

Uniclass L68117	EPIC F814
CI/SfB	Vu4 (K3)



Promat



PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

construction applications



www.promat-spray.com

PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

INTRODUCTION

PROMASPRAY® C450 is a spray applied, single package factory controlled premix, based on vermiculite and Portland cement, for internal use.

PROMASPRAY® C450 produces a monolithic coating able to withstand the thermal shocks experienced in a high intensity cellulosic fire. Concrete structures in particular, will be protected from explosive spalling when coated with PROMASPRAY® C450.

Although low in density, thus significantly reducing dead load, PROMASPRAY® C450 is highly durable and will not crack or spall under mechanical impact.

PROMASPRAY® C450 may be applied within environments where limited exposure to the elements is likely throughout the building phase of the project, e.g. perimeter beams.

PROMASPRAY® C450 is used for application to steel and concrete frames, metal floor or roof decks, and return air plenums. It may be easily removed and reinstated locally when additional fixings are required. Building types that will benefit from the use of PROMASPRAY® C450, include a wide range of educational, leisure and entertainment centres, commercial or industrial projects.

ADVANTAGES

- Structures protected with PROMASPRAY® C450 can provide fire resistance for up to 240 minutes.
- Does not release toxic or hazardous fumes.
- Presents no known health hazards either before, during or after application.

QUALITY ASSURANCE

Promat operates a quality system in accordance with BS EN ISO 9001: 2008 and has received full accreditation to these standards.

Operating to these standards means that all activities, which have a bearing upon quality, are set out in written procedures.

Systematic and thorough checks are made on all materials and their usage. Test equipment is subjected to regular checks and is referred back to national standards.

The information given in this data sheet is based on actual tests and is believed to be typical of the product. No guarantee of results is implied however, since conditions of use are beyond our control.



PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

PROPERTIES AND PERFORMANCE

Colour and finish	Off-white with a monolithic spray texture
Minimum practical thickness	8mm when unreinforced, 15mm when reinforced
Theoretical coverage	172m ² /tonne at 15mm thickness
Number of coats	One or more as required
Cure	By hydraulic set
Initial set	2 to 6 hours at 20°C and 50% RH
Density	365kg/m ³ ± 15% (when dry and in place)
Bond impact	No cracks or delamination
Air erosion resistance	No erosion to ASTM E859
Deflection effect	No cracks or delaminations within normal code limits
Compressive strength	563kPa (81.6lb/in ²) to ASTM E761
Combustibility	Non-combustible to BS476: Part 4
Flame spread	Class 0 as defined by the Building Regulations
Smoke generation	Does not contribute to smoke generation
Thermal conductivity	0.095W/mK at 20°C
Corrosion resistance	Does not promote corrosion of steel. However, a primed substrate is recommended for long term corrosion resistance. See Preparation
pH value	12.0-12.5
Fire resistance	<p>Structures protected with PROMASPRAY® C450 have undergone fire resistance tests up to 240 minutes in approved independent laboratories to recognised standards throughout the world, including:</p> <ul style="list-style-type: none"> • UK (BS 476: Parts 20-21: 1987) • Germany (DIN 4102) • USA (ASTM E119 UL263) <p>The tests also comply with International Standard ISO 834</p> <p>Cafco PROMASPRAY® C450 protected structures have been successfully tested under BS 476: Part 21 to failure temperatures of up to 800°C. This allows the specifier the freedom to adopt a fire engineering approach to fire resistance in accordance with BS 5950: Parts 3 and 8, as well as the Fire Appendices of the forthcoming Eurocode</p> <p>The fire resistance test results relate solely to the constructions tested and test conditions imposed. Promat provides computer based thickness calculations to meet specific fire resistance requirement. See FIRE PROTECTION THICKNESS</p>

PREPARATION

Typical substrates	Unprimed and primed steel, concrete frames, metal floor/roof decks and return air plenums
Substrate preparation	<p>The substrate shall be clean, dry and free from dust, loose millscale, loose rust, oil and any other condition preventing good adhesion</p> <p>PROMASPRAY® C450 can be applied to unprimed or primed steelwork. Prior to the application, incompatible primers should be prepared by the application of Promat SBR Bonding Latex used as a keycoat</p>
Mesh reinforcement	<p>Most fire tests conducted have been carried out without mesh reinforcement, to demonstrate the ability of PROMASPRAY® C450 to stay in place under the most severe fire conditions. However, for maximum long term in service durability, the use of lightweight mesh reinforcement is recommended where vibration or mechanical damage and the possibility of subsequent de-bonding exist</p>

PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

FIRE PROTECTION THICKNESS

The thickness of the fire protection for a given period of fire resistance in a cellulosic type fire, relates to the A/V ratio of the section.

