



Chemicals for Laundry Products

Laundry Liquids
Laundry Powders & Tablets
Fabric Softeners



Laundry Product **Chemicals** from Univar

This aid contains a sample of Univar's portfolio offering to manufacturers of Laundry Liquids, Laundry Powders, Laundry Tablets & Fabric softeners.

For further information on our range please contact your local account manager. For technical assistance with your laundry product formulations please contact:

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Registered trademarks

- | | | |
|--------------------|---|--|
| Univar | - | Caflon |
| Huntsman | - | Empilan, Nansa |
| Thermphos | - | Dequest |
| Dow | - | Versenex, Canguard |
| Dow Corning | - | DC Antifoam |
| Croda | - | Prifac |
| Kao | - | Levanol |
| Novozymes | - | Alcalase, Esperase, Everlase, Savinase, Lipex, Stainzyme, Termamyl, Mannaway, Celluclean, Carezyme |

It's a good time to go **Phosphate free**

Price

Phosphate prices have increased dramatically and are predicted to remain high.

There is now a commercial advantage to Phosphate Free formulations.

Green

Phosphates cause Eutrophication (excessive growth of plants and algae) EU restrictions due in 2008.

Phosphates are needed in the environment but too much is a problem.

Heavy Duty Liquid Detergents (HDL)

Three options to supply your HDL components.

- Option 1** Individual components
- Option 2** Fully formulated, perfumed, enzymatic, phosphate built [Nansa 1493E](#)
- Option 3** Phosphate Free Detergent Base + Optional Components

Advantages of Option 3:

Avoids most of the difficult, multi stage blending & neutralisation processes.

No neutralisation stage means no need for an IPPC licence.

Nansa 1493E

| | |
|------------------------------------|-------|
| Nonionic Surfactants, Phosphonates | <5% |
| Anionic Surfactants | 5-15% |
| Phosphates | 5-30% |

Option 3 - Phosphate Free Detergent Base

Caflon HDL conc.

Dilute to 30-35%
wt/wt with water

**Add your choice the
following components**

Enzymes

Dye

Softener

Colour Protector

Thickener

Opacifier

Preservative

Perfume

Bleaching

Agent

Caflon HDL Conc.

pH (5% Soln) 8.5-9.5

Solids 65-69%

For significant
volumes Univar can
do your blend for you

Contains

Anionic Surfactants

Non-ionic Surfactants

Soap

Anti-redeposition Agent

Chelating Agent

Antifoam

Optical Brightener

Laundry Product Chemicals from Univar

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Soap, Anionic Surfactants and Hydrotrope

| | | Active | Form | Typical % Inclusion |
|---------------|---|--------|------|---------------------|
| Prifac 7901 | Coconut Fatty Acid (Soap, when neutralised) | 100% | Liq. | 0 - 20% |
| Caflon SNA | Dodecyl Benzene Sulphonic Acid (H2P) | 95% | Liq. | 5 - 20% |
| Caflon NAS30A | Sodium DDBS | 30% | Liq. | 5 - 20% |
| Caflon 2L28U | Sodium Lauryl Ether Sulphate | 28% | Liq. | 5 - 20% |
| Caflon SXS30 | Sodium Xylene Sulphonate (Hydrotrope) | 30% | Liq. | 0- 5% |

Standard Stock Item

Neutralising the Coconut & Sulphonic Acid's requires an IPPC licence

Neutralising Agents

| | | Active | Form |
|---------------------|---------------------|--------|------|
| Caustic Soda | Sodium Hydroxide | 32% | Liq. |
| Triethanolamine Std | TELA | 100% | Liq. |
| Caustic Potash | Potassium Hydroxide | 36% | Liq. |

Standard Stock Item

The amine salt will be more water soluble than the sodium salt. A combination of neutralising agents may be used.

Non-Ionic Surfactants

| | | Active | Form | Cloud Point | Typical % Inclusion |
|----------------|-----------------------------|--------|------|-------------|---------------------|
| Empilan KCL7 | C12-C15 Alcohol 7EO | 100% | Liq. | 76 b | 5 - 20% |
| Empilan KBE7 | C12-C14 Natural Alcohol 7EO | 95% | Liq. | 56 a | 5 - 20% |
| Caflon TF-0700 | C13-C15 Alcohol 7EO | 30% | Liq. | 77 b | 5 - 20% |
| Caflon TD-0900 | C13 Alcohol 9EO | 28% | Liq. | 58 a | 5 - 20% |
| Levenol C-301 | Glycereth-7 Cocoate | 30% | Liq. | none | 5 - 20% |

Standard Stock Item

Levenol C-301 – Environmentally Friendly, Vegetable Origin, No Labelling, Non-Irritant
method a - 0.5% aq soln. method b - 10% in 25% BDG soln.

