

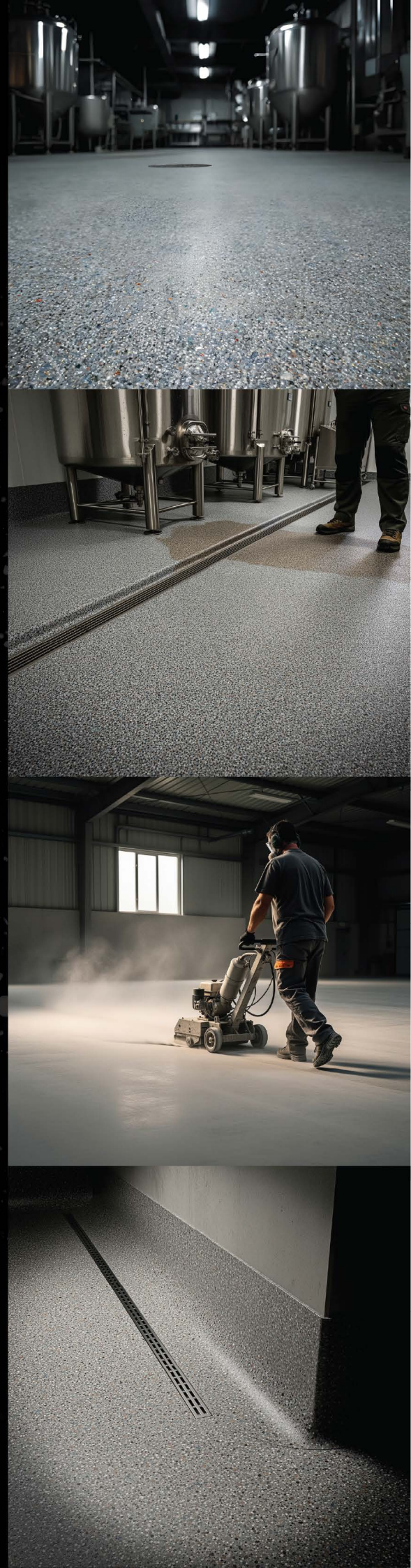
INDUSTRIAL FLOORING · MMA RESIN SYSTEMS

Rapidly curing methacrylate flooring for wet areas and food production

SPECFLOOR® MMA 420-526

ANTI-SLIP SYSTEM FOR INDUSTRIAL AND COMMERCIAL
FLOORS IN WET AREAS


SPECIALIZED
COATING SYSTEMS



A WET-AREA FLOOR YOU CAN HAND BACK THE SAME SHIFT.

Methacrylate resin cures in about **two hours**, at ambient temperatures as low as **-30 °C**. That single property is why an MMA floor goes into a working slaughterhouse, dairy or brewery when an epoxy cannot: the line stops on Friday evening and runs again on Saturday morning.

SPECFLOOR® MMA 420-526 is a broadcast, self-levelling anti-slip system. A SpecFloor MMA 420 wearing layer is laid at 3–5 mm, broadcast with coloured quartz while wet, and sealed with SpecFloor MMA 526. The broadcast grade sets the slip rating; the seal coat sets how easily it cleans. Both are decided on your floor, not in a catalogue.

The result is seamless and water-tight, resistant to hot and greasy water and to conventional acids, alkalis and cleaning agents, and physiologically safe for food-processing environments under EU Regulation 1935/2004.

We formulate, manufacture and specify the range in South Africa. If the floor in front of you is not the floor in this book, tell us the substrate, the traffic, the wash-down regime and the shutdown window you have — the specification comes back against those four inputs.



BACK IN SERVICE IN 2 HRS



CURES TO -30 °C



SLIP-RATED R11–R13



FOOD-CONTACT SAFE

Three questions decide this system: **how wet does it get, what gets spilled on it and how long may it be out of service**. Page 03 answers the first, page 05 the second, and answer to the third is two hours.



