Chemistry Protects
Sustainable Solutions for Roofing
CHEMISTRY PROTECTS
through Sustainable Solutions for Modern Roofing

BASF – The Chemical Company is the world’s leading chemical company and a reliable partner of the construction industry. With high-quality products, innovative system solutions, and intelligent services, we provide the ideal combination of ecology and economy.

BASF offers the construction industry one of the most comprehensive portfolios of raw materials, formulations, and systems for energy-efficient and sustainable construction. Designed to meet the requirements and needs of sustainable planning, building, and living, these solutions are a central prerequisite for improving the durability and energy efficiency of modern roofs. Thus, they make a significant contribution to resource conservation and cost control.

Sustainable, responsible, and reliable.
For thousands of years and across all cultures, roofs are a symbol of the human need for shelter. To have a roof over one’s head represents independence, well-being, and security. It’s precisely these inner values that count.
The optimization of thermal insulation plays a key role in buildings. Already 15–20% of the heating energy of a building is lost due to a poorly insulated roof.

Against the backdrop of disproportionately increasing energy costs and a growing global commitment to protecting the environment, energy efficiency, sustainability, and a sense of responsibility have become essential values in the construction industry.

The rule is that every climate zone, but also every season presents other challenges toward the natural temperature control within buildings. Optimized insulation solutions for roofs protect from cold or heat, reduce costs, and are characterized by an exemplary ecological balance. This is a challenge for the construction industry, which was solved thanks to the cooperative support from BASF.

BASF insulation materials are designed for the versatile roof constructions of steep and flat roofs. They effectively increase the energy efficiency of new and existing buildings, reduce CO₂ emissions worldwide, and thus make an important contribution to environmental protection.
The highly efficient insulation materials made of BASF’s polyurethanes Elastopor® H (PUR) and Elastopir® (PIR) are characterized by a very low thermal conductivity, high resistance, and long durability. Produced by insulation material manufacturers as insulation boards, form-sprayed foam, or sandwich elements, they offer ideal solutions for the thermal insulation of almost all roof constructions.

www.pu.basf.de/insulation

The black expandable polystyrene beads Neopor® (EPS) from BASF are processed by foam manufacturers to make silvery-grey insulation materials that can be used in the most diverse flat or steep roof constructions. Insulation materials made of Neopor provide up to 20% better insulating performance than conventional EPS.

www.neopor.de

Whether it be for steep roofs or especially for flat roofs as a durable inverted roof construction, extruded polystyrene hard foam (XPS) Styrodur® C has been known for more than 40 years for its excellent thermal insulation, low water absorption, and high compressive strength. Free of CFC, HCFC, and HFC, it contains air as cell gas.

www.styrodur.com
We spend most of our lifetime in closed rooms. In these familiar surroundings, well-being is especially important. Particularly during heat waves, an unbalanced room temperature has a negative impact on the quality of life and personal performance levels.

The solutions offered by BASF in the form of solar-reflecting roof coatings, whose innovation is based on functional pigments, stand for intelligent and climate-friendly roofs. They contribute significantly to a reduction of roof temperatures, which has a positive effect on the total energy balance and the comfort of a building.

Roofing with solar-reflecting coatings not only protect the people in houses, offices, or industrial buildings from summer heat, they can also counteract the urban heat island effect—the heating up of inner city areas in contrast with the suburbs—when used extensively over large areas.
Functional pigments, such as Paliogen® Black and Sicopal® Black, ensure that surfaces, despite their dark colors, heat up much less in the sun. This can lead to a temperature reduction of up to 20°C on the roof surface.

www.basf.de/pigments

POLYCERAM® and PLASTICERAM® are used for coating steel or aluminum bands for metal roofing elements. The coatings provide optimal corrosion protection and give roofing color and brilliance. The use of functional pigments and their solar-reflecting effect provide for cooler roofs.

www.basf-coatings.com

Incidentally, roof coating systems for the renovation of concrete roofing tiles, clay tiles, or artificial slate panels from RELIUS, a subsidiary of BASF, can be equipped with the COOL COLOURS Technology by RELIUS.

www.cool-colours.de

Solar radiation also serves to the sustainable use of sun energy on roofs. Colo-Fast® provides a rapid, inexpensive, and secure framing for photovoltaic panels and solar collectors. Seluris® is an all-round solution for the cutting, cauterizing, texturing, and doping of photovoltaic cells. Basotect® is used for the insulation of side walls and back sides of flat plate collectors.
Every property is an investment in the future. Changing climatic conditions and increasing weather and climate extremes represent new challenges for the entire construction industry. Challenges for sustainable solutions.

The sustainability of buildings significantly depends upon durability and weather-resistance of the utilized building materials. Roofs are a particularly sensitive point for any property. For good reason, it is one of the oldest symbols for shelter and security. It must be able to resist rain, snow, and hail, just as it needs to be protected from weathering.

Through high-quality raw materials such as dispersions and innovative sealing systems, BASF makes a responsible supporting contribution toward fulfilling these requirements on modern, secure roofing.
Dispersions such as Acronal® are raw materials for coating materials, for the protection of concrete roof tiles and fiber cement plates, or for flexible roof coatings. Moreover, they are used for fiber bonding in technical nonwovens, such as in carriers for bituminous roofing membranes, under-tile layment membranes, or shingles. BASF dispersions improve the durability and weatherproofing of roofing materials and fulfill decorative purposes.

www.basf.de/dispersions

With Elastocoat® C, neuralgic leaking zones, such as complex roof connections, dome lights, or air-conditioning ducts can be smoothly and permanently sealed without joints. Simply sprayed onto the roof, the polyurethane system hardens in seconds and also seals vertical surfaces. Free of solvents and catalysts, it has excellent resistance.

www.elastocoat.com

The fully bonded CONIROOF™ roof waterproofing system consists of a series of individually balanced primers, waterproofing membranes, and top coats. As a liquid applied system laps, welds or seams are fully avoided. It has been designed to provide a performance expectancy of at least 25 years, even under extreme climatic conditions. For complex roof geometries with many details, a significantly higher reliability is obtained than with conventional sealing membranes.

www.construction-chemicals.basf.com/coniroof_en

Sample applications
Roofs are a symbol for shelter and security. Good planning and the use of appropriate materials are decisive in ensuring that every client can enjoy these properties for a long time. Architects, planners, investors, and construction companies must have access to building materials that fulfill structural, ecological, and economic requirements.

With high-quality raw materials, formulations, and systems, BASF offers first-class products for roofs. Through these solutions and intensive dialog with our clients and partners, we preserve the value of your property.

Sustainable, responsible, and reliable.
Politics and society are always presenting planners and investors with new challenges. The European legislation has an increasing influence on the regulations relating to climate protection and energy efficiency for buildings. With our excellent knowledge of materials, combined with your market and industry knowledge, as well as your sense for trends, we can fulfill these needs with trend-setting products to provide optimal solutions to your construction needs.

Talk to us.

construction.europe@basf.com