

# WHITECHEM SPR 210

## Open Cell, Spray Polyurethane Foam



### 1 – PRODUCT DESCRIPTION

**WHITECHEM SPR 210** is a two component spray polyurethane foam system with open cell structure which is applied with high pressure and heated special spray machines for heat insulation purpose.

**WHITECHEM SPR 210** contains water as a blowing agent.

### 2 – COMPONENTS

#### Component A: WHITECHEM SPR 210

Mixture of polyols, catalyst, flame retardant and water (blowing agent)

#### Component B: WHITECHEM P-MDI / RPS

Polymeric MDI

### 3 – PRODUCT FEATURES

- Two component
- Ecological (water based)
- Open cell structure
- B2 (E) fire reaction
- Easy and high application speed (~ 1000 m<sup>2</sup> per day)
- Seamless, no heat bridge
- Does not grow insect and fungus
- Excellent thermal insulation for a long time
- High energy saving
- Water vapor permeability
- Low storage and transportation cost
- Excellent sound insulation

### 4 – APPLICATION AREAS

- Walls
- Ceilings
- Attics

### 5 - APPLICATION CONDITIONS

The application surface should be clean and dry, the elements that prevent adhesion should be cleaned from the surface. Do not wash to clean the surface.

Recommended temperature of application surface is between 5°C and 40°C.

The recommended air temperature is between 5°C and 30°C.

Recommended component temperatures and machine settings are as follows.

Parameters	Data
Component A (Polyol Blend) Temperature	50-65°C
Component B (Polymeric MDI) Temperature	50-65°C
Hose Temperature	50-65°C
Machine Pressure	80-110 Bar

\*Settings may vary depending on weather conditions and machine specifications.

- Component A must be mixed thoroughly before starting and during application.
- In order to obtain mixture in the right ratio, the filters of the machine should be cleaned and pump maintenance should be done. Improper mixing ratio of components results in low quality foam formation. In addition, the improper mixing ratio causes the adhesion problem, the increase in consumption, the deterioration of the cell structure.

Mixing Ratio	Unit	Data
A/B	By volume	100 / 100
	By weight	100 / 113

## 6 – APPLICATION INSTRUCTIONS

- **WHITECHEM SPR 210** is applied on the surface to be heat insulated until the desired thickness is achieved. Application is usually done in one layer.
- Application is made in different thicknesses according to the regional climate conditions and application areas.

## 7 – CONSUMPTION

- Material consumption may vary for many reasons. These reasons are the air temperature, surface temperature, machine temperature settings, mixing ratio etc.
- According to the application thickness the theoretical consumption table is as follows.

Application Thickness	Consumption (kg)
10 cm	0,90 – 1,10
15 cm	1,40 – 1,60
20 cm	1,90 – 2,10

## 8 - TECHNICAL SPECIFICATIONS

### Component Properties

	Unit	A Component	B Component
<b>Chemical Structure</b>	-	Polyol Blend	Polymeric MDI
<b>Physical Appearance</b>	-	Liquid	Liquid
<b>Color</b>	-	Light yellow	Brown
<b>Density (20°C)</b>	gr/ml	1,08 ± 0,01	1,23 ± 0,03
<b>Viscosity (25 ° C)</b>	cps	1100±200	220-250
<b>NCO Content</b>	%	-	30-31

### Reaction Parameters

	Unit	Data
<b>Cream Time</b>	sec.	2-4
<b>Gel Time</b>	sec.	5-7
<b>Tack Free Time</b>	sec.	10-14
<b>Free Rise Density</b>	kg/m <sup>3</sup>	8-10

\* Components temperature in foaming test is 55°C

### Finished Product Features

Test Name	Unit	Method	Data
<b>Application Core Density</b>	kg/m <sup>3</sup>	-	9-12
<b>Open Cell Content</b>	%	EN 4590	80- 90
<b>Fire Reaction</b>	-	EN 13501	E
		DIN 4102	B2
<b>Water Absorption Amount</b>	kg/m <sup>2</sup>	EN 1609	0,26 (Declared) ~ 0,26 (Measured)
<b>Thermal Conductivity Coefficient</b>	(W/m.K)	EN 12667	0,039 (Declared) ~ 0,038 (Measured)
<b>Compressive Strength</b>	kPa	EN 826	10 (Declared) ~ 11 (Measured)

## 9 - PACKING

220 kg/drum (Component A - Polyol Blend)  
250 kg/drum (Component B - Polymeric MDI)

## 10 - SHELF LIFE AND STORAGE CONDITIONS

- **WHITECHEM SPR 210** components are moisture sensitive. For this reason, it should be stored in original, unopened and undamaged packages, in store which is dry and not under direct sunlight.

	Unit	A Component	B Component
<b>Shelf Life</b>	Month	6	12
<b>Storage Temperature</b>	°C	15-25	15-25

### 11 – CLEANING

- Clean all tools and application equipment with suitable cleaner solvent immediately after use. Hardened and cured material can only be cleaned by mechanical methods.

### 12 - WARNING AND SUGGESTIONS

- Read the MSDS form carefully before using the **WHITECHEM SPR 210** product or when a problem is encountered and follow the written instructions.
- Personal protective equipment and full face mask with appropriate filter should be used during application.
- There must be sufficient air circulation in the application area.
- Give empty barrels to authorised hazardous waste collector companies.