

Delico®

SPREADABLE TASTE SENSATIONS



HARDSTOCKS



A Sime Darby Plantation Company



Wendy and Mark want the best for their family. They want food that looks good, tastes good and does them good.

Sime Darby Unimills is the leading supplier of tailor-made natural vegetable oil-based ingredients for the European food industry. By sharing information, ideas and expertise, and using all modern oil-processing techniques, we develop the perfect blend for our customers.
www.unimills.com

DELICO® HARDSTOCKS

Delico® is our brand of hardstocks used in the production of consumer margarines, spreads and cooking oils. At the very heart of margarine, Delico® Hardstocks are blends of processed vegetable oils designed to give the texture, taste and consistency you want in your product. Delico® Hardstocks can be tailored to the needs of the most discerning margarine manufacturers, and thus to the demands of consumers for healthy, tasty products.



How do Delico® Hardstocks offer the ultimate spreadable taste sensation? By providing a hardstock to form the solid phase of the margarine and in doing so largely determining the texture and mouth feel. Margarines, spreads and semisolid cooking fats are water-in-oil or oil-in water emulsions.

Other ingredients, such as Omega essential fatty acids, flavours, colorants, proteins, thickeners and vitamins A and E, are used to balance the margarine's nutritional profile, perception and appearance.

The hardstocks stabilize the emulsion properties throughout the required shelf life. This guarantees the required spreadability and taste sensations during consumption, as well firmness, plasticity, mouthfeel and flavour-release properties.





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Making the right selection

Margarine and spreads are also gaining recognition as functional foods. Margarine is an important provider of healthy fats with a balance of the essential fatty oils - Omega-3 and Omega-6. Most consumers know that margarine is a source of vitamins A (β -carotene) and E (tocopherol), and natural plant sterols that help to reduce cholesterol levels.

Margarine and low fat spreads are considered to be healthy alternatives to butter because in general they contain less saturated fat. In addition, spreads made with sunflower or rapeseed oils have higher levels of healthy polyunsaturated fats.

Our reputation for high-quality margarine hardstocks is based on the in-depth knowledge of and experience with processing oils and fats. In fact, hardstocks have been our core business for almost 100 years. We are ready to support you in selecting and customizing the right Delico® Hardstock for your specific application.

Delico® Products

Delico® 100 series	Liquid margarines, cooking oils and peanut butter
Delico® 200 series	Full fat margarines
Delico® 300 series	Margarines & reduced fat spreads
Delico® 400 series	Low fat spreads
Delico® 500 series	Margarines or spreads with added nutritional properties

Delico® properties

- Tailored melting and crystallization behaviour (SFC-curves)
- Excellent processibility

Delico® benefits

- Tailored spreadability
- Optimized flavour release
- Required mouthfeel

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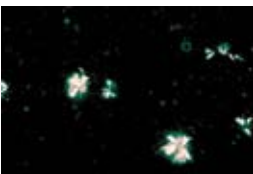
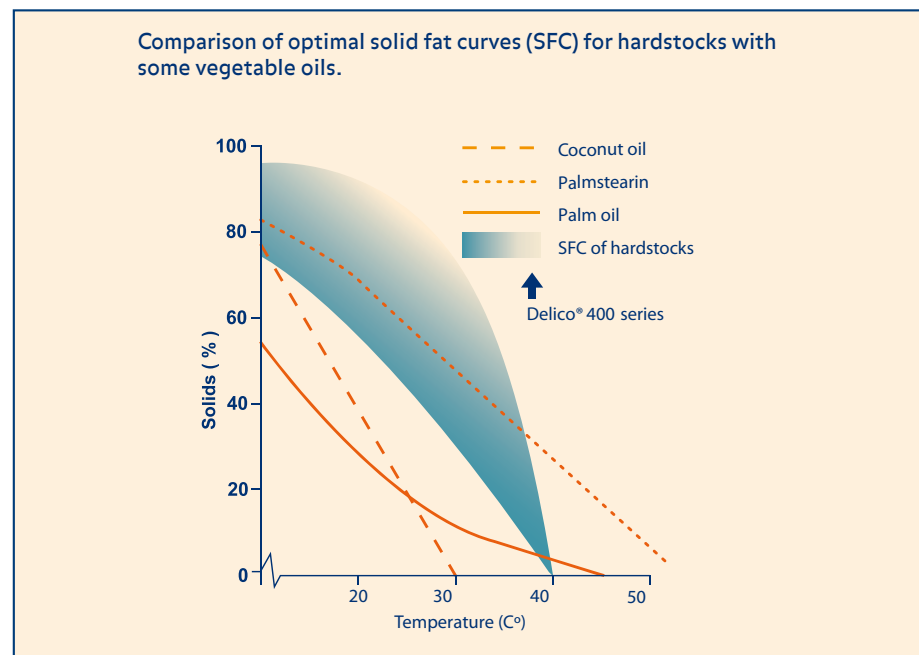




Innovation

Our R&D team is continuously developing healthier and more functional hardstocks. We are among the leading experts in the complex structure-property relationships of crystallization in hardstocks. In addition, we cooperate with leading scientists in universities and research institutes. This fundamental knowledge is essential in creating new and innovative hardstocks.

