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Technical Data Guide

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Joint
Sealants

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MasterSeal[®] CR 195

One-component, aliphatic, non-sag, elastomeric,
polyurethane security sealant

FORMERLY SONOLASTIC[®] ULTRA

PACKAGING

- 300 ml (10.1 fl oz) cartridges,
30 per carton
- 20 fl oz (590 ml) ProPaks,
20 per carton

COLOR

Limestone, White and Aluminum Gray

YIELD

See page 3 for charts

STORAGE

Store in original, unopened containers
away from heat and direct sunlight.
Storing at elevated temperatures will
reduce shelf life.

SHELF LIFE

1 year when properly stored

VOC CONTENT

118 g/L
less water and exempt solvents

DESCRIPTION

MasterSeal CR 195 is a one-component, moisture-curing, aliphatic, non-sag, polyurethane sealant for security and institutional uses requiring elasticity, abrasion and puncture resistance, with superior color integrity.

PRODUCT HIGHLIGHTS

- Aliphatic polyurethane technology with non-staining, non-yellowing, non-chalking characteristics
- Pick-resistant, making it excellent for security applications, schools and other public buildings
- High UV resistance prevents discoloration from sunlight
- Absence of tackiness creates a dirt free, self-cleaning surface
- Medium modulus provides superior puncture and abrasion resistance
- Superior gunability and workability for increased ease in tooling
- Movement capability $\pm 25\%$ expansion and contraction with joint movement
- Suitable for water immersion with documented performance in wet areas

SUBSTRATES

- Concrete, masonry
- Granite, marble
- Brick
- Metals
- Wood

APPLICATIONS

- Horizontal and vertical
- Interior and exterior
- Immersed in water
- Store fronts
- Expansion joints
- Curtain walls
- Panel walls
- Precast units
- Aluminum, vinyl, and wood window frames
- Prisons
- Schools
- Stadiums
- Parking decks
- Plazas
- Wastewater treatment plants
- Dams
- Spillways and storm drains
- Wetwells and manholes

A brand of
MBCC GROUP

Technical Data**Composition**

MasterSeal CR 195 is a one-component, moisture-curing aliphatic polyurethane.

Compliances

- ASTM C 920, Type S, Grade NS, Class 25, Use NT, T, M, A, and I
- Federal Specification TT-S-00230C, Type II, Class A, when primed
- Corps of Engineers CRD-C-541, Type II, Class A
- Canadian approval for use in areas that handle food, CFI

Typical Properties

PROPERTY	VALUE
Temperature range, ° F (° C)	-40 to 180 (-40 to 82)
Shrinkage	None

Test Data

PROPERTY	RESULTS	TEST METHOD
Movement capability, %	±25	ASTM C 719
100 % modulus, psi (MPa)	160 (1.1)	ASTM D 412
Tensile strength, psi (MPa)	600 (4.1)	ASTM D 412
Rheological, (sag in vertical displacement), at 120° F (49° C)	No sag	ASTM C 639
Ultimate elongation at break, %	600	ASTM D 412
Tear strength, pit	100	ASTM D 1004
Extrudability, 3 seconds	Passes	ASTM C 603
Hardness, Shore A, at standard conditions	50 ±5	ASTM C 661
Weight loss, after heat aging, %	9.2	ASTM C 792
Cracking and chalking, after heat aging	None	ASTM C 792
Tack-free time, hrs	< 72	ASTM C 679
Stain and color change	Passes	ASTM C 510
Bond durability, on glass, aluminum, and concrete, ±25% movement	Passes	ASTM C 719
Adhesion in peel*, pli		ASTM C 794
Primed dry		
Glass	37 CF**	
Aluminum	34 CF**	
Concrete	43 CF**	
Water immersion, 122° F (50° C)	Passes 10 weeks with cycling	ASTM C 1247

* Primed for water immersion dictated by ASTM C 920. Concrete and aluminum primed with P 173.

** Cohesive failure

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

TABLE 1

Joint Width and Sealant Depth

JOINT WIDTH, IN (MM)	SEALANT DEPTH AT MIDPOINT, IN (MM)
¼–½ (6–13)	¼ (6)
½–¾ (13–19)	¼–⅜ (6–10)
¾–1 (19–25)	⅜–½ (10–13)
1–1½ (25–38)	½ (13)

Yield

LINEAR FEET PER GALLON*

JOINT DEPTH, (INCHES)	JOINT WIDTH (INCHES)									
	¼	⅜	½	⅝	¾	7/8	1	1½	2	3
¼	308	205	154	122	–	–	–	–	–	–
⅜	–	–	–	82	68	58	51	–	–	–
½	–	–	–	–	51	44	38	26	19	12

METERS PER LITER

JOINT DEPTH, (MM)	JOINT WIDTH (MM)									
	6	10	13	16	19	22	25	38	50	75
6	24.8	16.5	12.4	9.8	–	–	–	–	–	–
10	–	–	–	6.6	5.5	4.7	4.1	–	–	–
13	–	–	–	–	4.1	3.5	3.0	2.2	1.5	0.7

HOW TO APPLY**JOINT PREPARATION**

- The product may be used in sealant joints designed in accordance with SWR Institute's Sealants - The Professional's Guide.
- In optimum conditions, the depth of the sealant should be ½ the width of the joint. The sealant joint depth (measured at the center) should always fall between the maximum depth of ½" and the minimum depth of ¼". Refer to Table 1.
- In deep joints, the sealant depth must be controlled by closed cell backer rod or soft backer rod. Where the joint depth does not permit the use of backer rod, a bond breaker (polyethylene strip) must be used to prevent three-point bonding.
- To maintain the recommended sealant depth, install backer rod by compressing and rolling it into the joint channel without stretching it lengthwise. Closed cell backer rod should be about ⅛" (3 mm) larger in diameter than the width of the joint to allow for compression. Soft backer rod should be approximately 25% larger in diameter than the joint width. The sealant does not adhere to it, and no separate bond breaker is required. Do not prime or puncture the backer rod.