Cloud Point Adjustment

| | | Active | Form |
|---------|-----------------------|--------|------|
| MPG | Mono Propylene Glycol | 100 | Liq. |
| DPG | Di Propylene Glycol | 100 | Liq. |
| Ethanol | Ethyl Alcohol | 100 | Liq. |

Standard Stock Item

Ethanol will also act to 'lift' the fragrance and reduce the pour point

Chelating Agents, Anti-redeposition Agents & Alkaline Builders

| | | Active | Form | pH | Typical Inclusion | Properties |
|-------------------------|--------------------------|--------|-------|------|-------------------|---|
| Sodium Tripolyphos S20 | Sodium Tripolyphosphate | 92% | Gran. | 9.6 | 0 - 10% | Water softening, anti-redeposition |
| Dequest 2066 | (Phosphonate) DTPMPA 7Na | 32% | Liq | 7.0 | 0 - 2% | Stain removal, chelating, bleach stabilisation, anti-redeposition, corrosion inhibition |
| Versenex 80E | (Chelate) DTPA | 32% | Liq | 11.5 | 0 - 2% | Chelating, bleach stabilisaton, soap curd prevention |
| Trisodium Citrate N1560 | Trisodium Citrate | 100% | Solid | 8.3 | 0 - 8% | Chelating |
| Crystal 0084 | Sodium Silicate | 40% | Solid | 11.8 | 0 - 5% | anti-redeposition, deflocculation, emulsification, buffering, corrosion inhibition |
| Caflon PA445 | Polyacrylate | 40% | Liq | 7.0 | 0 - 5% | Chelating, anti-redeposition, whiteness maintenance |

 Standard Stock Item

Additional HDLD Components

| | | Active | Form | Properties |
|----------------------------|-----------------------|-----------------------|------|--|
| DC Antifoam DB310 | Silicone Antifoam | 30% | Liq. | Designed to control foam in aqueous systems over wide pH ranges. |
| DC Antifoam RD | Silicone Antifoam | 10% | Liq. | Designed to control foam in aqueous systems over wide pH ranges. |
| Sodium Perborate Tetra Hyd | Bleaching Agent | Min 10% free O2 m/m | Pwd. | Oxygen-based bleaching agents while remaining colour fast. |
| Sodium Percarbonate | Bleaching Agent | Min 13.5% free O2 m/m | Pwd. | Oxygen-based bleaching agents while remaining colour fast. |
| Caflon FCP | Colour Protector | 80% | Liq. | Protects against colours fading |
| Caflon OPB* | Optical Brightener | 100% | Pwd. | Improves whiteness, prevents yellowing. |
| Caflon OPF | Opacifier | 40% | Liq. | Produces a milky white appearance. |
| Caflon PQ7 | Polyquat 7, Softener | 9% | Liq. | Cationic softener |
| Caflon PAT-S20 | Polyacrylic Thickener | 40% | Liq. | Thickener |
| Canguard Ultra BIT 20 | Preservative | 20% | Liq. | Low tox, broad spectrum, effective pH 2-12 |

 Standard Stock Item

Univar supply a full range of dyes & colours but we do not currently supply fragrances.

Novozymes - Enzymes

| | | Active | Form | Properties |
|---------------------|----------|------------|------|---|
| Alcalase 3.0T | Protease | 3 KNPU-E | Gran | Very good wash performance at pH 7-9 Gentler on wool & silk than other proteases. Suitable for soaks, liquids & powders. |
| Alcalase 2.5L | Protease | 2.5 KNPU-E | Liq | |
| Esperase 4.0T | Protease | 4 KNPU-E | Gran | Robust, retains wash effect at high alkalinity & high temperature. Ideal for professional laundries. |
| Esperase 8.0L DX | Protease | 8 KNPU-E | Liq | |
| Everlase 16T | Protease | 16 KNPU-E | Gran | Bleach robust. Excellent storage stability in powders & tablets. Very good wash performance in liquids. |
| Everlase 16L EX | Protease | 16 KNPU-E | Liq | |
| Savinase 16T W | Protease | 16 KNPU-S | Gran | Cost-effective & robust. Effective under more alkaline conditions and medium temperature. |
| Savinase 16L EX | Protease | 16 KNPU-S | Liq | |
| Lipex 100T | Lipase | 100 KLU | Gran | Good first wash removal of fat & oil stains. Effective in alkaline conditions over a broad temperature range. Surface & deep cleaning. |
| Lipex 100L | Lipase | 100 KLU | Liq | |
| Stainzyme 12L | Amylase | 12 SNU | Gran | High performance, low temp, short time, stubborn food stain removal, esp. starch's. (Stainzyme Plus – Bleach robust). |
| Stainzyme Plus 12T | Amylase | 12 SNUX | Liq | |
| Termamyl Ultra 300L | Amylase | 300 KNU-T | Gran | Robust. Removes starch stains & provides whiteness. Effective at high temperature & alkalinity. |
| Termamyl 120T | Amylase | 120 KNU-T | Liq | |

