Technical Data Sheet

BC 706 Continuous PIR System

Three-Component Cyclopentane-Based Continuous Sandwich Panel

1. Product Description

BC 706 Continuous PIR System is a three-component, cyclopentane-blown rigid polyurethane foam system designed for continuous sandwich panel production.

When BC 706 Polyol is reacted with BC 768 Isocyanate at the specified mixing ratio (100 + 10 / 160), it produces a highly crosslinked, dimensionally stable, closed-cell PIR foam with excellent adhesion to metal facings.

The produced foam meets B2 fire rating (DIN 4102) and provides superior thermal insulation performance.

2. Features & Advantages

- Cyclopentane-blown, environmentally friendly system
- Three-component system optimized for continuous line production
- Fast & controlled reaction profile for production efficiency
- Stable PIR structure with improved fire behavior (B2)
- Low thermal conductivity for superior insulation
- Uniform cell structure and high compressive strength
- Designed for continuous panel machines (double-belt lines)

3. Typical Uses

- Continuous sandwich panel manufacturing
- PIR panels for cold rooms, prefabricated buildings & industrial structures
- Metal-faced insulating panels
- Exterior & interior cladding panels
- Ceiling, wall and roofing panels

4. Technical Data

(All values based on controlled laboratory conditions)

Property	BC 706 Continuous PIR System
System Type	Three-component, Cyclopentane-based PIR
Mix Ratio (Polyol + Additive / ISO)	100 + 10 / 160
Cream Time	20 seconds
Gel Time	52 seconds
Free Rise Density	36 kg/m³
Polyol Viscosity (25°C)	800 mPa.s
Isocyanate Viscosity (25°C)	210 mPa.s
NCO Content	31% (by weight)
Foam Density	42–46 kg/m³
Fire Rating	B2 (DIN 4102)
Compressive Strength	110 kPa
Dimensional Stability	< 1%
Thermal Conductivity	0.021 W/m·K

5. Surface Preparation

- Metal facings must be clean, dry, and free from oil, dust, rust, and release agents
- Panels must be properly preheated as per machine settings
- Moisture contamination must be avoided to prevent foaming defects

6. Mixing

- Ensure homogeneous mixing of Polyol, Additive and Isocyanate through the continuous line metering system
- Maintain accurate metering ratio: 100 + 10 / 160
- Homogenize Polyol before feeding into machine
- Keep materials between 15°C and 35°C before processing

7. Application

- Suitable only for continuous sandwich panel production lines
- Ensure machine parameters are set according to recommended reactivity times
- Apply between metal surfaces and allow expansion under double belt pressure
- Maintain stable substrate and chemical temperatures for optimum foam quality

8. Packaging

- BC 706 Continuous Polyol: 220 kg Drum
- BC 768 Isocyanate: 250 kg Drum

9. Shelf Life & Storage

- Polyol: 6 months
- Isocyanate: 6 months
- Store between 15°C and 35°C in dry, ventilated areas
- Protect from direct sunlight, moisture, and extreme temperatures
- Low temperature increases viscosity; high temperature may cause loss of blowing agent

10. Health & Safety

- Use air-purifying respirator during handling
- Wear protective gloves, goggles, and full body covering
- Avoid inhalation of vapors during foaming
- Ensure adequate ventilation
- Refer to SDS for detailed safety guidelines