

Injection Products – Polyurethanes (PU) and Polyurea Silicates (PUS)

Injection Product	MasterRoc MP 355 IK	MasterRoc MP 355 IK DW	MasterRoc MP 355*	MasterRoc MP 358 SC	MasterRoc MP 367 Foam	MasterRoc MP 368	MasterRoc MP 368 TIX	Notes
Product Category	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurea Silicate	Polyurea Silicate	Polyurea Silicate	
Main Application	Stopping water ingress Ground stabilization Concrete repair	Stopping water ingress Small void filling Concrete repair	Stopping water ingress Ground stabilization Concrete repair	Strata consolidation Small void filling Concrete repair	Cavity filling	Ground consolidation Concrete crack repair	Ground consolidation Concrete crack repair	
Number of Components (excluding accelerator)	1	1	2	2	2	2	2	
Resin Viscosity, cP/mPa.s	320	700	Part A: 320** / Part B: 240** (Estimated viscosity of the mixed material is 280, right after mixing)	Part A: 300 / Part B: 300 (Estimated viscosity of the mixed material is 300, right after mixing)	Part A: 70 / Part B: 170 (Estimated viscosity of the mixed material is 120, right after mixing)	Part A: 300 / Part B: 115 (Estimated viscosity of the mixed material is 208, right after mixing)	Part A: 490 / Part B: 115 (Estimated viscosity of the mixed material is 303, right after mixing)	**At 68 °F (20 °C). All others at 73 °F (23 °C).
Mixing Ratio	Accelerator up to 10% of Resin by volume	Accelerator up to 10% of Resin by volume	1:1 by volume	1:1 by volume	1:1 by volume	1:1 by volume	1:1 by volume	
Reaction Time / Setting Time	10 s to 5 min	15 s to 6 min	Vary – depending on the choice and the dosage of accelerator	30 to 80 s	10 to 55 s	2 to 3 min	3 to 4 min	Highly dependent on product temperature, ground temperature and other factors
Appearance (cured)	Rigid foam	Flexible foam	With water: Rigid foam; Without water: Stiff, rubber-like material	Rigid material	Rigid foam	Hard resin	Hard resin	
Strength	Low to medium	Low	Medium	Flexural: 870 psi (6 MPa)	Low	Bond: 725 psi (5 MPa) at 30 min; Compressive: 3600 psi (25 MPa) at 24 h	Bond: 725 psi (5 MPa) at 30 min; Compressive: 3600 psi (25 MPa) at 24 h	
Expansion Rate	25 - 30	20 - 30	Vary – depending on the choice and dosage of accelerator / water	3 without water; 8 with water	Up to 30	1	1	Depending on temperature, mixing ratio and other factors
Flexibility	Low	Medium	Low	Low	Low	Low	Low	
Adhesive Properties (wet surface)	Excellent	Excellent	Outstanding	Excellent	Good	Good	Good	
Pump	Single-component injection pump	Single-component injection pump	Two-component injection pump with a static in-line mixer	Two-component injection pump with a static in-line mixer	Two-component injection pump with a static in-line mixer	Two-component injection pump with a static in-line mixer	Two-component injection pump with a static in-line mixer	
Additional Notes	Mixed product requires moisture / water to activate	Mixed product requires moisture / water to activate	Three optional accelerators for various types of applications	Less water sensitive	Not water sensitive	Not water sensitive, works well in low temperatures	Thixotropic feature, not water sensitive, works well in low temperatures	
Packaging	Resin: 6 gal (22 L) pails; Accelerator: 0.7 gal (2.5 L) bottles	Resin: 6 gal (22 L) pails; Accelerator: 0.7 gal (2.5 L) bottles	Part A: 49 gal (185 L) drums and 5 gal (20 L) pails; Part B: 49 gal (185 L) drums and 5 gal (20 L) pails	Part A: 49 gal (185 L) drums and 5 gal (20 L) pails; Part B: 49 gal (185 L) drums and 5 gal (20 L) pails	Part A: 50 gal (190 L) drums and 5 gal (19 L) pails; Part B: 50 gal (190 L) drums and 5 gal (19 L) pails	Part A: 53 gal (200 L) drums and 6 gal (24 L) pails; Part B: 53 gal (200 L) drums and 6 gal (24 L) pails	Part A: 53 gal (200 L) drums and 6 gal (24 L) pails; Part B: 53 gal (200 L) drums and 6 gal (24 L) pails	