 Standard Stock Item

In addition to the single enzyme grades, Novozymes also do a number of T-Blends

New Enzymes from Novozymes

Beta-glucans, found in oats, are contained in a large variety of food products. They stick heavily to cotton and even small amounts can lead to graying and hard-to remove stains. They also cause redeposition of clay soilings

| | | Active | Form | Properties |
|-------------------|-----------|----------|-------|---|
| Celluclean 4500 T | Cellulase | 4.5 KECU | Gran. | Unique beta-glucan stain removal properties. Provides strong whiteness & anti graying effects. Preserves brightness in coloured & contrasts in striped clothes. |

 Standard Stock Item

New Enzymes from Novozymes (cont.)

Mannan is used worldwide as a thickener and stabilizer in products such as soups, sauces, desserts & personal care products. Over 27,000 new products containing mannan were introduced, globally, between 2001 and 2006.

| | | Active | Form | Properties |
|----------------|-----------|----------|-------|--|
| Mannaway 4.0L | Mannanase | 4.0 MIUM | Liq. | Strong mannan stain removal. In-depth cleanness and anti redeposition. Prevents graying. |
| Mannaway 4.0T | Mannanase | 4.0 MIUM | Gran. | Strong mannan stain removal. In-depth cleanness and anti redeposition. Prevents graying. |
| Carezyme 4500T | Cellulase | 4.5 KECU | Gran. | Effectively removes fuzz & pills from cotton. Restores & maintains original appearance, colour & softness of the fabric. |
| Carezyme 4500L | Cellulase | 4.5 KECU | Liq. | Effectively removes fuzz & pills from cotton. Restores & maintains original appearance, colour & softness of the fabric. |

 Standard Stock Item

Components for Laundry Powders & Tablets

| | | Active | Form | Typical Inclusion | Properties |
|----------------------------|-------------------------------|-----------------------|-------|-------------------|--|
| Nansa HS80S | Sodium DDBS | 80% | Pwd. | 5 - 20% | Anionic Surfactant |
| Empilan KM25 | C16- C18 Natural Alcohol 25EO | 92% | Pwd. | 2 - 8% | Non-ionic Surfactant |
| Sodium Tripolyphos NW Fine | Sodium Tripolyphosphate | 92% | Pwd. | | Water softening, anti-redeposition |
| Sodium Carbonate Granular | Sodium Carbonate | 100% | Gran. | 5 - 40% | Filler |
| Crystal 0084 | Sodium Silicate | 40% | Solid | 2 - 10% | Anti-redeposition, deflocculation, emulsification, buffering, corrosion inhibition |
| Sodium Sulphate Anhydrous | Sodium Sulphate | 100% | Gran. | 0 - 20% | Filler |
| Sodium Perborate Tetra Hyd | Sodium Perborate | Min 10% free O2 m/m | Pwd. | 0 - 30% | Oxygen-based bleaching agents while remaining colour fast. Activators. |
| Sodium Percarbonate | Sodium Perborate | Min 13.5% free O2 m/m | Pwd. | 0 - 30% | Oxygen-based bleaching agents while remaining colour fast. Activators. |
| DC Antifoam 2-4248s | Silicone Antifoam | 12% | Pwd. | <1% | Antifoam |
| Dequest 4266D | DTPMPA 7Na | 56 | Pwd. | <1% | Stain removal, chelating, bleach stabilisation, anti-redeposition |

Standard Stock Item

see also granulated enzymes on pages 11, 12 & 13

Fabric Softeners

| | | Form | Active | Pour Point | Cold Mix |
|----------------|--------------------------------|-------|--------|------------|----------|
| Calon FSC2 | Fabric Softener Concentrate | Liq | 40-45% | <0 | Yes |
| Caflon EQ90 | Dialkyl Ammonium Methosulphate | Paste | 90% | Paste | No |
| Caflon EQ90/LP | Dialkyl Ammonium Methosulphate | Liq | 90% | 6 | No |

 Standard Stock Item

Caflon FSC2 passes the detergents directive, and is suitable for cold mix.
Just dilute & add dye & perfume as required.

Fabric Softeners – Additional components

| | | Form | Active | Properties |
|-----------------|-----------------------|------|--------|--|
| Caflon PAT-FS | Polyacrylic Thickener | Liq. | 50% | Cationic thickener. |
| Vo-Bicide B-111 | Preservative | Pwd. | 90% | Broad spectrum bacteriacide (Bronopol), effective pH 3-8 |

 Standard Stock Item

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