

## Technical News Bulletin

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### Pre-Formed Insulation for Metering Orifice Rings

#### Introduction

Preparing orifice rings for service is often a messy and time consuming ordeal. The insulation package must be prepared and great care must be taken to ensure that voids are not left underneath the orifice ring that may lead to cracks. In order to help ease this process, Bucher Emhart Glass now offers pre-formed insulation for its metering orifice rings.

The Pre-Form is made of bio-soluble ceramic fiber, and shaped to fit tightly inside the steel pan with a cavity ready for an orifice ring. This significantly reduces the time needed to prepare an orifice ring for service.



Pre-Formed Orifice Ring Insulation for a 10"/11" DG.




A complete orifice ring assembly with pan, pre-formed insulation, and orifice ring.

## Specification

Orifice ring Pre-Formed Insulation is available in the following sizes:

Part Number	Metering Orifice Ring Series
59-95511	81 Series 8"/9" SG
59-95512	81 Series 8"/9" DG
59-95513	81 Series 8"/9" TG
59-95514	503/515 Series 10"/11" SG
59-95515	503/515 Series 10"/11" DG
59-95516	503/515 Series 10"/11" TG
59-95517	585 Series 13" DG (1-3/8" to 2-1/2" Orifice Diameter)
59-95518	585 Series 13" DG (2-9/16" to 3" Orifice Diameter)
59-95519	585 Series 13" DG/TG

## Material Technical Data Sheet

<b>Mix Name:</b>	<b>Bio-Soluble Fiber Orifice Ring Pre-Formed Insulation</b>			
<b>Type:</b>	<b>Vacuum Formed</b>			
<b>Application:</b>	High temperature ceramic fiber insulation made with bio-soluble fibers. Low thermal conductivity, high temperature stability and excellent resistance to thermal shock with excellent flexural and compressive strength. Available in a wide variety of sizes.			
<b>Typicals:</b>	<b>Density:</b>	<b>180 kg/m<sup>3</sup></b>	<b>Chemistry:</b>	<b>Wt.%</b>
			<b>Al<sub>2</sub>O<sub>3</sub></b>	<b>1 – 5</b>
	<b>Temperature Rating</b>	<b>1300°C (2372°F)</b>	<b>SiO<sub>2</sub></b>	<b>70 – 80</b>
			<b>NaO</b>	<b>N/A</b>
	<b>Typ Linear Shrinkage:</b>	<b>@ 1250°C – 2.6%</b>	<b>CaO</b>	<b>N/A</b>
			<b>MgO</b>	<b>17 – 22</b>
	<b>Thermal Conductivity:</b>	<b>800°C – 0.23 W/mK</b>	<b>Other</b>	<b>&lt;1</b>
		<b>1000°C – 0.35 W/mK</b>		
	<b>1200°C – 0.54 W/mK</b>			

All data is subject to reasonable deviations and not to be used for specification purposes.

## Features / Benefits

- |  |   |   |
|--|---|---|
| Minimal preparation required to prepare orifice rings                  | ⇒ | Facilitates faster job changes.   |
| The insulation does not need to be “packed” around the orifice ring.   | ⇒ | Risk of voids underneath the orifice ring is reduced.                           |
| Insulation residue is easily removed from the bottom of the steel pan. | ⇒ | Reduce the time needed to clean the steel pans for the next use.                |
| Pre-Form is available in Bio-Soluble materials.                        | ⇒ | Health and Safety risks to the operators are reduced compared to RCF materials. |