BUILT FOR THE ROOMS THAT GET HOSED DOWN.

Coatings based on SpecFloor MMA 420, sealed with SpecFloor MMA 526, are made for easy-to-clean, slip-resistant and hygienic indoor surfaces. The 526 seal coat gives an abrasion-resistant surface of immaculate appearance, and its resistance to hot water, greasy water and conventional cleaning agents is what puts it in the food industry.

FIELDS OF APPLICATION

- Slaughterhouses
- Butchers' shops and meat-processing plants
- Fish factories and canning plants
- Restaurant and hotel kitchens
- Breweries and cellarage premises
- Fruit juice companies
- Dairies and cheesemaking premises
- Shower and washrooms

WHY METHACRYLATE HERE

Return to service	≈ 2 hours
Application temperature	-30 °C to +35 °C
Joints in the surface	None — seamless
Water-tight	Yes
Hot and greasy water	Resistant
Acids, alkalis, cleaners	Good resistance
Recoat onto old MMA	Yes
Colour and design	To specification

SUBSTRATES. MMA systems apply to concrete, metal and asphalt substrates, in indoor and outdoor areas and in both wet and dry rooms. The mechanical strength and the slip resistance are each adjusted to the specific requirement or the governing industrial regulation.

THE FOOD-CONTACT POSITION

The coating system is physiologically safe and suitable for food-processing companies, assessed against **EU Regulation 1935/2004** of the European Parliament dated 27 October 2004 (test report No. 26050 U 08). The system complies with **EN 13813:2002** and meets the prerequisites for CE marking under Annex ZA.5 of that standard.

Not every wet room needs R13. A dry store, a corridor and a slaughter floor in the same building have three different risk profiles. Rate each area on its own and change the broadcast at the zone line.

Refurbishment. New MMA coatings can be applied onto old MMA substrates, so an existing methacrylate floor can be re-profiled and re-sealed rather than removed.



THE BROADCAST GRADE AND THE SEAL COAT RATE DECIDE THE SLIP RATING

CHOOSE THE RATING FIRST. THE BROADCAST FOLLOWS.

This is the decision that shapes the whole floor.

R is the ramp angle a person can walk at without slipping.

V is displacement volume - the space under the profile that water, fat or debris can go into instead of under a Boot. Two things set the system: the broadcast grade, and how much seal coat goes over it."

READING R AND V

RATING	WHAT IT MEANS	TYPICAL DUTY
R9	Lowest ramp angle	Dry, low-risk areas
R10	Moderate	Light wet exposure, entrances
R11	Good — most wet production	Kitchens, dairies, packing halls
R12	High	Slaughter floors, fish handling
R13	Highest	Heaviest fat and water loading
V6	6 cm³/dm² displacement	Water and light soil
V10	10 cm³/dm² displacement	Fat, blood, solids

BROADCAST SETS THE RATING

BROADCAST	PARTICLE SIZE	CERTIFIED RESULT
Coloured sand	0.4 – 0.8 mm	R10 · R11 · V6
Colour / quartz mix	0.7 – 1.2 mm	R11 · R13 · V6
Coloured sand	1.2 – 1.8 mm	R11 · V10
Granite sand	1.0 – 2.0 mm	R12 · R13 · V10
Colour chips	3 – 5 mm	R9 · V6
Primer broadcast	0.4 – 0.8 mm	Bond key, not the wear profile

V10 needs a coarser broadcast than the standard grades. The 0.4-0.8 and 0.7-1.2 mm grades used for the wearing layer reach V6. Every certified V10 build uses 1.2-1.8 mm coloured sand or 1.0-2.0 mm granite. If a displacement volume is written into the specification, the broadcast has to be specified with it.

100 g/m² of seal coat is worth a full class. Two certified builds are identical — same primer, same 420 wearing layer, same 0.4-0.8 mm broadcast to saturation. One was sealed at ≈ 400 g/m² and rated **R11**, the other at ≈ 500 g/m² and rated **R10**. The seal coat fills the profile. Specify its rate, do not leave it to the applicator.

