

Industrial Chemicals

DeMythe[®] LDD Technology

AkzoNobel 



Responsible Care[®]
OUR COMMITMENT TO SUSTAINABILITY

DeMythe[®] LDD technology has won the Responsible Care Award 2012 of the European Chemical Industry Council (Cefic) and the Association of the Dutch Chemicals Industry (VNCI).

With more than three billion raw hides and skins processed annually, the leather and protein industry is an important part of the world economy. One of the key phases in the leather and protein production process is removing fat efficiently from the animal skin.

Sustainable degreasing and dehydration technology

Traditional degreasing agents are harmful to health and the environment, but now AkzoNobel - together with our Spanish partner GRIT - have developed a degreasing and dehydration technology, based on the solvent Dimethyl Ether (DME). The result is a sustainable technology called DeMythe® LDD that delivers top-of-the-range degreasing and dehydration power in a closed loop process.

DeMythe® LDD uses DME as an extraction solvent because of its outstanding properties as a water and fat solvent. Moreover, DME can be used as extraction solvent in the production of foodstuffs and food ingredients under EU Directive 2010/59/EU.

It's precisely these unique capabilities that gave us and our partner GRIT the scope to be able to develop a technology that will remove water and fat from animal skins and hides in a closed loop process and operating at relatively low temperatures. After the process cycle has been completed, the DME is separated from the water and fat, and then recycled. The recovery rate is >99%. In other words, low waste, high degreasing and drying performance, low energy consumption, high product quality and high cost efficiency. Hence, it contributes to a better environment.

Here's a breakdown of the DME properties:

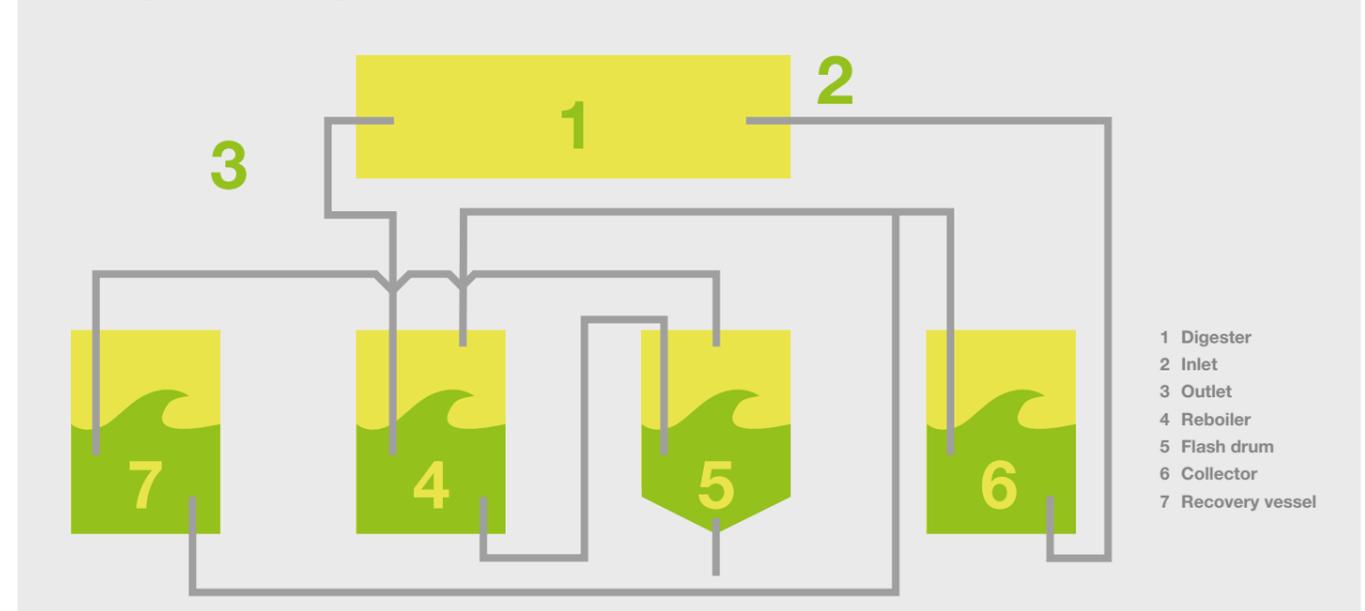
Molecular formula:	CH ₃ OCH ₃
Aspect:	Clear liquid (under pressure)
Boiling point:	- 25 °C
Vapor pressure at 20 °C:	4.1 bar(g)
MAC value:	1000 ppm
Toxicity aspects:	Non toxic
Flammable:	Yes

Datasheets and MSDS are available on request

Major process steps



Major process steps



DME in use

A widely used aerosol propellant, DME offers unique advantages such as solvency power and water miscibility. Based on the flexibility in use offered by these advantages, DME is an appreciated propellant in many aerosol products like hairsprays and other cosmetic aerosol products, paint sprays and various technical aerosol products.

Flexible process parameters

- Temperature (if desired)
- Contact time
- Mechanical energy (rotating drum)
- Quantity of extraction agent
- Number of skins / Load
- Size of skin (whole skin to small pieces)
- Number of cycles / repeated treatment

GRIT – an innovator

Our Spanish partner GRIT (which stands for Gas, Research, Innovation, Technology) distributes, stores and develops industrial application gases. The company specializes in research, innovation and technology and produces aerosols, plastic foams and refrigeration fluids for the chemicals industry. Services include R&D+I, technical solutions, refilling and distribution.

For more information, please contact:

AkzoNobel Industrial Chemicals

P.O. Box 247
3800 AE Amersfoort
The Netherlands
+31 33 467 6090

Industrial Chemicals produces and markets salt and energy, chlor-alkali products and derivatives like monochloroacetic acid (MCA) and metal salts. It is Europe's largest producer of vacuum salt and a leading supplier of chlorine, caustic lye, hydrochloric acid and MCA used in the chemical, detergent, construction, food, pulp and paper and plastic industries. Its products are essential in daily life and used in the manufacture of among others vehicles, glass, performance plastics, pharmaceuticals and textiles, and in disinfectants for swimming pools. Employing approximately 1,700 people, Industrial Chemicals has production sites in Rotterdam, Hengelo and Delfzijl in the Netherlands, Ibbenbüren, Frankfurt and Bitterfeld in Germany, Mariager in Denmark, LeMoyne in the USA, and Taixing in China. The business unit is headquartered in Amersfoort, the Netherlands.



www.akzonobel.com

AkzoNobel is a leading global paints and coatings company and a major producer of specialty chemicals. We supply industries and consumers worldwide with innovative products and are passionate about developing sustainable answers for our customers. Our portfolio includes well-known brands such as Dulux, Sikkens, International and Eka. Headquartered in Amsterdam, the Netherlands, we are consistently ranked as one of the leaders in the area of sustainability. With operations in more than 80 countries, our 50,000 people around the world are committed to delivering leading products and technologies to meet the growing demands of our fast-changing world.

© 2014 Akzo Nobel N.V. All rights reserved.

