



The Chemical Company

# Sandwich Plate System

Through collaboration with the Canadian-based Intelligent Engineering Ltd., BASF Polyurethane Solutions has developed an advanced alternative to conventional stiffened steel plates. The patented Sandwich Plate System (SPS), which is created by injecting a two-part, thermosetting polyurethane (PU) elastomer between a steel deck construction, has revolutionized steel engineering. In addition to reducing overall weight by up to 75%, SPS offers outstanding load capacity with shorter production times.

## Benefits over Conventional Technology

- Shorter construction and installation schedule
- Mechanically stronger and more efficient
- Fewer starting points for material cracks and fatigue
- Lighter weight than concrete
- Greater economic benefits
- Improved sustainability

## Structural Properties

The diverse structural properties of the PU elastomer include:

- Bond strength
- Ductility
- Vibration and noise dampening
- Impact and blast resistance
- Strength addition to other materials
- Increases stiffness
- Maximizes shear transfer



## Many Uses for SPS

Although initially developed as a deck replacement system for overhauling ships, the use of SPS technology has been extended to:

- Ship construction (hatchcovers, tank tops, bulkheads, decks, and accommodation blocks)
- Repair and conversion (offshore vessel, bulk carrier, tankers, roll-on/roll-offs (RoRos), ferries, passenger vessels, etc.)
- Crash decks
- Blast walls
- Military applications
- Blast belts and flight decks (naval vessels)
- Bridge decks — building, repair, and rehabilitation
- Structural flooring
- Stadia and arena terraces



## About Us

BASF is the leading supplier of polyurethane systems, specialties, and raw material products. BASF is the preferred supplier in many industries, thanks to our comprehensive product and service portfolio and 38 System Houses around the globe. Our System House network develops customized solutions with knowledgeable support on a local level, from sales to production to technical service, System House facilities with fast and committed local support is another reason why BASF is the market leader.

## Expertise and Leadership

- Service-oriented collaboration and support
- Value-added consultation
- Custom formulated solutions

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