



SOLVAY

asking more from chemIstry®

Miracare®
SOFT S-525
Sulfate-free Technology
For Mild Shampoos

Formulation Guidance

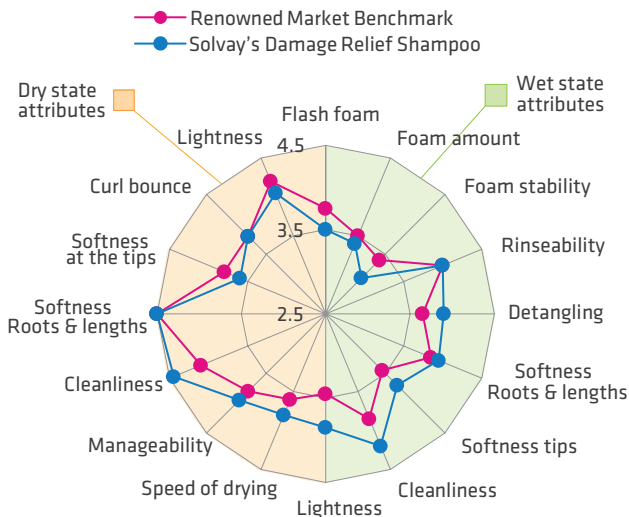


Damage Relief Sulfate-free Shampoo

| Ingredients | As is |
|---|----------|
| Miracare® SOFT S-525 | 18-20% |
| Anionic surfactant among Rhodacal® A-246/FF , Mackanate® EL or Geroon® TC42/LQ | 12-15% |
| Jaguar® Solvay's cationic conditioning guar | 0.4-0.5% |
| Mackadet® OPR1 , non-microbead opacifier | 1-1.5% |
| Rhodicare® T or Carbomer, suspending agent | 0.3-0.4% |
| Dhaykol® S6000 , thickener, PEG-150 distearate | 0-0.3% |
| Dimethicone emulsion, conditioner | 1.6% |
| Preservative, pH 6-6.5. | 0.1% |

Key features

- Level of care tunable via the type of cationic Jaguar® – from moderately to heavily damaged hair.
- Less than 15% active surfactant and 22% solids vs 33% for the most renowned market benchmark
- Good foam (flash, volume), high fiber softness from roots to tips, improved lightness and cleanliness vs benchmark



Scale: 1 very bad; 2 bad; 3 medium; 4 good; 5 very good
 In vivo salon half-head test, Medley Coiffure, Paris, France
 5 models with long colored bleached hair, medium to high damage



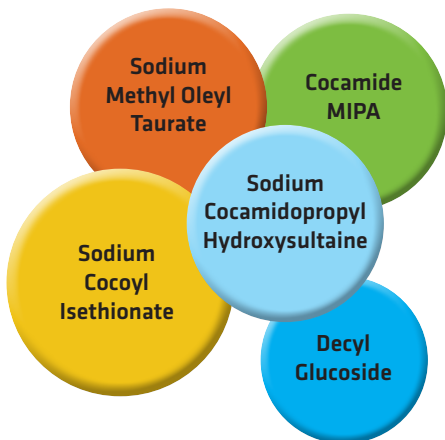
Solvay's solution: Miracare® SOFT S-525

Flexible, salon-tested, affordable sulfate-free booster

Patent-pending Miracare® SOFT S-525 consists in a high-solid, cold-processable performance booster that facilitates supply and eases manufacturing.

Synergistic with Solvay's Jaguar®, it provides salon-tested conditioning to the most damaged hair. Flexible, it can be combined with different anionics (AOS, sulfosuccinate, taurate) by formulators to adapt the cost and feel of their shampoo and cater to a variety of consumers.

- **Easy to use:** shear-thinning, lamellar, flowable liquid, easy to dilute and cold-processable
- **Sustainable,** 55-58% solids, reducing transportation of water
- **Can be used** alone or in combination with anionics
- **Recommended use level:** 18 -25% as supplied



Typical properties

| | |
|------------------------|--------------------------|
| Appearance, 25C | Flowable lamellar liquid |
| % Solids | 55-58 wt% |
| Viscosity (LV3 @ 6rpm) | 2000-3000 cps max |



Solvay's ambition and objective

Putting a wide ingredients portfolio to a challenging use

Solvay ambitions to offer sulfate-free shampoos to every consumer. To do this, formulators of the industry need solutions both proven to be efficacious and as ready-to-use and flexible as possible.

