



Source: Dow

## Holland: your chemical portal to Europe

The chemical industry in the Netherlands, a priority sector of the Dutch government, is strongly focused on sustainability. The chemical industry has therefore agreed on a long-term strategy aimed at increasing productivity, doubling both turnover as well as

CO<sub>2</sub> reductions and reducing the environmental footprint. Goal is to be known as the Green Chemistry Country and to be ranked among the top three producers of high-tech materials worldwide by 2050.

### Websites

[www.vnci.nl](http://www.vnci.nl) - Netherlands Chemical Industry Association  
[www.kncv.nl](http://www.kncv.nl) - The Royal Netherlands Chemical Society  
[www.be-basic.org](http://www.be-basic.org) - Bio-based, Ecologically Balanced Sustainable Industrial Chemistry  
[www.ispt.nl](http://www.ispt.nl) - Institute for Sustainable Process Technology  
[www.polymers.nl](http://www.polymers.nl) - Dutch Polymer Institute  
[www.m2i.nl](http://www.m2i.nl) - Materials Innovation Institute  
[www.iro.nl](http://www.iro.nl) - The Association of Dutch Suppliers in the Oil and Gas Industry  
[www.nfia.nl/chemical\\_portal\\_to\\_europe.html](http://www.nfia.nl/chemical_portal_to_europe.html) - Holland: your chemical portal to Europe

### Key aspects and strengths

- Holland enjoys an excellent geographical location, with an infrastructure which is second to none. Holland not only operates Europe's largest inland shipping fleet, but has also built an extensive network of roads, railways, pipelines. The Netherlands is also home to one of Europe's best airports for cargo and passenger transportation (Schiphol), and Europe's largest and most important sea port (Rotterdam). Finally, the Dutch are one of the world's foremost experts in logistics and supply chain management. Holland knows how to leverage location and infrastructure to ship chemicals quickly and economically to any destination in the world.
- The competitiveness of the Dutch chemical industry lies in its internal and inter-company integration. Chemical companies purchase from – and supply to – one another. They work together on innovation and production, and take advantage of regional clustering. As a whole, the clusters are more competitive than the individual companies put together. Because of its integrated nature, Holland now hosts 19 of the world's top 25 leading chemical companies, as well as a number of worldclass R&D institutes for fundamental and applied research.
- Within the strong chemical community, the Dutch have formalized and structured the approach to co-operation. This is done with formal, long-term public-private partnerships (such as BE-Basic, the Institute for Sustainable Process Technology and the Dutch Polymer Institute) as well as through 'open innovation' in so called Centres for Open Chemical Innovation (COCI). The three COCIs are Chemelot, the Green Chemistry Campus and Plant One.
- There are three sustainable areas in particular that excel in the Netherlands: 1) the Dutch industrial biotechnology cluster combines world-class knowledge on agro-food and chemistry with cross-disciplinary co-operation and innovation. Dutch excellence in high-performance materials (2) and fine chemistry (3) benefit from a strong foundation in basic and petrochemicals. In the area of advanced materials (polymers, composites, etc), the Netherlands consistently punches above its weight, producing world-renowned innovations in materials such as Twaron, Dyneema and Glare, as well as the folding tires for the automotive industry.

### Facts & figures

- In 2010, turnover amounted to € 47 billion. The industry employs some 64,000 people and accounts for 3 percent of Dutch GDP (10 percent if the impact on ancillary industries is included).
- Approximately three-quarters of the chemical products manufactured in the Netherlands are exported. Around 80 percent of this is to countries within Europe. In 2010, exports in the Dutch chemical industry totalled € 71 billion, or 19 percent of the total (goods) exports of Dutch industry. Imports rose by more than 16% to € 51 billion in 2010. The chemical industry made a positive contribution of almost € 20 billion to the balance of trade in 2010, which was 51% of the total balance of trade (goods) in the Netherlands.
- Innovation is essential for the Dutch chemical industry. This is demonstrated amongst other things by the investment the sector continues to make in research and development. The chemical industry in the Netherlands devotes approximately 2.5% of its revenues to in-house research and development, approximately € 1.4 billion per year.

Sources: VNCI, NFIA