All column and beam sections have their own specific A/V ratio. Please consult Promat to establish the A/V ratio for a particular beam or column section. TABLES 1 to 9 ascertain the thickness of PROMASPRAY® C450 that meets the required period of fire resistance for I-section beams and H-section columns.

For advice on thickness calculations for hollow sections, cellular beams, castellated sections, composite floors, upgrading of concrete slabs and more complex situations, please contact Promat.

TABLE 1. Beams and Columns at Critical Steel Temperature of 350°C

Section factor A/V (m ⁻¹)	Thickness for the required fire resistance					
	30 min	60 min	90 min	120 min	180 min	240 min
30	8mm	13mm	17mm	22mm	31mm	40mm
40	10mm	15mm	20mm	25mm	35mm	45mm
50	10mm	16mm	21mm	27mm	38mm	49mm
60	11mm	17mm	23mm	29mm	40mm	52mm
70	12mm	18mm	24mm	30mm	42mm	54mm
80	12mm	18mm	25mm	31mm	44mm	56mm
90	12mm	19mm	25mm	32mm	45mm	58mm
100	13mm	19mm	26mm	33mm	46mm	59mm
110	13mm	20mm	26mm	33mm	47mm	61mm
120	13mm	20mm	27mm	34mm	48mm	62mm
130	13mm	20mm	27mm	34mm	48mm	62mm
140	13mm	21mm	28mm	35mm	49mm	63mm
150	14mm	21mm	28mm	35mm	50mm	64mm
160	14mm	21mm	28mm	35mm	50mm	65mm
170	14mm	21mm	28mm	36mm	50mm	65mm
180	14mm	21mm	29mm	36mm	51mm	66mm
190	14mm	21mm	29mm	36mm	51mm	66mm
200	14mm	22mm	29mm	37mm	52mm	66mm
210	14mm	22mm	29mm	37mm	52mm	67mm
220	14mm	22mm	29mm	37mm	52mm	67mm
230	14mm	22mm	30mm	37mm	52mm	68mm
240	14mm	22mm	30mm	37mm	53mm	68mm
250	14mm	22mm	30mm	37mm	53mm	68mm
260	14mm	22mm	30mm	38mm	53mm	68mm
270	15mm	22mm	30mm	38mm	53mm	69mm
280	15mm	22mm	30mm	38mm	53mm	69mm
290	15mm	22mm	30mm	38mm	53mm	69mm
300	15mm	22mm	30mm	38mm	54mm	69mm
310	15mm	23mm	30mm	38mm	54mm	69mm

HEALTH AND SAFETY

Adequate ventilation must be provided during use.

Avoid contact with the skin and eyes by using eye protection, gloves, barrier cream and a face mask.

If the product comes into contact with the skin, wash immediately with soap and water. If the eyes are affected, flush with plenty of water and seek medical attention immediately.

A safety data sheet is available from Promat upon request.

Promat activities are conducted with due regard to all statutory requirements with appropriate safeguards against exposing employees and the public to health and safety risks.



PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

TABLE 2. Beams and Columns at Critical Steel Temperature of 400°C

Section factor A/V (m ⁻¹)	Thickness for the required fire resistance					
	30 min	60 min	90 min	120 min	180 min	240 min
30	8mm	11mm	15mm	19mm	27mm	35mm
40	8mm	13mm	17mm	22mm	31mm	40mm
50	9mm	14mm	19mm	24mm	34mm	44mm
60	10mm	15mm	20mm	26mm	37mm	47mm
70	10mm	16mm	22mm	27mm	38mm	50mm
80	11mm	17mm	22mm	28mm	40mm	52mm
90	11mm	17mm	23mm	29mm	41mm	54mm
100	11mm	18mm	24mm	30mm	43mm	55mm
110	12mm	18mm	24mm	31mm	44mm	56mm
120	12mm	18mm	25mm	31mm	44mm	57mm
130	12mm	19mm	25mm	32mm	45mm	58mm
140	12mm	19mm	26mm	32mm	46mm	59mm
150	12mm	19mm	26mm	33mm	46mm	60mm
160	13mm	19mm	26mm	33mm	47mm	61mm
170	13mm	20mm	27mm	34mm	47mm	61mm
180	13mm	20mm	27mm	34mm	48mm	62mm
190	13mm	20mm	27mm	34mm	48mm	62mm
200	13mm	20mm	27mm	34mm	49mm	63mm
210	13mm	20mm	27mm	35mm	49mm	63mm
220	13mm	20mm	28mm	35mm	49mm	64mm
230	13mm	20mm	28mm	35mm	50mm	64mm
240	13mm	21mm	28mm	35mm	50mm	64mm
250	13mm	21mm	28mm	35mm	50mm	65mm
260	13mm	21mm	28mm	36mm	50mm	65mm
270	13mm	21mm	28mm	36mm	51mm	65mm
280	14mm	21mm	28mm	36mm	51mm	66mm
290	14mm	21mm	29mm	36mm	51mm	66mm
300	14mm	21mm	29mm	36mm	51mm	66mm
310	14mm	21mm	29mm	36mm	51mm	66mm

PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

TABLE 3. Beams and Columns at Critical Steel Temperature of 450°C

Section factor AV (m ²)	Thickness for the required fire resistance					
	30 min	60 min	90 min	120 min	180 min	240 min
30	8mm	10mm	13mm	17mm	24mm	31mm
40	8mm	11mm	15mm	20mm	28mm	36mm
50	8mm	13mm	17mm	22mm	31mm	40mm
60	9mm	14mm	18mm	23mm	33mm	43mm
70	9mm	14mm	20mm	25mm	35mm	46mm
80	10mm	15mm	20mm	26mm	37mm	48mm
90	10mm	16mm	21mm	27mm	38mm	50mm
100	10mm	16mm	22mm	28mm	40mm	51mm
110	10mm	16mm	22mm	29mm	41mm	53mm
120	11mm	17mm	23mm	29mm	41mm	54mm
130	11mm	17mm	23mm	30mm	42mm	55mm
140	11mm	17mm	24mm	30mm	43mm	56mm
150	11mm	18mm	24mm	31mm	44mm	57mm
160	11mm	18mm	25mm	31mm	44mm	57mm
170	12mm	18mm	25mm	31mm	45mm	58mm
180	12mm	18mm	25mm	32mm	45mm	59mm
190	12mm	19mm	25mm	32mm	46mm	59mm
200	12mm	19mm	26mm	32mm	46mm	60mm
210	12mm	19mm	26mm	33mm	46mm	60mm
220	12mm	19mm	26mm	33mm	47mm	61mm
230	12mm	19mm	26mm	33mm	47mm	61mm
240	12mm	19mm	26mm	33mm	47mm	61mm
250	12mm	19mm	26mm	33mm	48mm	62mm
260	12mm	19mm	27mm	34mm	48mm	62mm
270	12mm	20mm	27mm	34mm	48mm	62mm
280	12mm	20mm	27mm	34mm	48mm	63mm
290	13mm	20mm	27mm	34mm	49mm	63mm
300	13mm	20mm	27mm	34mm	49mm	63mm
310	13mm	20mm	27mm	34mm	49mm	63mm



PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

TABLE 4. Beams and Columns at Critical Steel Temperature of 500°C

Section factor A/V (m ²)	Thickness for the required fire resistance					
	30 min	60 min	90 min	120 min	180 min	240 min
30	8mm	8mm	12mm	15mm	21mm	27mm
40	8mm	10mm	14mm	17mm	25mm	32mm
50	8mm	11mm	15mm	19mm	28mm	36mm
60	8mm	12mm	17mm	21mm	30mm	39mm
70	8mm	13mm	18mm	23mm	32mm	42mm
80	8mm	14mm	19mm	24mm	34mm	44mm
90	9mm	14mm	19mm	25mm	35mm	46mm
100	9mm	15mm	20mm	26mm	37mm	47mm
110	9mm	15mm	21mm	26mm	38mm	49mm
120	10mm	15mm	21mm	27mm	39mm	50mm
130	10mm	16mm	22mm	28mm	39mm	51mm
140	10mm	16mm	22mm	28mm	40mm	52mm
150	10mm	16mm	22mm	29mm	41mm	53mm
160	10mm	17mm	23mm	29mm	41mm	54mm
170	10mm	17mm	23mm	29mm	42mm	55mm
180	11mm	17mm	23mm	30mm	42mm	55mm
190	11mm	17mm	24mm	30mm	43mm	56mm
200	11mm	17mm	24mm	30mm	43mm	56mm
210	11mm	17mm	24mm	31mm	44mm	57mm
220	11mm	18mm	24mm	31mm	44mm	57mm
230	11mm	18mm	24mm	31mm	44mm	58mm
240	11mm	18mm	25mm	31mm	45mm	58mm
250	11mm	18mm	25mm	32mm	45mm	59mm
260	11mm	18mm	25mm	32mm	45mm	59mm
270	11mm	18mm	25mm	32mm	46mm	59mm
280	11mm	18mm	25mm	32mm	46mm	60mm
290	11mm	18mm	25mm	32mm	46mm	60mm
300	12mm	18mm	25mm	32mm	46mm	60mm
310	12mm	19mm	26mm	32mm	46mm	60mm

PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

TABLE 5. Beams and Columns at Critical Steel Temperature of 550°C

Section factor AV (m ⁻¹)	Thickness for the required fire resistance					
	30 min	60 min	90 min	120 min	180 min	240 min
30	8mm	8mm	10mm	13mm	18mm	24mm
40	8mm	10mm	12mm	15mm	22mm	29mm
50	8mm	10mm	14mm	17mm	25mm	32mm
60	8mm	11mm	15mm	19mm	27mm	36mm
70	8mm	11mm	16mm	20mm	29mm	38mm
80	8mm	12mm	17mm	21mm	31mm	40mm
90	8mm	13mm	18mm	23mm	32mm	42mm
100	8mm	13mm	18mm	23mm	34mm	44mm
110	9mm	14mm	19mm	24mm	35mm	45mm
120	9mm	14mm	19mm	25mm	36mm	47mm
130	9mm	14mm	20mm	25mm	37mm	48mm
140	9mm	15mm	20mm	26mm	37mm	49mm
150	9mm	15mm	21mm	26mm	38mm	50mm
160	9mm	15mm	21mm	27mm	39mm	51mm
170	9mm	15mm	21mm	27mm	39mm	51mm
180	10mm	16mm	22mm	28mm	40mm	52mm
190	10mm	16mm	22mm	28mm	40mm	53mm
200	10mm	16mm	22mm	28mm	41mm	53mm
210	10mm	16mm	22mm	29mm	41mm	54mm
220	10mm	16mm	23mm	29mm	42mm	54mm
230	10mm	16mm	23mm	29mm	42mm	55mm
240	10mm	17mm	23mm	29mm	42mm	55mm
250	10mm	17mm	23mm	30mm	43mm	56mm
260	10mm	17mm	23mm	30mm	43mm	56mm
270	10mm	17mm	23mm	30mm	43mm	56mm
280	10mm	17mm	24mm	30mm	43mm	57mm
290	10mm	17mm	24mm	30mm	44mm	57mm
300	10mm	17mm	24mm	31mm	44mm	57mm
310	11mm	17mm	24mm	31mm	44mm	58mm



PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

TABLE 6. Beams and Columns at Critical Steel Temperature of 600°C

Section factor AV (m ⁻¹)	Thickness for the required fire resistance					
	30 min	60 min	90 min	120 min	180 min	240 min
30	8mm	8mm	9mm	11mm	16mm	21mm
40	8mm	8mm	10mm	13mm	20mm	26mm
50	8mm	8mm	12mm	15mm	22mm	29mm
60	8mm	9mm	13mm	17mm	24mm	32mm
70	8mm	10mm	14mm	18mm	26mm	35mm
80	8mm	11mm	15mm	19mm	28mm	37mm
90	8mm	11mm	16mm	20mm	30mm	39mm
100	8mm	12mm	16mm	21mm	31mm	40mm
110	8mm	12mm	17mm	22mm	32mm	42mm
120	8mm	12mm	18mm	23mm	33mm	43mm
130	8mm	13mm	18mm	23mm	34mm	44mm
140	8mm	13mm	18mm	24mm	35mm	45mm
150	8mm	13mm	19mm	24mm	35mm	46mm
160	8mm	14mm	19mm	25mm	36mm	47mm
170	8mm	14mm	20mm	25mm	37mm	48mm
180	8mm	14mm	20mm	26mm	37mm	49mm
190	8mm	14mm	20mm	26mm	38mm	49mm
200	9mm	14mm	20mm	26mm	38mm	50mm
210	9mm	15mm	21mm	27mm	39mm	50mm
220	9mm	15mm	21mm	27mm	39mm	51mm
230	9mm	15mm	21mm	27mm	39mm	52mm
240	9mm	15mm	21mm	27mm	40mm	52mm
250	9mm	15mm	21mm	28mm	40mm	52mm
260	9mm	15mm	22mm	28mm	40mm	53mm
270	9mm	15mm	22mm	28mm	41mm	53mm
280	9mm	16mm	22mm	28mm	41mm	54mm
290	9mm	16mm	22mm	28mm	41mm	54mm
300	9mm	16mm	22mm	29mm	41mm	54mm
310	9mm	16mm	22mm	29mm	42mm	55mm

PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

TABLE 7. Beams and Columns at Critical Steel Temperature of 620°C

Section factor AV (m ²)	Thickness for the required fire resistance					
	30 min	60 min	90 min	120 min	180 min	240 min
30	8mm	8mm	8mm	11mm	15mm	20mm
40	8mm	8mm	10mm	13mm	19mm	24mm
50	8mm	8mm	11mm	15mm	21mm	28mm
60	8mm	9mm	12mm	16mm	23mm	31mm
70	8mm	10mm	13mm	17mm	25mm	33mm
80	8mm	10mm	14mm	19mm	27mm	35mm
90	8mm	11mm	15mm	20mm	28mm	37mm
100	8mm	11mm	16mm	20mm	30mm	39mm
110	8mm	11mm	16mm	21mm	31mm	40mm
120	8mm	12mm	17mm	22mm	32mm	42mm
130	8mm	12mm	17mm	22mm	33mm	43mm
140	8mm	13mm	18mm	23mm	33mm	44mm
150	8mm	13mm	18mm	24mm	34mm	45mm
160	8mm	13mm	19mm	24mm	35mm	46mm
170	8mm	13mm	19mm	24mm	35mm	46mm
180	8mm	14mm	19mm	25mm	36mm	47mm
190	8mm	14mm	19mm	25mm	37mm	48mm
200	8mm	14mm	20mm	25mm	37mm	49mm
210	8mm	14mm	20mm	26mm	37mm	49mm
220	8mm	14mm	20mm	26mm	38mm	50mm
230	8mm	14mm	20mm	26mm	38mm	50mm
240	8mm	15mm	21mm	27mm	39mm	51mm
250	9mm	15mm	21mm	27mm	39mm	51mm
260	9mm	15mm	21mm	27mm	39mm	51mm
270	9mm	15mm	21mm	27mm	40mm	52mm
280	9mm	15mm	21mm	27mm	40mm	52mm
290	9mm	15mm	21mm	28mm	40mm	53mm
300	9mm	15mm	21mm	28mm	40mm	53mm
310	9mm	15mm	22mm	28mm	41mm	53mm



PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

TABLE 8. Beams and Columns at Critical Steel Temperature of 650°C

Section factor AV (m ²)	Thickness for the required fire resistance					
	30 min	60 min	90 min	120 min	180 min	240 min
30	8mm	8mm	7mm	10mm	14mm	19mm
40	8mm	8mm	9mm	12mm	17mm	23mm
50	8mm	8mm	10mm	13mm	20mm	26mm
60	8mm	8mm	11mm	15mm	22mm	29mm
70	8mm	9mm	12mm	16mm	24mm	31mm
80	8mm	9mm	13mm	17mm	25mm	33mm
90	8mm	10mm	14mm	18mm	27mm	35mm
100	8mm	10mm	15mm	19mm	28mm	37mm
110	8mm	11mm	15mm	20mm	29mm	38mm
120	8mm	11mm	16mm	20mm	30mm	39mm
130	8mm	11mm	16mm	21mm	31mm	41mm
140	8mm	12mm	17mm	22mm	32mm	42mm
150	8mm	12mm	17mm	22mm	32mm	43mm
160	8mm	12mm	17mm	23mm	33mm	43mm
170	8mm	12mm	18mm	23mm	34mm	44mm
180	8mm	13mm	18mm	23mm	34mm	45mm
190	8mm	13mm	18mm	24mm	35mm	46mm
200	8mm	13mm	18mm	24mm	35mm	46mm
210	8mm	13mm	19mm	24mm	36mm	47mm
220	8mm	13mm	19mm	25mm	36mm	47mm
230	8mm	13mm	19mm	25mm	36mm	48mm
240	8mm	13mm	19mm	25mm	37mm	48mm
250	8mm	14mm	19mm	25mm	37mm	49mm
260	8mm	14mm	20mm	26mm	37mm	49mm
270	8mm	14mm	20mm	26mm	38mm	50mm
280	8mm	14mm	20mm	26mm	38mm	50mm
290	8mm	14mm	20mm	26mm	38mm	50mm
300	8mm	14mm	20mm	26mm	39mm	51mm
310	8mm	14mm	20mm	27mm	39mm	51mm

PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

TABLE 9. Beams and Columns at Critical Steel Temperature of 700°C

Section factor AV (m ²)	Thickness for the required fire resistance					
	30 min	60 min	90 min	120 min	180 min	240 min
30	8mm	8mm	8mm	8mm	12mm	16mm
40	8mm	8mm	8mm	10mm	15mm	20mm
50	8mm	8mm	9mm	12mm	17mm	23mm
60	8mm	8mm	10mm	13mm	19mm	26mm
70	8mm	8mm	11mm	14mm	21mm	28mm
80	8mm	8mm	12mm	15mm	23mm	30mm
90	8mm	8mm	12mm	16mm	24mm	32mm
100	8mm	9mm	13mm	17mm	25mm	33mm
110	8mm	9mm	13mm	18mm	26mm	35mm
120	8mm	9mm	14mm	18mm	27mm	36mm
130	8mm	10mm	14mm	19mm	28mm	37mm
140	8mm	10mm	15mm	19mm	29mm	38mm
150	8mm	10mm	15mm	20mm	29mm	39mm
160	8mm	10mm	15mm	20mm	30mm	40mm
170	8mm	11mm	16mm	21mm	31mm	41mm
180	8mm	11mm	16mm	21mm	31mm	41mm
190	8mm	11mm	16mm	24mm	35mm	46mm
200	8mm	11mm	16mm	24mm	35mm	46mm
210	8mm	11mm	17mm	22mm	33mm	43mm
220	8mm	12mm	17mm	22mm	33mm	44mm
230	8mm	12mm	17mm	23mm	34mm	44mm
240	8mm	12mm	17mm	23mm	34mm	45mm
250	8mm	12mm	17mm	23mm	34mm	45mm
260	8mm	12mm	18mm	23mm	35mm	46mm
270	8mm	12mm	18mm	23mm	35mm	46mm
280	8mm	12mm	18mm	24mm	35mm	47mm
290	8mm	12mm	18mm	24mm	35mm	47mm
300	8mm	12mm	18mm	24mm	36mm	47mm
310	8mm	12mm	18mm	24mm	36mm	48mm