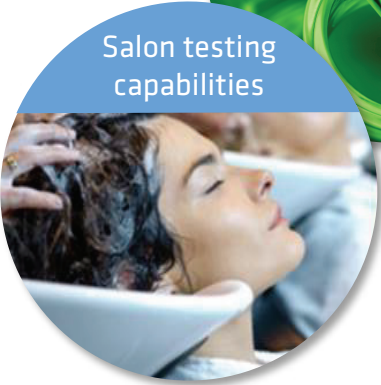
Solvay leverages its wide portfolio of surfactants and polymers, its formulation expertise and salon testing capabilities, to find those needles in the haystack that will bring affordable innovation to the market.



A wide portfolio
of ingredients



Formulation
Expertise



Salon testing
capabilities



What is the whole challenge about?

The equation to crack to next-gen sulfate-free

In premium shampoos, sulfate-free technologies have long been used to offer consumers improved mildness and respect, to both scalp & hair.

To this day, access to the benefits of sulfate-free remains limited to a minority of consumers who can afford it, because key technical roadblocks still prevent sulfate-free from expanding to mass market - a challenge which Solvay's R&I teams have decided to tackle!

| Formulators & Consumers needs | Challenges with Sulfate-free formulations |
|--|--|
| Help manage a foam acceptable by consumers | <ul style="list-style-type: none"> • foam by nature denser, creamier vs. sulfates • must mimic sulfates foam to appeal to mass market consumers & ensure buy-in |
| Provide Efficient care of the hair fiber | <ul style="list-style-type: none"> • conditioning more difficult to achieve in a sulfate-free environment • need for new, efficient conditioning systems specifically tailored for the purpose |
| Provide affordable cost and flexibility | <ul style="list-style-type: none"> • often more complex than sulfate ones • less flexible and more costly |
| Find solutions to thickening & suspension | <ul style="list-style-type: none"> • tough to thicken, poorly response to salt • need of carbomer-free or acrylates-free "natural" solutions |
| Simplify supply chain and ease manufacturing | <ul style="list-style-type: none"> • many surfactants often necessary (5-8) • supply chain becomes complex and costly |

SOLVAY *Way*

The way we do business

North America

Solvay Novincare – 504 Carnegie Center Drive –
Princeton, NJ 08540 – USA
Phone: +1-800-973-7873 – Fax: +1-609-860-0463
NovincareCC@solvay.com

Europe

Solvay Novincare – 40, rue de la Haie-Coq –
F-93306 Aubervilliers Cedex – France
Phone: +33 (0) 1 53 56 50 00 – Fax: +33 (0) 1 53 56 53 90

Asia Pacific

Solvay Novincare – 1, Biopolis Drive –
#05-01/06 AMNIOS – Singapore 138 622
Phone: +65 - 6291 1921 – Fax: +65 - 6394 3376

Latin America

Solvay Novincare – Centro Empresarial –
Avenida Maria Coelho Aguiar, 215, Bloco B-1º Andar
Cep: 05804-902 – São Paulo-SP Brazil
Phone: +55 11 3741-7505 – Fax: +55 11 3741-8378

www.solvay.com

While the information herein is believed to be reliable, we do not guarantee its accuracy. Customers (direct and indirect) are urged to make their own tests with products described herein. Various patents owned by Solvay or others may be pertinent to their use and to compositions containing them. Nothing contained herein is intended as a recommendation to use our products so as to infringe any patent. We assume no liability for any intellectual property rights violation by customers (direct or indirect). Customers (direct and indirect) should make their own patent investigation related to the freedom to operate for any specific intended use. If a relevant patent is identified, customers (direct and indirect) should secure a license from the patent owner. Customers (direct and indirect) should evaluate the products to determine notably their strength, performance and safety. All applicable laws and regulations should be consulted. All the names mentioned are registered trademarks of Solvay, its subsidiaries or affiliates.