CERAMIC REINFORCED TECHNOLOGIES

CERFLON® and CERTEXTM FluoroCeramic Chemistry



CERFLON® Introduction and Table of Contents Booklet

A Guide and Manual

VOLUME 3 | August 2015

Introduction

his document is a compilation and consolidation of the most salient and significant data regarding "Ceramic Reinforced Fluoropolymers" and Cerflon®. It is an indexed reference tool that includes detailed information on several uses of the patented Cerflon® chemistry.

It also contains other issued patents and patent applications that include the use of the Cerflon® composition of matter patent. They include those written by Xerox Research Center, Garlock Sealing Technologies and DuPont that specifically reference Cerflon® dispersions or the combination of fluoropolymers and Boron Nitride.

Additionally, it cites many successful, commercially marketed products from companies such as DuPont, Radiator Specialties, Garlock and quite a few others. There are also academic "white papers" included as well as some "out of the box" thinking regarding other market opportunities which have not been considered to date.

This manual is a very valuable reference and sales tool for the current line of Ceramic Reinforced Technologies (CRT) Cerflon® dispersions and Cerflon® FluoroCeramic powders.

TableofContents

What is Cerflon® and "Why" Cerflon®? Booklet

A simple definition

So, what is Cerflon®?

So, why Cerflon® now?

FluoroCeramic Cerflon® Benefits

An Illustration of Market Scale Opportunities for BN in Fluoropolymers

Cerflon® Data Booklet

Some interesting "Application Patents" that incorporate Cerflon®

Garlock Sealing Technologies - An EnPro Company (NYSE – NPO)

FluoroCeramic Cerflon® Data

FluoroCeramic Cerflon® Ladder Studies

FluoroCeramic Cerflon® Data - HFRR Cerflon® on DLC

FluoroCeramic Cerflon® as a Polymer Processing Additive

FluoroCeramic Cerflon® versus Molybdenum Disulfide (MoS₂)

Solid Lubricant Comparison - Graphite - MoS₂ - PTFE - Boron Nitride

FluoroCeramic Cerflon® versus Emralon® 334

FluoroCeramic Cerflon® versus Emralon® 334 Chart

FluoroCeramic Cerflon® in Dry Film coating

FluoroCeramic Cerflon® - St-Gobain 2001 Falex Testing

FluoroCeramic Cerflon® Data

FluoroCeramic Cerflon® Data - GE Advanced Ceramics

Cerflon® Commercialized Products Booklet

Cerflon® Dispersions

Cerflon® FluoroCeramic Powders

FluoroCeramic Cerflon® Comparative Values at Different Ratios

FluoroCeramic Boron Nitride and PTFE for the Food Industry

Perfluoroalkylpolyether (PFPE) and Boron Nitride

Some consumer product applications

Cerflon® Market Scale Analysis Booklet

Some industrial market numbers and opportunities

Some automotive and consumer market numbers and opportunities

Cerflon® in Plastics

Some "Out of the Box" FluoroCeramic Cerflon® thoughts

Some more "Out of the Box" FluoroCeramic Cerflon® thoughts

Cerflon® Patent(s) Booklet

APPENDIX

US Patent 5,783308, "Ceramic Reinforced Fluoropolymers"

US Patent 7,734,244 Apparatus for Conditioning a Substrate

US Patent Application 2008/0166643A1 Electrographic Photoreceptors having reduced torque and improved mechanical robustness. Xerox Research Center

US Patent 7,811,490, Boron Nitride Filled PTFE - Garlock

US Patent Application 2010/0288968 A1 - Composite of a Polymer and Surface Modified Hexagonal Boron Nitride - DuPont

The Effect of Combining Boron Nitride and Fluoroelastomer on Melt Fracture in Extrusion Blow Moulding-University of British Columbia Boron Nitride as a Processing Aid for the Extrusion of Polyolefins and Fluoropolymers

Cerflon® Chronological History

A Chronological Summary of FluroCeramic Cerflon® Development