ only in the solvent:

VARISOFT® 432 PPG: propylene glycol  
VARISOFT® 432 CG: isopropanol

### Chemical and physical properties (not part of specifications)

|   |                                 |
|---|---------------------------------|
| Content of quaternary ammonium compound | ~ 68 %                          |
| Solvent                                 | Propylene Glycol or Isopropanol |
| Water content                           | ~ 10 %                          |
| Appearance at room temperature          | Liquid                          |

### Properties

- Improves significantly wet comb and wet feel
- Makes hair soft and silky
- High actives content
- Substantive to hair
- Spreads easily on hair
- Easy to formulate.

The excellent sensory properties of VARISOFT® 432 PPG have been proven by sensory assessment with bleached European hair swatches.

The test formulations were simple hair rinses based on 0.5 % Cetcareth-20, 2.0 % Cetyl Alcohol and 1.0 % active of different common conditioning agents, plus water. Control was just the formulation without additive.

The other tested conditioning agents were:

- VARISOFT® BT 85 (Behentrimonium Chloride)
- VARISOFT® W 575 PG (Quaternium-87)
- VARISOFT® TA 100 (Distearyldimonium Chloride)
- VARISOFT® PATC (Palmitamidopropyltrimonium Chloride)
- TEGO Amid S 18 (Stearamidopopyl Dimethylamine)
- VARISOFT® 300 (Cetrimonium Chloride)

The results of the wet properties like wet feel and wet combability, shown as difference to Cetrimonium Chloride ("CTAC", VARISOFT® 300) as standard, are shown in fig. 1.

VARISOFT® 432 PPG improves significantly both properties. The statistical Difference to CTAC has been proven (Duncan Multiple Range Test).

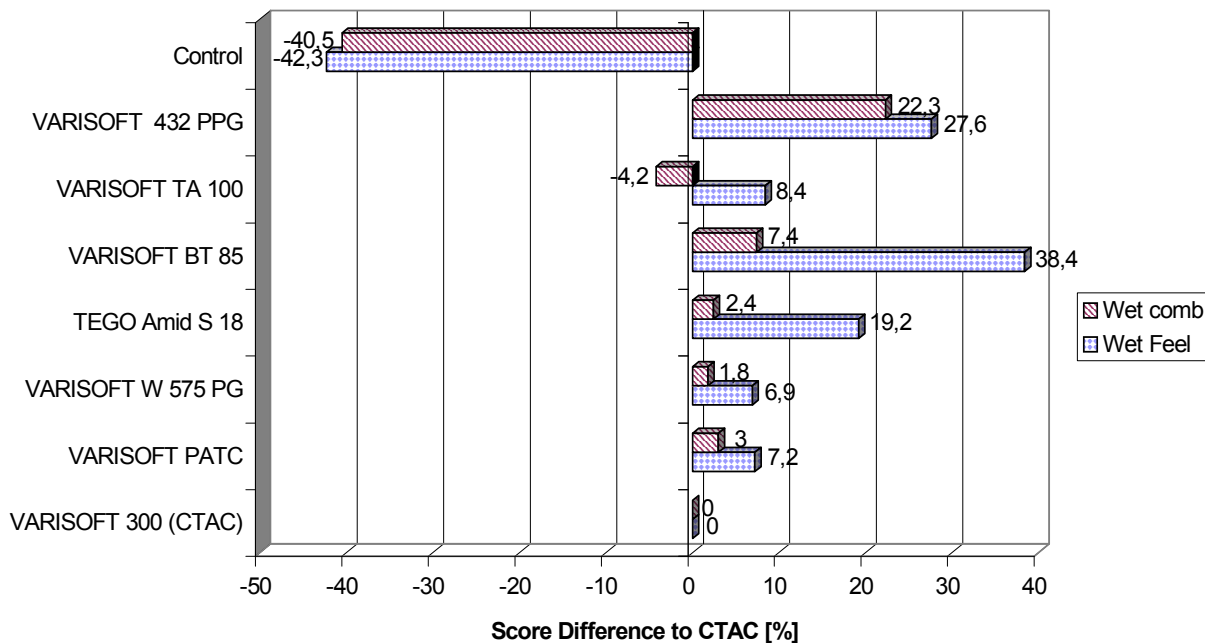


Fig. 1: Results of the sensory hair swatch test of different conditioner agents in comparison to Cetrimonium Chloride (CTAC) as standard.

## Application

- Conditioning hair rinses
- Conditioning shampoos
- Leave-in conditioners

## Suggested usage concentration

1 – 10 % VARISOFT® 432 PPG or VARISOFT® 432 CG

## Packaging

708 kg pallet (4 x 177 kg drums)

## Storage

VARISOFT® 432 PPG and VARISOFT® 432 CG may become solid at lower temperatures. If this occurs the clarity and homogeneity of the product has to be recovered by mild heating (approx. 40 °C) and gentle mixing.

## Hazardous goods classification

Information concerning

- classification and labelling according to regulations for transport and for dangerous substances
- protective measures for storage and handling
- measures in accidents and fires
- toxicity and ecological effects

is given in our material safety data sheets.

## Guide Line Formulations

| Variable Conditioner  |        |
|---|--------|
| <b>Phase A</b>  |        |
| Water, deion.   | 89.5 % |
| <b>Phase B</b>  |        |
| TEGO® Alkanol 16 (Cetyl Alcohol)  | 3.7 %  |
| VARISOFT® 432 CG  | 3.2 %  |
| TEGO® Alkanol 1618 (Cetearyl Alcohol)   | 0.6 %  |
| TEGO® Alkanol CS 20 (Cetareth-20)   | 0.8 %  |
| Cyclomethicone  | 0.6 %  |
| Perfume   | q.s.   |
| Citric acid   | q.s.   |
| Preservative  | q.s.   |
| <b>Preparation:</b><br>In separate vessels, heat phases A and B to 70 – 75 °C. Add phase A to phase B with agitation. Continue mixing while allowing the blend to cool to room temperature. Adjust the pH to 4.5 to 5.5 with citric acid. Add perfume and preservative as needed. |        |

| Economy Conditioner   |        |
|---|--------|
| <b>Phase A</b>  |        |
| Water, deion.   | 96.8 % |
| <b>Phase B</b>  |        |
| TEGO® Alkanol 16 (Cetyl Alcohol)  | 2.0 %  |
| VARISOFT® BT 85 (Behentrimonium Chloride)   | 0.6 %  |
| VARISOFT® 432 PPG   | 0.6 %  |
| Perfume   | q.s.   |
| Citric acid   | q.s.   |
| Preservative  | q.s.   |
| <b>Preparation:</b><br>Heat phases A and B to 70 – 75 °C. Add phase A to phase B with agitation. Continue mixing while allowing the blend to cool to room temperature. Adjust the final pH to 4.5 – 5.5 with citric acid and add perfume and preservatives as required. |        |

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