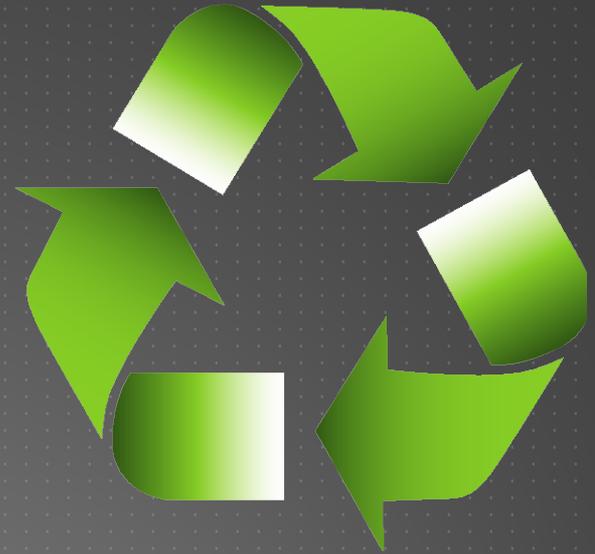


**COM2** |  
**RECYCLING SOLUTIONS**



## **CRT Glass to Ceramic Frit**

USEPA Region e-Recycling Webinar Series

May 19, 2016

# OVERVIEW

- ▶ About
- ▶ Upstreams and Downstreams
- ▶ Process & Product
- ▶ Capacity
- ▶ FAQs

# ABOUT COM2

- ▶ Limited Liability Corporation
  - ▶ Minority and Small Business Certified
- ▶ 2 facilities - Carol Stream, IL
  - ▶ 86,000 sq. ft. E Fullerton Ave. /207,000 sq. ft. Kehoe Blvd.
  - ▶ 65 Employees total
- ▶ 1 facility – Mississauga, ON
  - ▶ 17,000 sq. ft. - 15 employees
- ▶ Dismantling, glass shredding, refurb/resale
- ▶ R2 Certified/ISO 14001 and 18001 Certified
- ▶ USEPA Legitimate Recycling Standard compliant

# CRT MATERIAL ACCEPTED

- ▶ Whole CRT units
- ▶ Bare tubes
- ▶ Broken tubes
- ▶ Broken glass

# UPSTREAM/DOWNSTREAM

## ▶ Upstream

- ▶ Recyclers
- ▶ Manufacturer take-back
- ▶ Government
- ▶ Enterprises

## ▶ Downstreams

- ▶ CRT glass - None
- ▶ Frit buyers - Brazilian and US tile manufacturers

# WHAT IS FRIT?

Used in the ceramics industry for ceramic tile glaze

- ▶ Feldspar, sodium carbonate and quartz, all found in CRT glass, are required for frit production
  - ▶ Energy savings
  - ▶ Natural resource savings
- ▶ Lead
  - ▶ Speeds up the fusing process (energy)
  - ▶ Reduces permeability (function)
  - ▶ Dramatically enhances brightness of glazes (marketability)



# PROCESS – CRT GLASS

- ▶ Glass and glass products received at E Fullerton
  - ▶ Disassembly
  - ▶ Shredding
  - ▶ Dry-cleaning process to remove coatings
- ▶ Prepared glass moved to frit production facility on Keyhoe Blvd.

# PROCESS – FRIT PRODUCTION

- ▶ Cleaned CRT glass sized - metal particles removed
- ▶ Feldspar, other minerals added in accordance with buyer specs
- ▶ Frit collected into supersacks for shipping
- ▶ Vitrification process occurs at the tile manufacturing site

# CAPACITY

- ▶ CRT glass processing capacity
  - ▶ 5/TPH
- ▶ Frit production capacity
  - ▶ 20 TPH
- ▶ Expanding capacity?
  - ▶ Dictated by inbound volume/outbound product demand

# FAQS

- ▶ Is COM2's use for CRT glass the same as Camacho in Spain?
  - ▶ No. COM2 only uses CRT glass to produce frit for tile glaze, not the 'bisque', which is the tile itself
  - ▶ Does it pass TCLP?
    - ▶ Yes. All TCLP testing comes in below Reportable Limits
- ▶ Does it pass the ISO test for lead and cadmium off-gasses from ceramic tiles?
  - ▶ Yes

Other questions?

# CONTACT

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