Chemical Grout Performance Guide

A Technical Guide to MasterRoc® Injection Products by Performance



Injection Products – Acrylics

Injection Product		MasterRoc MP 300	MasterRoc MP 304	MasterRoc MP 307 CE	MasterRoc MP 309	Notes
Viscosity of Mixed Material, cP/mPa.s		2 to 5	5	7	13	At 68 °F (20 °C); depending on the mixing ratio
Gel Time		10 s to 30 min	15 s to 7.5 min	3 to 24 min	1 to 12 min	Highly dependent on product temperature, ground temperature, accelerator dosage and hardener dosage
Cured Material Property	Elongation at Break	N/A	> 700%	> 300%	N/A (Hard)	
	Swelling	Yes	Up to 100% of the initial volume	up to 20% of the initial volume	N/A	Swelling feature helps fill cracks and fissures
	Appearance	Flexible soft gel	Rubber-like elastic	Rubber-like solid	Hard-elastic solid	
	Flexibility	High	High	Medium	Very Low	
	Adhesive / Bond Strength	Excellent	Excellent	Good	Good	All products bond to damp or wet surfaces
Hardened Material Property	Strength (Neat resin)	Soft gel	Soft gel	Soft gel	Compressive – Over 1300 psi (9 MPa)	
	Re-swelling (after dry cycles)	Excellent re-swell property	Up to 100% of the initial volume	Up to 20% of the initial volume	N/A	
	Chemical Resistance	Acids and Bases	Acids, Bases and Diesel	Acids, Bases, Solvents and Fuels	Acids, Bases, Solvents and Fuels	Refer to the complete chemical resistance list
Splitting Resin with Water		Up to 1:3	No	No	No	
Pot Life (activated), hours		8	5	5	5	At 68 °F (20 °C)
Pump		Two-component injection pump	Two-component injection pump	Two-component injection pump	Two-component injection pump	
Packaging	Resin	44 lb (20 kg) pail	44 lb (20 kg) pail	44 lb (20 kg) pail	44 lb (20 kg) pail	
	Accelerator	6.6 lb (3 kg) bottle	1.1 lb (0.5 kg) bottle	2.2 lb (1 kg) bottle	1.1 lb (5 kg) bottle	Accelerators of MasterRoc MP 304 and MasterRoc MP 307 CE are the same material; but have different package sizes
	Hardener	2.2 lb (1 kg) bottle	2.2 lb (1 kg) bottle	0.66 lb (0.3 kg) bottle	0.88 lb (0.4 kg) bottle	Same hardener; but have different package sizes
	Part B	44 lb (20 kg) pail (Optional)	44 lb (20 kg) pail (Optional)	45 lb (20 kg) pail (Optional)	44 lb (20 kg) pail	Part B of MasterRoc MP 300, MasterRoc MP 304, and MasterRoc MP 307 CE is the same material

About Master Builders Solutions

Master Builders Solutions is a leading global manufacturer of concrete admixtures, as well as other sustainable solutions for the construction industry, focussed on delivering its vision: **Inspiring people to build better.** Master Builders Solutions provides value-added technology and market-leading R&D capabilities to improve the performance of

construction materials and to enable the reduction of CO2 emissions in the production of concrete. Founded in 1909, Master Builders Solutions has ca. 1600 employees operating 35 production sites globally, supporting their customers in mastering their building challenges of today – for a decarbonised future.