BE SURE. BUILD SURE.

MC-Proof 4200

Fast setting, pure polyurea elastomeric waterproof coating.

PRODUCT DESCRIPTION:

- **MC-Proof 4200** is a spray-applied, 100% solids containing, flexible, two-component, rapid curing pure Polyurea system, designed as a waterproofing, anti-corrosion and protective coating for concrete and steel in a wide range of environmental conditions. It provides the advantages of a seamless coating with very long life cycle and excellent mechanical and chemical resistance.
- **MC-Proof 4200** is highly reactive and has to be applied by special two-component spray equipment.

PRODUCT PROPERTIES:

- Environment friendly, 100% solids.
- Excellent chemical resistance, thermal stability and UV resistance.
- Very fast turn-around time. The coated substrate can be put into service within an hour.
- Excellent impact, abrasion and puncture resistance.
- Seamless and monolithic, including field joints.
- Significantly enhances the durability of reinforced concrete.
- Low permeability values.
- Colour stable when coated with MC-Dur TopSpeed or MC-Color Flex/Flair as a topcoat.
- Can be applied at ambient temperatures from -15°C to +70°C***.

AREAS OF APPLICATION:

- Below and above ground structures.
- Planter boxes and roof decks.
- Bridge piers / decks.
- Marine structures.
- Theme parks / waterparks.
- Water tanks, swimming pools and aquariums.
- Concrete pipes.
- Tunnels.

APPLICATION NOTES:

- **Project Log:** A Project Log should be carried out for each polyurea site application. For details of Project Log requirements please contact to MC-Bauchemie local office.
- **Surface preparation:** All surfaces must be clean, dry and free from contamination. Metal surfaces must be assessed and treated in accordance with ISO 8504.
- **Concrete:** Dry abrasive blasting, wet abrasive blasting, vacumassisted abrasive blasting, and centrifugal shot blasting, as described in ASTM D4259, may be used to remove contaminants, laitance, and weak concrete, to expose blow holes, and to produce a sound concrete surface with adequate profile and surface porosity. All blow holes and minor surface imperfections shall be filled with recommended filler prior to application of Primer.
- **Bare steel:** All welding seams must have a surface finish which ensures that the quality of the coating system will be maintained in all respects. Holes in welding seams, undercuts, cracks, etc. must be avoided. If found, they must be remedied by welding and/or grinding. All weld spatters must be removed. All sharp edges must be removed or rounded off in such a way that the specified film thickness can be built-up on all surfaces. Blast cleaning to Sa 2½. (ISO 8501-1:2007). Roughness: using abrasives suitable to achieve a coarse surface of Grade Medium G (50-85µm, Ry5) (ISO 8503-2).

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- **Priming:** Following correct preparation, the substrate must be primed. For sound, dry concrete and at ambient/substrate temperatures of ≥10°C, use **MC-DUR 1200 VK**. For steel surfaces, use Colusal Spped Primer. For other surfaces, consult MC-Bauchemie for advice. A broadcast of fire-dried sand onto the fresh primer is recommended to provide additional mechanical interlock in order to achieve optimum adhesion properties. The primer shall be allowed to become touch-dry prior to application of **MC-Proof 4200**.
- **Spray equipment**: A high pressure spray proportioning machine/ spray gun for plural heated polyurea components such as those manufactured by GlasCraft, Graco and WIWA should be used for this product.
- **Application:**
  - The client/main contractor must be satisfied that the applicator has suitable equipment and expertise and will follow the procedures detailed in this datasheet.
  - Do not dilute **MC-Proof 4200** under any circumstances.
  - Normal recommended minimum applied thickness **MC-Proof 4200** is 1.5 mm, using cross-hatch spray pattern. The maximum thickness is 3 mm for a single coat application.
  - Applied product can be walked on carefully after approximately 2 mins; it is light duty trafficable (e.g. light foot traffic) after approximately 15-20 minutes, and fully serviceable after 24 hours.
  - For temperatures below +5°C, longer cure times must be anticipated – contact MC-Bauchemie for further advice.
  - Use appropriate non-solvent chemical for the flushing of equipment.
  - In the case of prolonged product storage prior to use, thoroughly mix the amine component with a drum mixer until a homogenous mixture and colour is obtained.
- **Estimating supply:**

MC-Proof 4200 - Part A
Drum: 200 litres

MC-Proof 4200 - Part B
Drum: 200 litres

MC-DUR 1200 VK
Metal containers: 20 kg

Colusal Speed Primer
Metal containers: 5 kg or 20 kg

TECHNICAL DATA:

Characteristic	Unit	Value	Comments
Solids by Volume	%	100	
Viscosity	mPas	900 ± 200 600 ± 200	Part A Part B
Density at 20°C	g/cm³	1.09 ± 0.2 1.02 ± 0.2	Part A Part B
Tensile strength	MPa	25	ASTM D412
Bonding strength to concrete	MPa	1.7	
Tear Resistance	N/mm	90 ± 4	ASTM D624C
Elongation	%	> 400	ASTM D412
Shore A		85	
Abrasion (1kg, CS10 wheels)	mg / cycles	0.6 /1000	ASTM D4060
Abrasion (1kg, H22 wheels)	mg / cycles	35 /1000	
Service temperature range	°C	-30 to +100	

The physical properties given above are derived from independent verified tests of MC-Proof 4200, spray-applied by means of a Wiwa gun under controlled laboratory environment and tested after a minimum of 14 days cure.

Results derived from testing field-applied samples may vary dependent on circumstances beyond our control such as the type and condition of equipment utilised, static and dynamic working pressures, application temperatures and weather conditions, film thickness, test and curing conditions and age of samples tested. A water-sinking test must be carried out and a "pass" achieved (sample sinks in water) prior to spraying.

PROCESSING PARAMETERS:

Block temperature	+70°C to +75°C
Hose temperature	+70°C to +75°C
Volume ratio	1 : 1
Gel time	5-15 seconds
Walkable	1-2 minutes
Trafficable (light duty)	15-20 minutes
Fully Serviceable	24 hours

PRODUCT CHARACTERISTICS:

Storage	**MC-Proof 4200** has a shelf life of 12 months if kept in a dry, air conditioned store between +5°C and +30°C in the original unopened containers. Any changes in colour have no negative effect on reactivity and physical properties of the coating.
Safety handling	Avoid contact with eyes and skin. Wear suitable protective clothing, gloves and eye/face protection at all times. Ensure adequate ventilation and avoid inhalation of vapour and aerosol. Use supplied air hood. **MC-Proof 4200** may cause sensitisation. In case of eye contact, first aid must be administered immediately. The eyes should be held open while flushing with a continuous low pressure stream of water for at least 15 minutes. Seek medical advice immediately. If swallowed, seek medical attention immediately - do not induce vomiting. The use of barrier creams provides additional skin protection. Refer to product safety data sheets for detailed information.
Limitation	Do not proceed with application if atmospheric relative humidity is > 90% or if the surface temperature is < 3ºC above the dew point. For a bonded polyurea coating application, concrete substrate must have achieved at least 75% of its design strength. Concrete relative humidity must be ≤ 75%. Do not proceed with application if the substrate temperature or the ambient temperature is, or is anticipated to be, < +5ºC during the application. For work in exposed areas, do not proceed with application if precipitation is imminent. If in doubt, contact MC-Bauchemie for advice.

Note: The information provided here is based on our experience and correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual building projects, to the specific application and to non-standard local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. Given these preconditions we shall be liable for the accuracy of the information given as outlined in our sales and delivery terms and conditions. Recommendations by our employees that deviate from this information are only binding for us if they have been confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be adhered.

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