



CEPSA CHEMICALS
2017



CEPSA

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CHAPTER 1



Cepsa





Our aim is to achieve a powerful position in the global energy market.

We are a global energy company, 100% owned by the Mubadala Investment Company, which is active in all stages of the oil and gas value chain of: exploration and production, refining, transport and marketing of derivatives, bio-fuels, cogeneration and marketing of electricity, with close to 10,000 professionals and a presence on the four continents.

We have developed an important chemicals area, which is closely integrated with the oil refining area, where we manufacture and market raw materials to make high value added products.

With the dynamic and innovative spirit that characterizes us, we pursue continuous improvement in the search for new goals and challenges, while maintaining our firm commitment to maximum customer satisfaction, adapting energy to their needs.

Thanks to our integrated business model, our technical excellence and ability to adapt, we have consolidated our position as a leading company nationally, and our aim is to achieve an important position in the global energy market.



CHAPTER 2

➤ Chemicals
at Cepsa



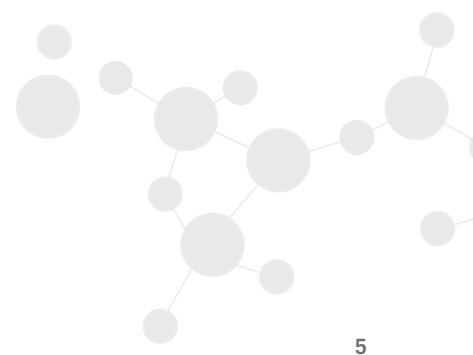


Cepsa's Chemicals area is fundamental to the internationalization and growth of the Company.

Our Chemicals area is well renowned both in national and international markets, where it sells its products manufactured at our chemicals plants and refineries.

We produce high value added products that are used as raw materials in multiple industries and have a large number of end uses: state-of-the-art plastics, biodegradable detergents, personal care products, paints or synthetic fibers, among others.

We carry out marketing through strategically located sales offices and subsidiaries, and we have an extensive global distribution network, with our own storage tanks and loading platforms at the production centers and at different terminals, to ensure optimum delivery to the customer.





CHAPTER 3

➤ Leadership,
integration
and growth



Our technical excellence and adaptation to our clients' needs has enabled us to reach international leadership positions.

In the Chemicals area our business is closely integrated with Cepsa's refining business and with suppliers and customers, and we have managed to become partners of choice of the leading world companies in their sectors.

We are constantly growing and expanding internationally, with plants in Germany, Brazil, Canada, China, Spain and Indonesia, with a dual objective: strengthening our current market position and expanding our product range.

Our technical excellence and adaptation to our clients' needs has enabled us to achieve international leadership positions:

- World leaders in the production of LAB and LABSA, the raw materials used to make biodegradable detergents and the only world LAB producer to obtain the Environment Product Declaration.
- Leaders in the solvents sector in Spain, UK and Italy.
- World's second largest producer of phenol the raw material used to produce next generation plastics and acetone.
- World leaders in the production of cumene.



CHAPTER 4

➤ Our products





We market our products, all with high standards and multiple end uses, across the world.

LAB, LABSA

Raw materials to produce linear alkylbenzene sulfonate (LAS), the most used detergent after soap, due to its biodegradability and versatility in formulations.

To produce it, our Chemicals area has the largest capacity plant in the world located in Brazil; it is also manufactured in our Canadian plant, a pioneer in the use of DETAL technology, and in Spain.

Fatty alcohols and oleochemical surfactants (SLES, SLS)

We have a plant in Indonesia, through a *joint venture* with Sinar Mas (Sinar Mas Cepca) for the production of fatty alcohols of vegetable origin (palm kernels).

These alcohols are used as raw materials at the plant in Germany,

Sinar Mas Cepca Deutschland, to produce surfactants of oleochemical origin: Sodium lauryl sulfate (SLS) and Sodium lauryl ether sulfate (SLES).

They are widely used as surfactants in general detergents, for cosmetics, and personal care and cleaning products.



CHAPTER 4

Our products



Cumene, phenol, acetone, AMS

Phenol is manufactured at our plants in Spain and China. Its main use is in the production of polycarbonate, an engineering plastic used principally in the automotive sector and in design and architecture.