A key functionality of hardstocks is to provide the required solid fat content (SFC) at certain temperatures combined with the required crystallization speed during processing. Optimal SFC curves for hardstocks are compared with SFC curves for some vegetable oils.



Microscopy of Palm oil crystal spherulite.

We were one of the first companies to make the change to trans-free hardstocks because they have a better fit with today's nutritionally balanced diet. Over the last 10 years, our trans-free hardstocks, Delico® 100 and 200 series have proven track records in the market as leading hardstocks with excellent functionalities.

The Delico® 300 and 400 series have been developed from non-hardened fats based on dry-fractionated vegetable oil combined with interesterification technology. For spreads with very low saturated fatty acid content (SAFA), Delico® 400 series are based on ultra hard fractions of natural fats obtained by our double dry fractionation technology.



We are one of the leading industry pioneer in developing healthier, trans-free blends, which have proven track records in the market as leading hardstock supplier with excellent functionalities. Our R&D efforts not only focus on developing new functionalities and healthier hardstocks.

To meet the demand for a more natural and sustainable processes to make margarines and spreads we deliver hardstocks based on enzymatic rearrangement technology. This oil modification technology is environmental friendly because of the mild operating conditions and the enzymes used in this technology, are biodegradable proteins. Our Delico® Hardstocks based on enzymatic rearrangement can be tailored to the required melting properties without compromising on taste and mouth feel.



Delico® 242,
a pure rapeseed
hardstock

Our new generation of natural hardstocks. These allow for the manufacture of pure rapeseed and pure sunflower margarines



Delico® 273,
a pure sunflower
hardstock

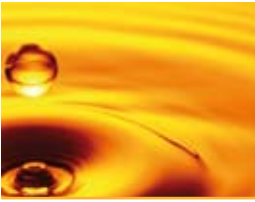


Enrich your hardstock with additives

At our production site we have extensive blending facilities to enrich your hardstock with additives such as natural colorants, flavours or lecithin. For instance, our Malaysian research scientists developed Vitolio®. As this product retains the naturally present β -carotene and tocopherols, there is no need to add chemical colorants or vitamins when used to produce spreads. We are one of the leading producers of producing natural lecithin. Our scientists have in-depth knowledge about the functionality of lecithin in your margarine and can help you to make the right selection.

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Our approach

Our reputation for high-quality hardstocks is based on our in-depth knowledge and experience of processing oils and fats gained over almost 100 years. We believe that the best products are created through an approach of transparency and partnership. Transparency is a key element of success with the aim to innovate and manufacture ingredients effectively and responsibly.

At our site in Zwijndrecht, The Netherlands, we have all modern oil-processing techniques such as interesterification, double-fractionation and enzymatic re-arrangement. We are a leading producer of lecithin products modified by enzymatic hydrolysis or alcohol fractionation. We can add lecithin, flavours or natural colourants to the final oil blend. Sharing information, ideas and expertise, allows us to develop the perfect blend or recipe for our customers with shorter lead times and higher success rates.



Our responsibility is to ensure that each step from palm seedling to your product is sustainable.

Strategic thrusts

First and foremost, consumers look for products they enjoy. However, today's consumers are increasingly aware of health and environmental issues. Their enjoyment of a product increasingly depends on the knowledge that the product has been produced in an ethical, environmentally friendly and sustainable way. They want to eat good food and feel good about the choices they make. The Delico® range delivers on this desire.

Most of our tropical raw materials come from sustainable sources: the estates of our Sime Darby plantations in Malaysia and Indonesia. Sime Darby, our parent company, is a founding member of the Roundtable on Sustainable Palm Oil (RSPO). We see it as our responsibility to source our raw materials from sustainable sources and to help all our customers to switch over to sustainable palm oil based products. As a company we believe that we can only have a successful future if we make sure it's a sustainable one.

We adhere to strict quality assurance standards, from raw material sources to final products. We have adopted various food standards such as HACCP, ISO, BRC and IFS.

Our strategic thrusts of Innovation and Responsibility are embedded in Delico® Hardstock formulations. By applying these thrusts to every aspect of our work, we are committed to meeting your needs and the needs of your customers, the consumers.



*Developing
Sustainable
Futures*

Contact

If you would like to learn more about how you could use our expertise to successfully co-develop your products, please contact our sales department or product development experts:

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