

AkzoNobel Functional Chemicals

A balanced partner in your production

Ethylene Amines, Ethanolamines, Glycols



AkzoNobel

Tomorrow's Answers Today



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For more information, visit www.akzonobel.com/ea

Chemistry that works


AkzoNobel is an acknowledged world leader in the production of functional chemicals. This leading position has been achieved through the highest levels of research, know-how, process plant design and quality control. Plus our ability to listen.



Our vast range of ethylene amines, ethanolamines and glycols is the result of close communication with customers and the ability to identify the needs of the market. By operating as a production partner, we can guarantee a steady supply of essential chemicals to customers in all parts of the world.

This way of doing things – providing the right products and working together with customers to achieve the desired results – is what we like to call “Chemistry that works”.

A vital part of daily life

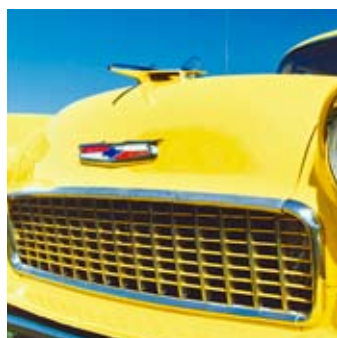


Our homes and workplaces are filled with products manufactured with the help of ethylene amines, ethanolamines and glycols. So much so, that it is virtually impossible to get through the day without benefiting from these performance enhancers.

AkzoNobel ethylene amines, ethanolamines and glycols are essential building blocks in products that help our customers to manufacture products that restore the health of humans, pets and farm animals, make our clothes cleaner and more comfortable after washing, ensure the quality of the food on our tables, add wet strength to kitchen rolls, clean incinerator emissions, provide the required characteristics for our cosmetics and toiletries, enhance the performance of our vehicle engines and tyres, prevent car radiators from freezing, and retain the integrity of road surfaces. In short, they play a significant part in improving daily life for countless millions around the world.

Our functional chemicals are made to transform the properties of end products. They can make them softer, firmer or more pliable, make them adhere better or stop them from coagulating, help them retain a thicker consistency, make them foam in a controlled fashion or keep them free-flowing. No matter your application, we are sure you will find the ethylene amine, ethanolamine or glycol that will fulfil your production needs.

Whatever features you need



Industrial applications – a fast guide

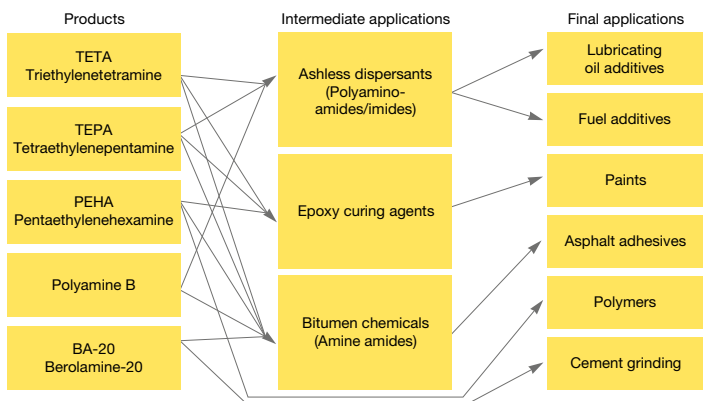


Ethylene amines are extremely reactive molecules. This makes them a most versatile tool for building new molecules for a wide range of applications. Some of the main applications for our ethylene amines are described in the tables.

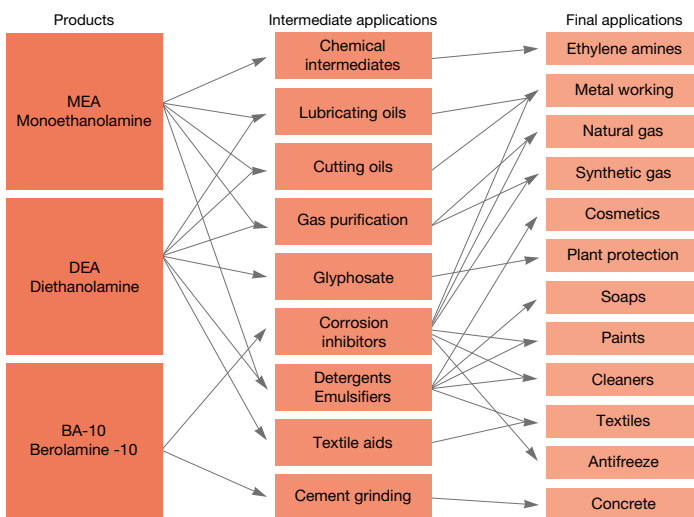
Ethanolamines are used extensively in the manufacture of detergents, in gas sweetening, textile additives, lubricants, cutting oils, surface coatings, in polyols for polyurethanes, in cyanide-free electroplating, pharmaceuticals and countless other applications.

