AkzoNobel is proud to be one of the world’s leading industrial companies. In fact, we are the largest global paints and coatings company. As a major producer of specialty chemicals we supply industries world-wide with quality ingredients for life’s essentials. We think about the future, but act in the present. We’re passionate about introducing new ideas and developing sustainable answers for our customers. That’s why our 58,000 employees – who are based in more than 80 countries – are committed to excellence and delivering Tomorrow’s Answers Today.

About AkzoNobel: Looking closer, seeing further.

AkzoNobel’s chemicals are essential ingredients in everything from ice cream to asphalt, soap to soap, and plastics to paper. We’re the leader in several markets and sectors. Specialty Chemicals is divided into the following business:
- Surface Chemistry
- Functional Chemicals
- (Polymer Chemicals merge per 01.01.2010)
- Industrial Chemicals
- Pulp & Paper Chemicals
- Chemicals Pakistan.

Understanding the unique needs of the Detergent Industry
By combining expertise, process technology and application know-how AkzoNobel can help solve your application challenge no matter where you are in the world. AkzoNobel can offer a tailor-made solution to every application and function in the Detergent Industry. This brochure gives an overview of the spectrum of chemicals we can offer to your industry.

Welcome to AkzoNobel in the Detergents Industry.

AkzoNobel in the detergents industry

AkzoNobel is one of the world’s leading suppliers of chelates, fulfilling the diverse needs of our customers with a comprehensive range of Dissolvine® chelates, customizing packaging and delivery, offering outstanding advice on applications, dedicating extensive R&D to product innovation, and providing peerless service in everything we do.

An Eye on the Future
With production locations in Herkenbosch (The Netherlands), Lima, Ohio (The United States of America), in Kvarntorp (Sweden) and as from 2010 in Ningbo (China), we are committed to supplying our customers around the globe.

Dissolvine® is the AkzoNobel brand name for products known as chelates, chemicals that control the reactivity of metal ions. Dissolvine® chelates form strong, water-soluble complexes that prevent undesirable precipitation, dissolve scale deposits and optimize oxidation processes.

Dissolvine® Chelates: The Right Chemistry...
Products:
Dissolvine® chelates have been designed and fine-tuned to meet the needs of our customers. Our product range is extensive, including chelating agents and metal chelates, in various salt forms, in different purities and in both liquid and solid forms.
- Ethylene Diamine Tetra Acetic acid (EDTA)
- Diethylene Triamine Penta Acetic acid (DTPA)
- Hydroxy Ethyl Ethylene Diamine Tri Acetic acid (HEDTA)
- Nitrilo Tri Acetic acid (NTA)
- Gluconolactone (GLDA)
- Glucono-δ-Lactone (GDL)
- Ethanoliglycic acid (EDG or HEIDA).

The use of chemicals in cosmetics and personal care is regulated by National Authorities. For your convenience, these regulations, together with the INCI names relevant to a range of Dissolvine® chelating agents and metal chelates, have been summarized in the application leaflet 231 – Dissolvine® in Cosmetics.

What’s more, we continuously develop new products to better meet requirements in the Detergents Industry. Thanks to our concerted research and development efforts, product quality and consistency are ensured.
Powerful and Gentle

The next generation of products in personal care and cosmetics needs to be both powerful and gentle. Dissolvine® GL can do the job:

- boosts the performance of preservatives more than other chelating agents
- chelates calcium and transition metal ions which helps to enhance the shelf-life of creams
- helps to stabilize and avoid discoloration in liquid and soap products.

But it is also:
- free from genetically modified raw materials
- not irritating to skin or eyes
- readily biodegradable.

Dissolvine® GL is listed under INCI as Tetrasodium Glutamate Diacetate and Tetrasodium Dicarboxymethyl Glutamate.

GLDA: safe to use

GLDA was found to be readily biodegradable in the OECD 301 test, which was confirmed by a third party and to have excellent properties with regard to eco and human toxicity. This makes Dissolvine® GL an excellent solution for use in Personal Care.

Functional Application

Dissolvine® GL can be applied in a wide range of personal care products:
- Shampoos – reduces effect of water hardness and improves foaming properties
- Bar & Liquid Soaps – reduces effect of metal catalysed oxidation causing discoloration and rancidity
- Deodorants – stops bacteria metabolising other metals found on the skin
- Creams, lotions and oils – increases formulation stability, appearance and shelf life.

Enhancing the effect of preservatives

Chelates are often added to personal care products to improve the shelf life, e.g. to prevent rancidity of fatty products by complexing trace amounts of metals that can catalyze the oxidation of fatty acids, to complex hardwater ions or to boost the effect of other ingredients like preservatives. All Dissolvine® GL products are fully compliant with the European Cosmetics Directive and its amendments and adaptations (latest update 16 April 2009) including the 7th amendment.

The results of the so-called challenge test are illustrated in figure 1 with Bronopol as preservative. Dissolvine® GL has no biocidal properties in itself, but it can boost the effectiveness of the preservative and in doing so reduce the amount of preservative necessary to reach the desired effect. This boosting effect is proved for gram negative bacteria, gram positive bacteria and mold, and for a variety of preservatives.

Contact us:

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www.dissolvinegl.com
A substantial investment in R&D facilities, personnel and processes allows Surface Chemistry, Personal Care to support customers with technical programs that address both the short and long term needs of the market. The success of this strategy is seen in our continuing introduction of ground-breaking technology, and in the development of tailored ingredients and systems for individual customers.

Products and Functions

AMAZÉ® Polymers
The AMAZE family of styling polymers include high-performing natural ingredients that deliver superior hold and ease of formulation in a broad range of personal care formulations including styling aids, styling mousses and gels.

AMPHOMER® Styling Polymers
AMPHOMER styling polymers are among the leading technologies that have been used in the aerosol hair spray market for over 20 years. These amphoteric acrylic polymers offer outstanding curl retention properties with unparalleled holding power for ultimate control in all temperature and humidity conditions.

Arquad® Conditioning Agents
The Arquad series of conditioning agents is derived from mono and dialkyl quats and esterquats. These versatile products impart detangling, conditioning and static control properties to hair care formulations like cream rinses, mousse, spray, shampoo and conditioners.

Elfacos® Thickeners and Rheology Modifiers
The Elfacos product range includes polyalkylene glycol derivatives that remain fully functional in most surfactant systems containing high levels of electrolytes. The multi-functional products serve as consistency regulators in emulsion systems, offering associative thickening and stabilising effects.

DRY-FLO® Aesthetic Enhancing Polymers
The DRY-FLO series of hydrophobically modified natural polymers offer holding power, manageability, gloss and adhesion without flaking. They provide hydrocarbon tolerance, superior compatibility with dimethyl ether and high humidity curl retention.

CELQUAT®
The CELQUAT series of polymers find application in a wide range of personal care formulas. The CELQUAT S series of cationic water soluble polymers offer lubricity and richness in many hair and skin care applications. The CELQUAT series of cationic cellulose polymers is substantive to hair and skin care formulas and exhibit a range of outstanding properties.

To learn more about the technology offerings of Surface Chemistry, Personal Care, visit www.akzonobel.com/personalcare.
AkzoNobel is proud to be one of the world’s leading industrial companies. Based in Amsterdam, the Netherlands, we make and supply a wide range of paints, coatings and specialty chemicals—2008 revenue totaled €15.4 bln.

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