We innovate to make our customers more successful.

What is so fascinating about the new coolpure 1.0 concept refrigerator from BASF Polyurethanes?

It is fascinating, because it can do a lot more than just cool things down. coolpure 1.0 from BASF gives totally new possibilities for the design in future due to the versatility of polyurethane. It combines innovative materials and functionality with zeitgeist and the use of sustainable materials.

With its coolpure 1.0 concept refrigerator, BASF gives absolutely new impulses in polyurethane for the Appliance Industry. The 10 polyurethane materials offer new solutions focusing on improvement of energy efficiency and differentiation, such as a pleasant and unique touch combined with an outstanding value.

We provide solutions with new perspectives – because at BASF, we create chemistry.

Ten steps to a cool future:

Step no.1 Permaskin®
Step no.2 Balindur™
Step no.3 Elastollan® Soft Touch
Step no.4 Elastollan® LED optical waveguide
Step no.5 Elastocool® Advanced
Step no.6 COLO-FAST® WST®
Step no.7 Elastollan® Gasket
Step no.8 Elastopor® H
Step no.9 Elastollan® Shelves
Step no.10 Elastofoam® I
Permaskin® compounds for the production of white, homogenously coloured or transparent films based on TPU for finishing three-dimensional components. In the new coolpure 1.0, both the outside surfaces and the inside, including the bottle rack, are covered using Permaskin®.

- excellent thermoform properties
- suitable for complex geometries (undercuts and corners)
- outstanding durability
- broad variety of substrates can be used (e.g. wood, metal, plastic)
- surfaces protected by the film
- solvent-free – replaces conventional paint systems
- minimal set-up costs, only one production step
- transparent films have additional properties (can be back-printed with decors)
Balindur™ is an innovative and efficient solution for the fixation of vacuum insulation panels (VIPs). It is a foamed rigid polyurethane system of a specific density range. Due to its foaming character Balindur™ not only bonds VIPs efficiently but also fills cavities between VIPs and uneven surfaces. This makes it especially easy to affix VIPs easily to the outer sheet of the cabinet, and especially to the inliner of the refrigerator door.

- Improves energy efficiency up to 4%
- Evens out profiled 3D surfaces
- Results in durable long lasting finished parts
- Makes VIPs invisible from the outside
- Allows high degree of automation
- Gives freedom of design
- Bonds VIPs perfectly
The aliphatic, thermoplastic polyester polyurethane is a special material that gives surfaces a pleasant soft touch. Using Elastollan® allows the creation of high-quality surfaces with excellent properties and outstanding design possibilities.

- Lightfast and colour-stable
- Good flow properties
- No additional painting required
- Permits detailed replication of surface
- High resistance to abrasion and scratches
- Resistant to numerous media
- Very pleasant touch
The interior lighting and the external light strip “ambient light” have been realized with a flexible optical waveguide made of Elastollan®. The use of specific aliphatic isocyanates yields crystal-clear TPU products that dim the light only slightly. Due to its high flexibility, Elastollan® offers for greater design freedom in terms of form and colour than other materials and adapts to any contour. By printing reflector areas (inkjet) or by texturing the surface, it is possible to achieve controlled light effects.

- crystal-clear and highly amorphous – extremely low dimming of light
- minimized spectral shift of light due to optimized stabilization
- surfaces can be manipulated in order to achieve controlled light effects
- maximum material flexibility allows a lot of design possibilities
- soft light available in any colour
- can be shortened to desired length
The latest generation of Elastocool® systems boasts optimized properties. The thermal conductivity has been reduced yet again, which means another cut in energy consumption. A reduction in demoulding time has significantly increased the capacity of the foaming line, making the production process more flexible. The compression strength has been increased, thus making it possible to reduce density and hence the input of material.

- lower material usage
  (high compression strength – reduction of density)
- low thermal conductivity
- higher productivity
  (faster demoulding, lower post expansion)
- good flow properties
The COLO-FAST® Window-Spray-Technology® uses a glass encapsulation material for pressure-less application on glass panes in an open mold. The lid of the freezer drawer of the coolpure 1.0 illustrates the perfect smoothness of seal and glass.

- short curing time
- excellent mechanical properties
- outstanding resistance to aging
- optimal smoothness across joints
- freedom of design in shapes and contours
- broad variety of visual possibilities (colouring, surface qualities)
The gasket is made from Elastollan®. This material offers outstanding hydrolysis resistance, good low-temperature flexibility, and resistance to microorganisms. The profiles can be used as surrounds, making them perfectly suited to creating light, less complicated profile contours. This Elastollan® material is plasticizer-free, it is an attractive alternative to PVC.

- outstanding hydrolysis resistance
- good low-temperature flexibility
- resistance to microorganisms
- plasticizer-free solution
Step no.8 into a cool future

The open-celled rigid PU foam Elastopor® H has a low density and very high compression strength, making it especially suited to the production of VIP cores. It can be manufactured in boards with precise contours and is easy to process, compared with other core materials. Elastopor® H is easy to recycle, which is important in terms of the VIPs’ ecology and economy.

- high compression strength and low density
- excellent contour stability
- 100% open-celled rigid foam
- easy to recycle
- easy processing
Elastollan® Shelves

The installed shelves are made of Elastollan® – its excellent thermoform properties facilitate highly creative designs. To create a visual highlight, LED light is shone through the shelves of the coolpure 1.0. Compared to glass, the Elastollan® shelves absorb sound.

- outstanding hydrolysis resistance
- outstanding flexibility at low temperatures combined with high rigidity
- resistant against microorganisms
- highly transparent, even in thick walls
- particularly abrasion and scratch resistant surface
- good thermoform properties facilitate freedom of design
Elastofoam® I combines flexible and elastic properties, thus it is especially suitable for seating. Its good flow properties facilitate complex structures and therefore provide freedom for designers, enabling them to create seating in almost any shape and colour without difficulty.

- a good skin formation makes this material highly abrasion resistant and durable
- high flexibility and elasticity results in comfortable seating
- pleasant touch
- excellent flow behaviour facilitates freedom of design
It is not just our materials that lead to innovation, it is also our reliable partners, whom we would like to thank at this point.

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10 steps to a cool future.