Mono ethylene glycol (MEG) is a colorless liquid with low volatility. The product is extremely hygroscopic. MEG is miscible with water, alcohols, aldehydes, ketones and esters.

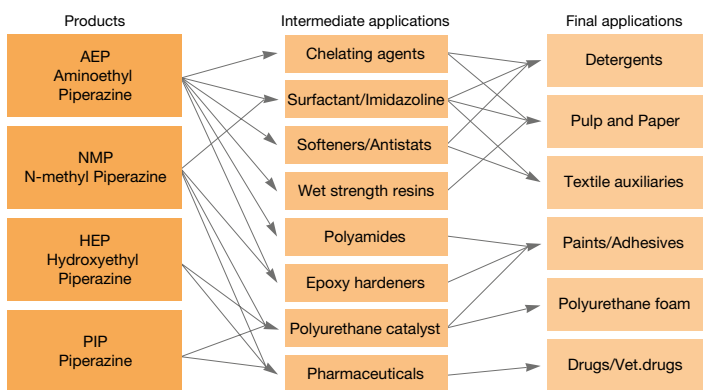
Ethylene Amines - Industrial Applications



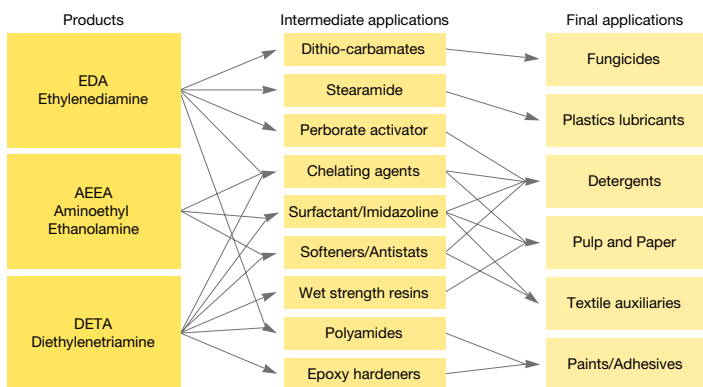
Ethanolamines - Industrial Applications



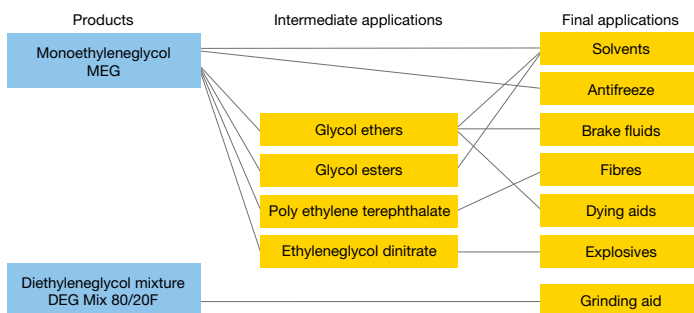
Ethylene Amines - Industrial Applications



Ethylene Amines - Industrial Applications



Glycols





WABU 56107815

HOYER
INTERNATIONALE FACHFABRIK
HAMBURG

MAX. BELASTUNG
34000 kgs

TRAILERSERVICE

A reliable partner means extra value



The performance of our products and their value to users are a function of their availability. This is especially true of chemicals, when customers' own manufacturing operations are so heavily dependent on reliable supplies and punctual deliveries. Because of this, we have set up a comprehensive supply chain organization to ensure that we and our products, are always close to our customers. So wherever you are, we are there, working as a true production partner.