CERTIFIED BUILDS — DIN 51130, KIWA POLYMER INSTITUT

RATING	REPORT	TESTED BUILD (AFTER B 71 / 112 PRIMER)	BROADCAST	SEAL COAT G/M²	ANGLE · CM³/DM²
R9 · V6	P 11953-2	420 / 421 · 163 / 526 / 527 · 165	Colour chips 3-5 mm ≈ 25 g/m², then 1.2 mm ≈ 100 g/m²	≈ 500 then ≈ 400	7.2° · 6.0
R10 · V6	P 11953-3	420 / 421 · 526	Coloured sand 0.4-0.8 mm to saturation	≈ 500	16.6° · 7.5
R11 · V6	P 11953-4	420 / 421 · 526	Coloured sand 0.4-0.8 mm to saturation	≈ 400	24.2° · 6.0
R11 · V6	P 12286-1	420 · 163 / 526 / 527 · 165	Colour / quartz mix 0.7-1.2 mm to saturation	≈ 400	22.2° · 7.0
R11 · V10	P 11953-6	420 / 421 · 526	Coloured sand 1.2-1.8 mm to saturation	≈ 400	20.6° · 10.5
R12 · V6	P 12380-1	420 · 526	Colour / quartz mix 0.7-1.2 mm to saturation	≈ 500	29.7° · 7.0
R12 · V10	P 12286-3	420 · 163 / 526 / 527 · 165	Granite sand 1.0-2.0 mm to saturation	≈ 500 then ≈ 400	32.0° · 10.0
R13 · V6	P 12286-4	420 · 530	Colour / quartz mix 0.7-1.2 mm to saturation	≈ 400	36.4° · 7.0
R13 · V10	P 12286-2	420 · 163 / 526 / 527 · 165	Granite sand 1.0-2.0 mm to saturation	≈ 450 then ≈ 200	35.3° · 11.0

Nine reports held on file, tested to DIN 51130:2014 by Kiwa GmbH Polymer Institut, Flörsheim. Figures are read from the reports. Builds shown as tested — several include SpecFloor MMA 421 alongside 420, and the R13 · V6 build is sealed with 530 rather than 526.

Confirm the exact layer schedule, broadcast grade and seal coat rate with SCS technical before an R or V rating is written into a specification.



SPECFLOOR® MMA 420-526

SEAMLESS · SLIP-RATED R11 - R13 · BACK IN TWO HOURS

BROADCAST ANTI-SLIP SYSTEM · WET AREAS

A self-levelling SpecFloor MMA 420 wearing layer at 3-5 mm, broadcast with coloured quartz and sealed with SpecFloor MMA 526.

Hard-wearing and non-slip with an optional coloured quartz design, resistant to hot and greasy water, and safe to walk on in wet areas to the specifications.

ANTI-SLIP BROADCAST BUILD

SpecFloor MMA 420 is characterised by good filling and levelling properties. Its filler and pigment wetting makes it the preferred choice for **broadcast self-levelling coatings at 3–5 mm**. The self-levelling wearing layer is distributed with a pin rake, then broadcast with coloured sand of the chosen colour and particle size.

SpecFloor MMA 526 is poured over the coating, spread roughly with a non-serrated rubber blade and rolled out evenly with a 12 mm pile polyamide roller. Because 526 is the harder resin, **it must not be applied over elastic coatings such as SpecFloor MMA 332** — the combination can craze the surface.

CHEMICAL RESISTANCE

Seamless MMA industrial floor coatings are robust and resistant to many conventional chemicals such as acids and alkalis. The sealed surface resists hot water, greasy water and conventional cleaning agents.

