

MAFTEC® - Mitsubishi Alumina Fiber Technology. **MAFTEC®** was developed in the 1980's by Mitsubishi Plastics Inc. for long term high or cyclic temperature operation. **MAFTEC®** "Polycrystalline Alumina Fibers" exhibit excellent thermal stability, resiliency, erosion resistance and mechanical strength at temperatures to 1600°C - 2912°F.

MAFTEC® is a mullite fiber. Mullite is a stable material that does not change molecularly through the temperature range, up until it melts (1850°C). The silica in **MAFTEC®** is contained within the structure of Mullite and is not allowed to form free silica. **MAFTEC®** fiber diameter averages 5 microns.

MAFTEC® SYSTEMS

Polycrystalline Alumina Fiber (Mullite)

- **Service temperature range** - up to 1600°C - 2912°F continuous.
- **Extremely low shrinkage** - 1% at 1400°C - 2552°F. 1 ½% at 1600°C - 2912°F.
- **Resiliency Performance** - to 1300°C.
- **Higher Tensile Strength** - maintaining lining integrity.
- **Extreme Weight Reduction** - lining densities of 8-10#/cu.ft compared to monolithic of 150-160#/cu.ft.
- Total **Thermal Shock Resistance**
- **Installed** easily and quickly in all temperature environments.
- **Low, Low, Low shot** content due to manufacturing technology.
- **Weight** and thickness tolerances to ensure value.
ONCE AGAIN
- **1% Shrinkage at 1400°C.**
- **Improve Safety, Quality Cost**

- **Reduce** down time, repair and replacement cost
- **MAFTEC®** systems provide the Solution.

DOORS in the aluminum industry are subjected to flame impingement, over firing and chemical attack causing failure - **MAFTEC®** solves these concerns.



MAFTEC® Modules



Perimeter Lining



Stack Method Internal



Inspection Stage



Completed MAFTEC® Installation



Thermbond 28-S Coating

Summary

Previously ceramic fiber shrunk badly and failed within 6 months of service due to temperature and flux exposure.

The **MAFTEC®** temperature use limit and chemistry eliminates shrinkage problems consequently lining integrity remains constant and structural damage is eliminated.

INDUSTRIES SERVED

- | | | | |
|----------------------------|--------------------|------------------------|---------------------------|
| ☞ Refining - Petrochemical | ☞ Non-Ferrous | ☞ Zinc | ☞ Precast Manufacturing |
| ☞ Rock Products | ☞ Die-Casting | ☞ Boiler Manufacturing | ☞ Mineral Processing |
| ☞ Chemical | ☞ Power Generation | ☞ Primary Aluminum | ☞ O.E.M. Furnace Builders |
| ☞ Steel | ☞ Incineration | ☞ Secondary Aluminum | ☞ Cremation |