This commitment to production partnership has helped us to move on from our early pioneering lead in ethanolamines and ethylene amines into our present position as world leader in the field. Because, like our customers, we know that in today's world, whatever the end product, whatever the location, a high service level and easy availability are vital to success.

Responsible Care all the way

Health, Safety, Environment and Security

We know that every aspect of our activities affects our customers, staff, host community, and the environment. Because of this, our commitment stretches beyond selling products.

Our aim is to do everything to ensure that what we do is not only a source of general benefit, but has the least possible adverse influence on Health, Safety and the Environment. In a word, we are determined to conduct our activities in a socially responsible manner.

Our HSE&S policy deals with: working environment, process development, external environment, product stewardship, continuous improvement and security. A copy of this policy can be found on www.akzonobel.com.

Product Stewardship

We have adopted the principles of the chemical industry's Responsible Care initiative, which includes Product Stewardship as one of its Management Practices.

Product stewardship focuses on the impact of a product throughout its lifecycle – raw materials and energy consumption, emissions to air, ground and water, toxicity, worker safety, and waste disposal.

This means that our products must be managed and used safely every step of the way from their development and manufacture, to packing and distribution, to use and ultimate disposal.

We have been certificated in accordance with the ISO 140001 Environmental Management System since 1999.

We offer safety data sheets containing information on properties, handling, precautions, and first-aid procedures.

We offer an Ethylenes Best Practices Manual, giving more detailed recommendations on the proper use and handling of ethylene amine products. Life Cycle Assessment documentation on our products is available on request.

Open Communication

As a member of the Responsible Care Discussion Group, we are committed to constantly seeking ways of further improving our HSE performance, and of maintaining open communication with the public and all other interested parties with regard to our goals and progress.

Continuous Improvement

We supply training and education so that all our employees, both as individuals and as members of our team, can accept responsibility for the health, safety and environmental aspects of their work.



Quality – the way we think, the way we work

As we see it, quality goes far beyond products, procedures and services. We see quality as a manifestation of our attitude to responsible and structured work, open communication – both internal and external – and transparency. It is equally a reflection of our willingness to listen, learn and respond to the world about us.



Focusing on our customer's future first

This philosophy, which determines the way we think and work, is expressed in our Quality Policy, where we emphasize the importance of having an active dialog with our customers and fulfilling agreements. We pledge to develop, produce and deliver our products consistent with our agreements with customers. In accordance with this we naturally promote responsible use and disposal practices. The complete policy is available on our website.



Business Charter for Sustainable Development

AkzoNobel actively supports the guiding principles of the International Chamber of Commerce's "Business Charter for Sustainable Development" and has signed the Global Responsible Care Charter.



Global coverage, global presence



AkzoNobel is a global chemical/industrial group. The ethylene amine, ethanolamine and glycol operations of AkzoNobel Functional Chemicals have their center of operations in Stenungsund, Sweden. A significant amount of production is also carried out in Leverkusen, Germany.

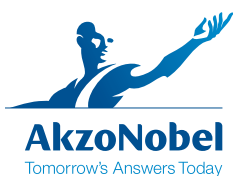
With the growing demand for our products on the Asian market we have also established a new production plant in Ningbo, China. This diversity of production locations enables us to offer a full range of ethylene amines and to guarantee even greater security of supply worldwide.

Our plants and processes have been designed to produce high-quality products at low cost and with exceptionally low emissions to the

environment. Our production processes and manufacturing facilities are subject to continuous review and upgrading in support of our ongoing efforts to further improve our products and lessen their environmental impact. Most of our production is based on our own proprietary technology. We are, of course, certificated in accordance with ISO 9001 (Quality Assurance) and ISO 14001 (Environmental Management).

The widely varied industries that use our products depend on reliable supplies of our high-quality chemical building blocks. When AkzoNobel is your production partner, it usually takes no more than a single phone call to secure in-time delivery.





www.akzonobel.com

We're the largest global paints and coatings company and a major producer of specialty chemicals. We supply industries worldwide with quality ingredients for life's essentials. We think about the future, but act in the present. We're passionate about developing sustainable answers for our customers. Based in Amsterdam, the Netherlands, we have 60,000 employees working in more than 80 countries – all committed to excellence and delivering Tomorrow's Answers Today.

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