It is obtained from cumene, using the most advanced technology for this process and it is found in many things without which our life would be very different. From car dashboards to insulation, helmets, wind turbines, etc.

The production of phenol also produces acetone, an excellent solvent for natural and synthetic oils, resins, gums, paints, varnishes and inks. Its main use is in the production of methyl methacrylate (MMA).

Furthermore, we also obtain a high added value derivative called alphas-methylstyrene (AMS), which has basic end uses in coatings, antioxidants, and adhesives.



Basic petrochemicals

Cyclohexane, Phthalic anhydride, Maleic anhydride, Sulfur

These derivatives are manufactured at two of our Spanish refineries, located in Andalusia.

Cyclohexane is obtained via hydrogenation of benzene and its most common use is in the production of nylon as an intermediate product used to make other chemicals and polyester fibers.

Phthalic anhydride and maleic anhydride are mainly used to make unsaturated polyester resins used in coatings, adhesives and insulation.

Sulfur, in addition to its effects as a fungicide and acaricide, is also a soil salinity corrector. This helps to improve the crop yield and, in contrast to large synthetic molecules, sulfur offers the advantage of leaving no toxic waste.

Solvents

We produce a wide range of solvents with multiple applications:

Aromatics: Paints, resins, adhesives, sealants, insecticides and detergents.

Aliphatics: Non-smelling paints, adhesives, wood treatments, printing inks, tires, cosmetics, and pharmaceuticals.

White Spirits: Adhesives, paints, lacquers, varnishes, cleaning products, bleachers, and inks.

Dearomatized fluids: With low aromatics content, and non-smelling, characteristics which make it a good diluent.

Oxygenated solvents: Pharmaceuticals, cosmetics, gasoline additives, anti-freeze.

CHAPTER 5

➤ Innovation
and Technology





Innovation and technology are fundamental variables for the future of all businesses.

Our Research Center works closely with the Chemicals area to strengthen its objective of pursuing value over the long term, through improving processes and products, the development of new products and providing technical support to plants and customers.

Collaboration with other bodies and companies, as well as Spanish and international universities are also important.

- Development, in collaboration with UOP, of DETAL technology used in the production of raw materials for detergents. Currently used by 80% of new plants worldwide.
- First Spanish energy company to develop a loading and unloading system for chemical products with efficiency and security improvements that won the International Edison Award for Innovation.
- Our chemical plant at Bécancour (Canada), unique in the world for its thermodynamic system that transforms residual energy into electricity to feed the installation.



CHAPTER 6

➤ Sustainability
and consumer health





We are the world's only LAB manufacturer to have achieved the EPD (Environment Product Declaration).

Our Product Protection area works to oversee the health and safety impacts of our products, to ensure the protection of our customers, our professionals and the environment, both at the manufacturing stage and in the storage and consumption phase.

- We evaluate the physical, chemical, toxicological, or ecotoxicological risks, as well as those associated with new substances or new applications of existing ones.
- We promote the 'Responsible Care' program, a voluntary global initiative aimed at ensuring that partner companies achieve continuous

improvements in safety, health and environmental protection, in accordance with the principles of Sustainable Development.

- We have developed a notable role in developing the methodology of the REACH regulation on chemicals, as members of CONCAWE and CEFIC.
- We adapt the criteria for our product labeling to the GHS System and to Regulation (EC) No. 1272/2008 (CLP Regulation), which has enabled us to offer our customers quality information and improve the safety of our products.



Cepsa Chemicals global presence

(Plant capacity in thousands of tons)