PROMASPRAY® C450

Vermiculite Cement Based Wet Mix Spray

APPLICATION

Initial steps	Application of PROMASPRAY® C450 must be carried out by an applicator recognised by Promat
Methods	Mix PROMASPRAY® C450 with potable water in a suitable mixer and apply by a spraying machine approved by Promat PROMASPRAY® C450 may be centrally pumped vertically or horizontally, enabling all spray plant and material storage to be contained in one area
Limitations	PROMASPRAY® C450 may be applied when the substrate and air temperatures are at least 2°C and rising, but should not be applied if the substrate or air temperatures are less than 4°C and falling. Maximum substrate and air temperature is 45°C Substrate temperature should be at least 2°C above dew point temperature

TOP COATING

Promat TOPCOAT® 200 may be used as protection from frequent wash down, long term chemical spills, or for improved resistance to fungal, algal and bacterial growth.

PACKAGING

12.5kg bags.

STORAGE

Off the ground and kept dry until ready for use.

SHELF LIFE

Maximum 12 months.

ENVIRONMENTAL

- Do not discharge into drains, watercourses or soil.
- Not readily biodegradable.
- Not expected to bioaccumulate.
- Not expected to be toxic to aquatic life except at high concentrations.

HEAD OFFICE, BELGIUM

Promat International N.V.
Bormstraat 24
2830 Tiselt
Tel: +32 15 718 100
Fax: +32 15 718 109
Email: info@promat
international.com
www.promat-international.com
www.promat-tunnel.com
www.promat-marine.com
www.promat-spray.com

ASIA PACIFIC HEADQUARTERS, MALAYSIA

**Promat International
(Asia Pacific) Limited**
Unit 19-02-01
Level 2 PNB Damansara
No.19 Lorong Dungun
Damansara Heights
50490 Kuala Lumpur
Tel: +60 3 2095 5111
Fax: +60 3 2095 6111
Email: spraysinfo@promat-ap.com
www.promat-ap.com

AUSTRALIA

Promat Australia Pty. Limited
1 Scotland Road, Mile End South
SA 5031 Adelaide
Tel: 1800 PROMAT
Fax: +61 8 8352 1014
Email: spraysinfo@promat.com.au
www.promat-ap.com

Promat Australia Pty. Limited
Unit 1, 175 Briens Road
NSW 2152 Northmead
Tel: 1800 PROMAT
Fax: +61 2 9630 0258
Email: spraysinfo@promat.com.au
www.promat-ap.com

Promat Australia Pty. Limited
3/273 Williamstown Road
VIC 3207 Port Melbourne
Tel: 1800 PROMAT
Fax: +61 3 9645 3844
Email: spraysinfo@promat.com.au
www.promat-ap.com

AUSTRIA

Promat Ges.m.b.H.
Seybelgasse 13
1230 Wien
Tel: +43 1 865 4501
Fax: +43 1 865 3600
Email: office@promat.at
www.promat.at

BELGIUM

Promat N.V.
Kuiermansstraat 1
1880 Kapelle-op-den-Bos
Tel: +32 15 713 351
Fax: +32 15 718 229
Email: info@promat.be
www.promat.be

CHINA

Promat China Limited
Room 503, Block B, Qi Lin Plaza
13-35 Pan Fu Road
510180 Guangzhou
Tel: +86 20 8136 1167
Fax: +86 20 8136 1372
Email: spraysinfo@promat-ap.com
www.promat.com.cn

**Promat North China
(Division of Promat China Limited)**
Room 1507 Building 5
SOHO Xiandaicheng
No.88 Jianguo Road
Chaoyang District
100022 Beijing
Tel: +86 10 8589 1254
Fax: +86 10 8589 2904
Email: spraysinfo@promat-ap.com
www.promat.com.cn

CZECH REPUBLIC

Promat s.r.o.
Ckalova 22/784
16000 Praha 6 - Bubeneč
Tel: +420 2 2439 0811
Fax: +420 2 3333 3576
Email: promat@promatpraha.cz
www.promatpraha.cz

DENMARK

Promat ApS
Tåstrup Stationscenter
Selsmosevej 2, 1. floor
2630 Tåstrup
Tel: +45 7020 0482
Fax: +45 7020 0483
Email: info@promat-nordic.com
www.promat-nordic.com