SURFACE PREPARATION

Substrates must be structurally sound, fully cured, dry and clean. Substrates should always be free of the following: dirt, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing or curing and parting compounds, membrane materials and sealant residue.

CONCRETE, STONE, AND OTHER MASONRY
Clean by grinding, sandblasting, or wire brushing to expose a sound surface free of contamination and laitance.

WOOD

New and weathered wood must be clean, dry and sound. Scrape away loose paint to bare wood.

Any coatings on wood must be tested to verify adhesion of sealant or to determine an appropriate primer.

METAL

Remove scale, rust, and loose coatings from metal to expose a bright white surface. Any coatings on metal must be tested to verify adhesion of sealant or to determine an appropriate primer.

PRIMING

- MasterSeal CR 195 is considered a non-priming sealant, but special circumstances or substrates may require a primer. It is the user's responsibility to check the adhesion of the cured sealant on typical test joints at the project site before and during application. Refer to product data sheet on MasterSeal P 173 or MasterSeal P 176, and consult Technical Services for additional information.
- For immersion applications, MasterSeal P 173 must be used.
- Apply primer full strength with a brush or clean cloth. A light, uniform coating is sufficient for most surfaces. Porous surfaces require more primer; however, do not over-apply.
- Allow primer to dry before applying MasterSeal CR 195. Depending on temperature and humidity, primer will be tack-free in 15–120 minutes. Priming and sealing must be done on the same day.

APPLICATION

- MasterSeal CR 195 comes ready to use. Apply using professional grade caulking gun. Do not open cartridges, ProPaks, or pails until preparatory work has been completed.
- Fill joints from the deepest point to the surface by holding an appropriately sized nozzle against the back of the joint.
- Dry tooling is recommended. Proper tooling results in the correct bead shape, neat joints and optimal adhesion.

CURING TIME

The cure of MasterSeal CR 195 varies with temperature and humidity. The following times assume 75° F (24° C), 50% relative humidity, and a joint ½" width by ¼" depth (13 by 6 mm).

- Skins: overnight or within 24 hours
- Full cure: approximately 1 week
- Immersion service: 21 days

CLEAN UP

1. Immediately after use, clean equipment with MasterSeal 990 or xylene. Use proper precautions when handling solvents.
2. Remove cured sealant by cutting with a sharp-edged tool.
3. Remove thin films by abrading.

FOR BEST PERFORMANCE

- Do not allow uncured MasterSeal CR 195 to come into contact with alcohol-based materials or solvents.
- Do not apply polyurethane sealants in the vicinity of uncured silicone sealants or uncured MasterSeal NP 150.
- MasterSeal CR 195 should not come in contact with oil-based caulking, silicone sealants, polysulfides or fillers impregnated with oil, asphalt or tar.
- All horizontal applications require the use of MasterSeal P 173.
- Protect unopened containers from heat and direct sunlight.
- In cool or cold weather, store container at room temperature for at least 24 hours before using.
- When CR 195 is to be used in areas subject to water immersion, cure for 21 days at 70° F (25° C) and 50% relative humidity. Allow longer cure time at lower temperatures and humidity.
- Do not use in swimming pools or other submerged conditions where the sealant will be exposed to strong oxidizers. Avoid submerged conditions where water temperatures will exceed 120° F (50° C).
- Lower temperatures will extend curing times.
- Do not apply over freshly treated wood; treated wood must have weathered for at least 6 months.

- Pursuant to accepted industry standards and practices, using rigid paints and/or coatings over flexible sealants can result in a loss of adhesion of the applied paint and/or coating, due to the potential movement of the sealant. However, should painting and/or coating be desired it is required that the applicator of the paint and/or coating conduct on-site testing to determine compatibility and adhesion.
- Substrates such as copper, stainless and galvanized steel typically require the use of a primer; MasterSeal P 173 or MasterSeal P 176 is acceptable. For Kynar coatings, use MasterSeal P 173 only. An adhesion test is recommended for any other questionable substrate.
- MasterSeal CR 195 can be applied below freezing temperatures only if substrates are completely dry, free of moisture and clean. Contact Technical Service for more information.
- Proper application is the responsibility of the user. Field visits by Master Builders Solutions personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.com/en-us, e-mailing your request to mbsbscst@mbcc-group.com or calling 1(800)433-9517. Use only as directed.

IN CASE OF EMERGENCY: Call CHEMTEL +1 (800) 255-3924 or if outside the US or Canada, +1 (813) 248-0585.

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