 Chemical plants

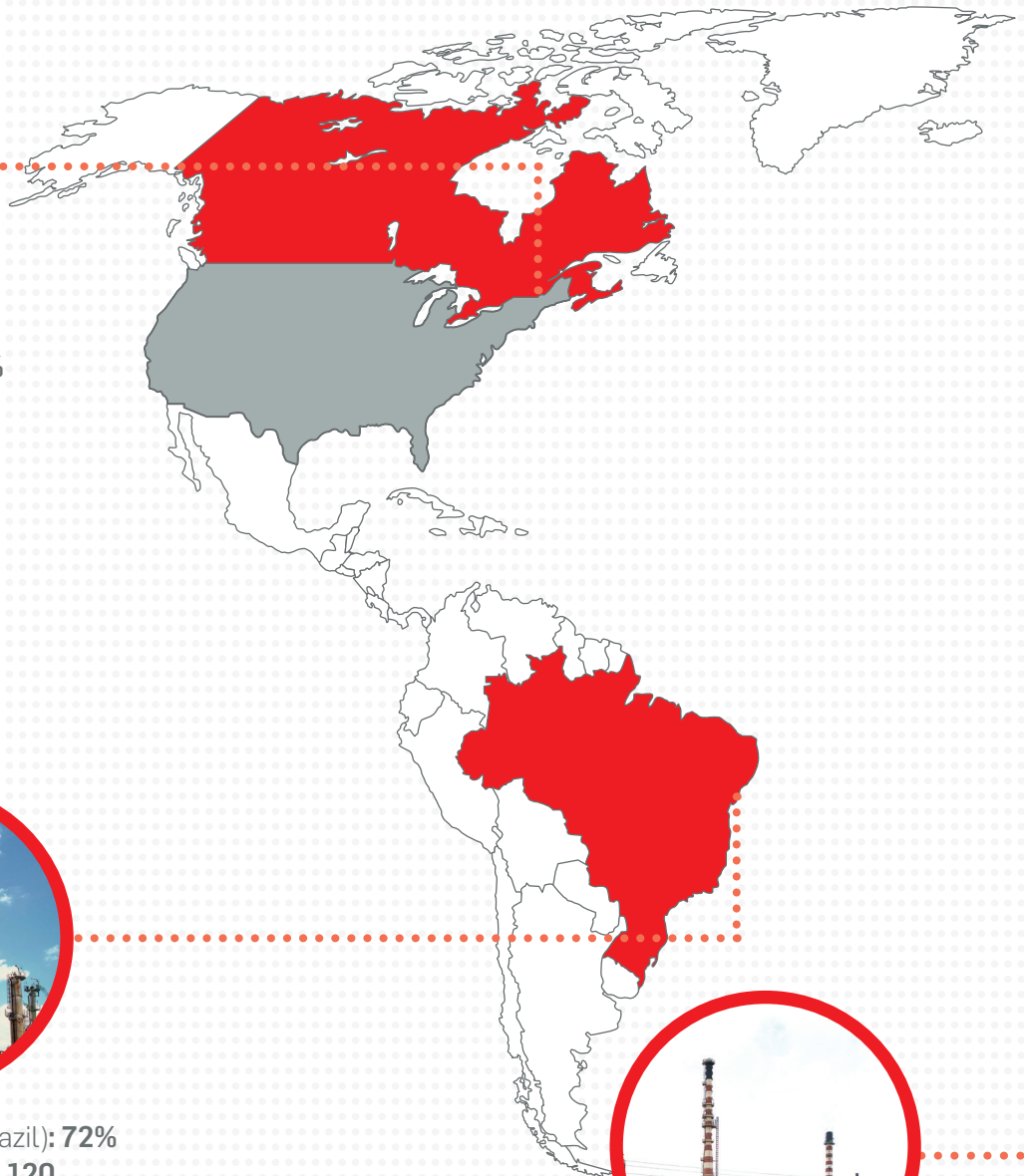
 Sales Offices



Palos de la Frontera (Spain): 100%
Cumene: 1,000; Phenol: 600; Acetone: 370



Bécancour (Canada): 100%
LAB 120



Salvador de Bahía (Brazil): 72%
LAB 260; LABSA 120



Puente Mayorga (Spain): 100%
LAB 220; LABSA 80; N-Paraffins: 400



Genthin (Germany): 50%
Surfactants: 100



Shanghai (China): 75%
Cumene 360; Phenol: 250;
Acetone: 150



Dumai (Indonesia): 50%
Fatty alcohols: 160



The content of this document is supplemented by the information available on the Company's website. Any queries regarding the information that is offered here will be handled by the Directorate of Communication, at Cepsa's head office.

www.cepsa.com

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