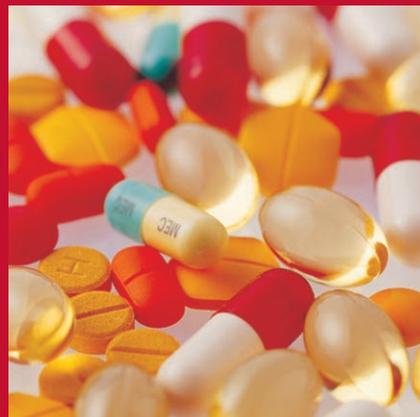


Intermediates



THF Solutions

Expanded Tetrahydrofuran Offer
for Pharma Customers in Europe

 **BASF**
We create chemistry

BASF – We create chemistry

About BASF

At BASF, we create chemistry – and have been doing so for 150 years. Our portfolio ranges from chemicals, plastics, performance products and crop protection products to oil and gas. As the world’s leading chemical company, we combine economic success with environmental protection and social responsibility. Through science and innovation, we enable our customers in nearly every industry to meet the current and future needs of society. Our products and solutions contribute to conserving resources, ensuring nutrition and improving quality of life. We have summed up this contribution in our corporate purpose: **We create chemistry for a sustainable future.**

About BASF Intermediates

The BASF Group’s Intermediates division develops, produces and markets a comprehensive portfolio of about 700 intermediates around the world. Its most important product groups include amines, diols, polyalcohols, acids and specialties. Intermediates are for example used as starting materials for coatings, plastics, pharmaceuticals, textiles, detergents and crop protectants. Innovative intermediates from BASF help to improve both the properties of final products and the efficiency of production processes. The ISO 9001 certified Intermediates division operates plants at production sites in Europe, Asia and North America.

THF Solutions:

Expanded Tetrahydrofuran Offer for Pharma Customers in Europe

With its “THF Solutions” package, BASF offers attractive services related to the chemical intermediate tetrahydrofuran (THF), specifically for pharma customers in Europe.

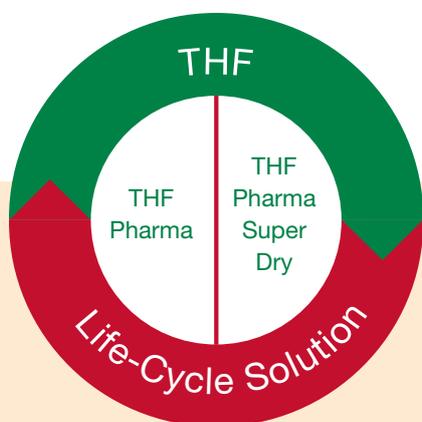
The package comprises the following elements:

- THF Pharma
- THF Pharma Super Dry
- THF Life-Cycle Solution

In addition to the THF pharma grade, the portfolio includes a THF with a reduced water content (“THF Pharma Super Dry”) as well as an initiative aimed at taking back used THF (“THF Life-Cycle Solution”).

With this package, BASF meets the demanding requirements for THF quality made in particular by customers in the pharmaceutical industry, and also offers a full-circle supply concept that allows for the return of THF after use.

BASF is a leading global supplier of THF. The company manufactures this intermediate in Europe, NAFTA and Asia with a total annual production capacity of 330,000 metric tons.



BASF offers an attractive package of services related to tetrahydrofuran (THF).

THF Pharma

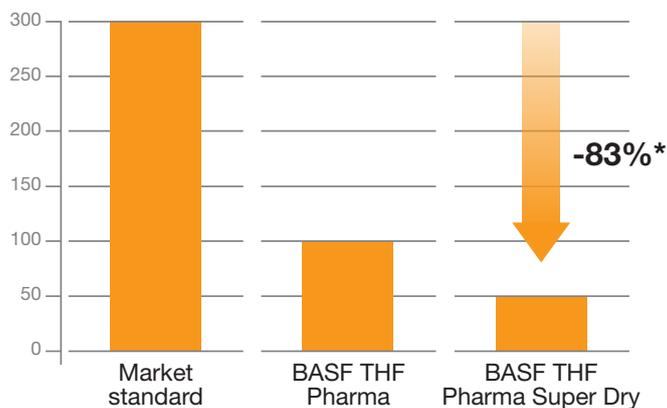
Under the name “THF Pharma,” BASF already offers its customers a THF grade with a water content of 100 ppm or below. Users appreciate in particular this consistently high product quality, which is globally unrivalled, as well as the company’s reliable supplies.

Benefits

- Supply security for high-value customer applications
- Consistently high quality (max. 100 ppm water content)
- Dedicated investments to support customer growth

THF water content (ppm)

*Water content reduced by 83% compared to market standard



THF Pharma Super Dry

“THF Pharma Super Dry” from BASF features water content reduced by 50% compared to “THF Pharma.” This low-water THF grade offers many advantages particularly in syntheses involving water-sensitive intermediates, such as Grignard reactions, or when lithiumorganic compounds are used. Higher yields and improved purities can be achieved in this way, and additional drying steps can be eliminated.

By combining this product with a logistics solution tailored to meet each customer’s specific demands, BASF guarantees that “THF Pharma Super Dry” will be delivered to customers in top quality and as reliably as usual.

Benefits

- Top quality (max. 50 ppm water content) for developing new products and sophisticated applications
- Superior yield potential in the production of active pharmaceutical ingredients (APIs)
- Customer-specific supply chain concept
- Supply security and scale-up capabilities
- Specific advice by BASF experts to guarantee best possible THF quality until its final use by the customer

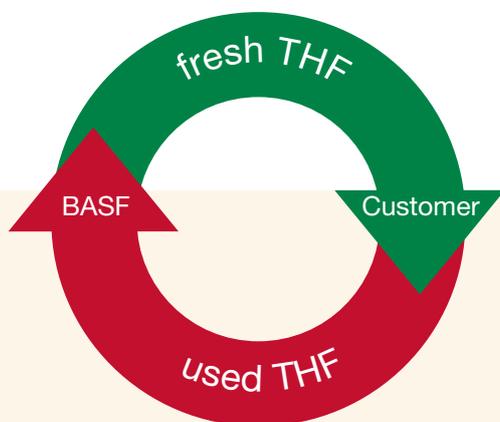


THF Life-Cycle-Solution

Under this heading, BASF offers to take back the customer's THF after use when it delivers fresh THF. In this way, BASF reduces complexity in its customers' operations and creates value for both partners. By offering the option to use a "vendor-managed inventory" (VMI) system, BASF allows customers to simplify their logistics even further and improve efficiency as a result. The VMI system enables BASF to monitor the customer's tank levels and retrieve used product without interruption.

Benefits

- Seamless integration of THF supply and disposal into the customer's supply chain processes
- Reduced cost of THF handling
- Simplified disposal of waste THF
- Closed-loop material life cycle to boost economic and ecological efficiency
- Benefit of BASF's many years of expertise in THF



*THF Life-Cycle Solution – the full-circle solution:
Supply of top-quality THF and retrieval of
used product*



THF Solutions

Expanded THF Offer in Europe

- ☒ Supply security for high-value applications
- ☒ Top quality for the manufacture of pharmaceutical products
- ☒ One-stop shop for THF supply and disposal

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Contact Us

Phone: +49 621 60 47604
info-intermediates@basf.com
www.intermediates.basf.com