WHAT WE NEED FROM YOU

Substrate and condition	Type, age, pull-off if known
Room and duty	What is made or handled there
Wash-down regime	Temperature, chemistry, frequency
Slip rating required	Or the risk assessment behind it
Shutdown window	Hours the floor may be out of service
Area and falls	m ² , drainage, existing coving

SYSTEM BUILD



- **SpecFloor MMA 526 seal coat**
400–800 g/m² · polyamide roller 12 mm pile
- **Broadcast coloured quartz**
0.4–0.8 up to 2.0 mm · sets the R and V rating
- **SpecFloor MMA 420 wearing layer**
3–5 mm · pin rake · min 3 mm wet film
- **Broadcast quartz sand**
Ø 0.4–0.8 mm into wet primer
- **SpecFloor MMA 112 / B 71 primer**
400–500 g/m² · rubber blade
- **Prepared concrete**
Shotblast or grind · pull-off ≥ 1.5 N/mm²

TOTAL NOMINAL DRY FILM · **3–5 MM + SEAL**

SYSTEM BREAKDOWN

LAYER	PRODUCT	THICKNESS / RATE	APPLICATION	COMMENTS
Primer	SpecFloor MMA 112 or B 71	400–500 g/m ²	Rubber blade, thin even film	Twice on highly absorbent substrates. Broadcast quartz Ø 0.4–0.8 mm while wet.
Wearing layer	SpecFloor MMA 420	3–5 mm	≈ 1.8 kg/m ² filler per mm	Pin rake. Minimum 3 mm wet film. Good filling and levelling.
Broadcast	Coloured quartz	Ø 0.4–0.8 or 0.7–1.2 mm	To refusal, while wet	Grade chosen for the target R and V rating. Coarser grades are certified for V10
Seal coat	SpecFloor MMA 526	400–800 g/m ²	Polyamide roller, 12 mm pile	Min 400 g/m ² per layer to cure. Max 800 g/m ² or slip resistance is lost.

PERFORMANCE

PROPERTY	STANDARD	UNIT	RESULT	EN 13813
Tensile strength	DIN EN ISO 527	MPa	15.2	F 15
Compressive strength	DIN EN ISO 604	MPa	46.4	C 40
Elongation at break	DIN EN ISO 527	%	1.1	—
Elastic modulus	DIN EN ISO 527	MPa	2 550	E2
Tensile bond on concrete	DIN ISO 4624 ZTV-SIB	MPa	> 3.9	B 2.0
Impact strength	EN ISO 6272	Nm	8	IR 8
Wear resistance (BCA)	prEN 13892-4	µm	< 10	AR 0.5
Slip resistance / displacement	BGR 181 · DIN 51130	R / V	R11–R13 · V6–V10	—
Fire rating	prEN ISO 11925-2 · 15 s	Class	Fs ≤ 150 mm in 20 s	EFL

AT A GLANCE

Hardener	PlastiLine MMA BP 50 Powder
Components	2K — resin + powder hardener
Return to service	≈ 2 hours, normal loads
Application temperature	–30 °C to +35 °C
Seal coat, minimum	400 g/m ² per layer
Seal coat, maximum	800 g/m ²
Substrate pull-off	≥ 1.5 N/mm ²
Food contact	EU 1935/2004 · report 26050 U 08
Standard	EN 13813:2002 · CE Annex ZA 1.5

Forklift traffic. Owing to the thermoplastic nature of MMA resins, forklifts may leave black abrasion or tyre marks. This is cosmetic, not a coating failure.

THE FLOOR UNDER IT DECIDES EVERYTHING

The substrate must be correctly prepared and the primer allowed to cure properly to guarantee a durable bond. This applies equally to concrete, asphalt and metal. **The floor-laying company must furnish proof of adequate adhesion.**

ACCEPTANCE CRITERIA

Pull-off strength, minimum	1.5 N/mm ²
Surface	Solid, dry, good grip, load-bearing
Free from	Laitance, loose particles, flakiness
Free from	Grease, oil, rubber fines, paint residues
Preferred preparation	Shotblasting or grinding
Heavily soiled floors	Mechanical + flame cleaning
Verification	Herion-type pull-off appliance
Quick check	Adhesive test patch with MMA 112

