



UNIT MASONRY
Concrete Masonry Units
Carbon Dioxide Cured

1. PRODUCT NAME

Carbon Dioxide Cured Concrete Masonry Products

2. MANUFACTURER

MASTERBLOCK
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Eagan, MN 55121
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3. PRODUCT DESCRIPTION

Carbon Dioxide Curing is a high temperature, accelerated steam curing process, which cures concrete masonry to ASTM C90 Type I moisture-controlled criteria. Carbon Dioxide Curing offers the following advantages.

- **ASTM C90 Type I**

MOISTURE CONTROLLED UNITS

Carbon Dioxide Cured units are guaranteed to meet ASTM C90 Type I moisture-controlled criteria prior to shipment (see Table 1 below). This means that long curing times (28 days or more under proper conditions with other curing processes) are not required for plain block, or "made as ordered" architectural CMU's, such as ground face and integral colored rock face units.

TABLE 1 Moisture-Content Requirements for Type I Unit

Total Linear Drying Shrinkage, %	Moisture Content, max.% of Total Absorption (Average of 3 Units)		
	Humidity conditions at Job Site or Point of Use ^D		
	Humid ^A	Intermediate ^B	Arid ^C
0.03 or less	45	40	35
From 0.03 to 0.045	40	35	30
0.045 to 0.065, max	35	30	25

^A Mean annual relative humidity above 75%.

^B Mean annual relative humidity 50 to 75%.

^C Mean annual relative humidity less than 50%.

^D See Appendix 1 for map of mean annual relative humidity.

The linear shrinkage of Carbon Dioxide Cured units will typically test in the 0.03 to 0.045 range. After production, Carbon Dioxide Cured block will not exceed the allowable maximum moisture content as specified above in Table 1.

- **LESS SHRINKAGE**

Laboratory testing has shown that the shrinkage of Carbon Dioxide Cured units when drying from saturation to equilibrium in a heated building can be as much as 40% less than units cured by conventional curing methods. Because the Carbon Dioxide Cured CMU's shrink less, walls constructed with Carbon Dioxide Cured CMU's are less susceptible to moisture penetration due to shrinkage cracks.

- **COLOR CONSISTENCY**

The extended high temperature Carbon Dioxide Curing process coupled with advanced temperature and moisture content control of sand and aggregates ensures improved color consistency and uniformity over non-Carbon Dioxide Cured units. The Carbon Dioxide Curing process typically results in a 95% or greater reaction of cement particles (as much as 30% higher than other curing methods). This process converts the soluble materials normally found unchanged in conventionally cured CMU's into stable inert compounds, thus practically eliminating efflorescence and leaching problems.

- **SPECIFICATIONS**

Provide concrete masonry units as manufactured by MASTERBLOCK. Color shall be _____. All concrete masonry units shall conform to ASTM C90 Type I criteria prior to shipment and shall be Carbon Dioxide Cured to a minimum temperature of 180°F.

- Please contact the MASTERBLOCK Architectural Products Representative for a complete guide specification.