FRANCE

Promat S.A.S.
BP 66 Rue de L'Ammandier
78540 Vernouillet
Tel: +33 1 3979 6160
Fax: +33 1 3971 1660
Email: info@promat.fr
www.promat.fr

GERMANY

Promat GmbH
Scheifenkamp 16
40878 Ratingen
Tel: +49 2102 493 0
Fax: +49 2102 493 111
Email: mail@promat.de
www.promat.de

HONG KONG

**Promat International
(Asia Pacific) Limited**
Room 1010, C.C. Wu Building
302-308 Hennessy Road
Wanchai
Tel: +852 2836 3692
Fax: +852 2834 4313
Email: spraysinfo@promat-ap.com
www.promat.com.hk

INDIA

**Promat International
(Asia Pacific) Limited
(India Representative Office)**
610-611, Ansal Imperial Tower
C-Block, Community Centre
Naraina Vihar, Naraina
110028 New Delhi
Tel: +91 11 2577 8413
Fax: +91 11 2577 8414
Email: spraysinfo@promat-ap.com
www.promat-ap.com

ITALY

Promat S.p.A.
Corso Paganini 39/3
16125 Genova
Tel: +39 010 248 8411
Fax: +39 010 213 768
Email: info@promat.it
www.promat.it

MALAYSIA

Promat (Malaysia) Sdn. Bhd.
Unit 19-02-01
Level 2 PNB Damansara
No.19 Lorong Dungun
Damansara Heights
50490 Kuala Lumpur
Tel: +60 3 2095 8555
Fax: +60 3 2095 2111
Email: spraysinfo@promat-ap.com
www.promat-ap.com

NETHERLANDS

Promat B.V.
Vleugelboot 22
3991 CL Houten
Tel: +31 30 241 0770
Fax: +31 30 241 0771
Email: info@promat.nl
www.promat.nl

POLAND

Promat TOP Sp. z o.o.
ul. Przeclawska 8
03 879 Warszawa
Tel: +48 22 212 2280
Fax: +48 22 212 2290
Email: top@promatop.pl
www.promatop.pl

RUSSIA

Promat GmbH
Repräsentanz
ul. Kantemirovskaya 58
115477 Moscow
Tel: +7 495 325 4268
Fax: +7 495 231 7977
Email: gd@promat.ru
www.promat.ru

SINGAPORE

**Promat Building System Pte.
Limited**
10 Science Park Road
#03-14 The Alpha
Singapore Science Park II
117684 Singapore
Tel: +65 6776 7635
Fax: +65 6776 7624
Email: spraysinfo@promat-ap.com
www.promat-ap.com

SPAIN

Promat Ibérica S.A.
C/ Velazquez, 41 - 2 Planta
28001 Madrid
Tel: +34 91 781 1550
Fax: +34 91 575 1597
Email: info@promat.es
www.promat.es

SWITZERLAND

Promat AG
Stationsstrasse 1
8545 Rickenbach-Sulz
Tel: +41 52 320 9400
Fax: +41 52 320 9402
Email: office@promat.ch
www.promat.ch

UNITED ARAB EMIRATES

Promat Middle East
Suite 1805, Floor 18
Festival City Tower
P O. Box 123945, Dubai
Tel: +971 4 232 9780
Fax: +971 4 232 9781
Email: promatmiddleeast@
promat.co.uk
www.promat-spray.com

UNITED KINGDOM

Promat UK Limited
The Sterling Centre
Eastern Road, Bracknell
RG12 2TD Berkshire, Great Britain
Tel: +44 1344 381 300
+44 1344 381 400 (technical)
Fax: +44 1344 381 301
Email: marketinguk@promat.co.uk
www.promat-spray.com

Promat Ireland

43 Fitzwilliam Square
Dublin 2, Ireland
Tel: +353 1 6765778
www.promat.ie

VIETNAM

**Promat International
(Asia Pacific) Limited
(Vietnam Representative Office)**
Room 606 Giay Viet Plaza
180-182 Ly Chinh Thang Street
Ward 9, District 3
Ho Chi Minh City
Tel: +84 904 055 055
Fax: +84 8 931 5964
Email: spraysinfo@promat-ap.com
www.promat-ap.com