SUBSTRATE MOISTURE (CM %)

SUBSTRATE	AMBIENT HUMIDITY BEFORE AND AFTER COATING
Reinforced concrete floor	2.0 – 3.0 %
Pumice concrete	3.0 – 5.0 %
Cementitious screed (by mixing ratio)	1.5 – 3.0 %
Aerated concrete screed, cement-bound	2.5 – 3.5 %
Cold bitumen screed, cement-bound	1.5 – 2.0 %
Magnesia flooring	8.5 – 12.0 %
Anhydrite and gypsum screeds	less than 0.5 %
Chipboard, hardboard, wooden floors	8.0 – 12.0 %



SIX RULES FOR THE SEAL COAT

- Apply at least **400 g/m² per layer** — below that the coating will not cure reliably through.

■ Do not exceed **800 g/m²**. Above it the slip resistance is lost and the coat can yellow and detach.
- Observe the hardener quantities precisely — **this is what prevents yellowing.**

■ Stir the hardener powder in thoroughly for **at least one minute.**
- Never apply 526 over an elastic MMA such as 332 — **surface crazing.**

■ **Ventilate well** during processing — good airflow is what cures the seal coat properly.

HARDENER · PLASTILINE MMA BP 50 POWDER

SPECFLOOR MMA 112 PRIMER

°C	% W/W	POT LIFE	CURE
+5	5	≈ 8	≈ 30
+10	4	≈ 8	≈ 30
+15	3	≈ 7	≈ 30
+20	2	≈ 8	≈ 30
+30	1	≈ 6.5	≈ 30

SPECFLOOR MMA 420 WEARING LAYER

°C	% W/W	POT LIFE	CURE
+5	4.0	≈ 35	≈ 65
+10	2.5	≈ 30	≈ 65
+15	2.0	≈ 30	≈ 55
+20	1.0	≈ 25	≈ 45
+25	1.0	≈ 15	≈ 30
>30	1.0	≈ 13	≈ 30

SPECFLOOR MMA 526 SEAL COAT

°C	% W/W	POT LIFE	CURE
+5	1.5	≈ 75	≈ 80
+10	1.5	≈ 35	≈ 45
+20	1.0	≈ 18	≈ 35
>30	1.0	≈ 15	≈ 25

Pot life and cure in minutes. Temperatures refer to resin, floor and air together. Hardener percentages are calculated on the resin they belong to. For SpecFloor MMA B 71 primer, refer to its own data sheet. The stated pot life always refers to the lower temperature of the band.

All values are derived from laboratory tests. **Deviations caused by environmental factors will occur on site** — treat pot life and cure as planning figures and confirm on the day against the actual resin, floor and air temperature.

INDUSTRIAL FLOORING · MMA RESIN SYSTEMS

SPECFLOOR® MMA 420-526

ANTI-SLIP SYSTEM FOR WET AREAS

SCAN FOR MORE INFORMATION



GET IN TOUCH

NATIONAL CALL CENTRE
086 137 2468

INTERNATIONAL TO SOUTH AFRICA
+27 11 552 0300

EMAIL
enquiries@speccoats.co.za

WEBSITE
www.speccoats.co.za


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NOTICE. The information in this document has been drawn up in good faith with the intention of providing information based on current knowledge, and may be subject to change without notice. All technical values are quoted from the current product Technical Data Sheets; where a value is not published it is not stated here. Slip ratings depend on the broadcast grade and the seal coat rate selected and must be confirmed against the certified build before being written into a specification. The purchaser should verify the use of the products or services and is responsible for contacting our technical staff who can provide guidelines for specific or special applications not presented in this document. Specialized Coating Systems (Pty) Ltd assumes no obligation or liability for the information in this document. Product images are illustrative. Consult the current Safety Data Sheet for each product before handling, mixing or application.