



## Cast In Motion: CIM 84

### Fire-Rated Casting Resin for Digital Fabrication

CIM 84 is a casting resin compliant with ASTM E84 Class A fire rating. Available for use with the Massivit 10000 series, CIM 84 enables the digital fabrication of large-scale experiential displays, props, and characters that comply with the highest fire and safety rating related to flame spread and smoke development.

#### Key Advantages:

- Fire-rated: ASTM E84 Class A
- Suitable for printing very thick parts
- Does not require post cure after print
- Does not contain VOC's, phthalates or crystalline silica

# CIM 84 - Technical Data Sheet

Character	Method	Metric	Imperial
<b>Mechanical Properties</b>			
Izod Impact	ASTM D256	22 [J/m]	0.412 [ft-lb/in]
Shore Hardness	ASTM D2240	84D	84D
<b>Tensile Properties</b>			
Ultimate Tensile Strength	ASTM D638	23 [MPa]	3340 psi
Elastic Modulus	ASTM D638	2.7 [GPa]	389,000 psi
Elongation at Break	ASTM D638	1.1 %	1.1 %
<b>Thermal Properties</b>			
Glass Transition Temperature	ASTM D3418	64 [°C]	147 [F]
Heat Deflection Temperature @0.45 MPa	ASTM D648	55 [°C]	131 [F]

Mix Ratio by Weight	100A:100B
Mix Viscosity	13,000 cP
Specific Gravity	1.51 g/cm <sup>3</sup>
Pot Life @RT	80 minutes
Cure Time @RT	17 hours
ASTM Fire Rating	ASTM E84 Class A
Mixture Color	Tan brown

All measurements were done on lab specimens of cured material, followed by post - cure process. The specifications stated above refer to the Beta version and results were derived from internal lab tests. The material above is under R&D development

## Pre-Mixing Material

The fillers in this epoxy system will settle in the container over time. Before loading to the machine, fillers must be reconstituted by pre-mixing Part A thoroughly.

## Storage

The material base -A and hardener -B should be stored in a dry place in the sealed original container at temperatures between +2°C and +40°C. Under these storage conditions, the shelf life is one year. The product should not be exposed to direct sunlight.

## Precautionary Statement

Massivit maintains up-to-date Material Safety Data Sheets (MSDS) on all its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

## Post Process

Cured CIM 84 specimens can be milled, polished, or coated with a suitable coating or paint. Let the coating fully dry before putting the part into service.