

# Polymers & Manufactured Products

CTLGroup provides materials science and building system solutions for clients such as manufacturers, architects, engineering firms and contractors through materials characterization, testing and analysis, addressing issues relevant to the polymer industry, including:

## Polymers

- Sealers + coatings
- Adhesives
- Polymer concrete additives

## Composites

- Deck board + guard rail systems
- Engineered composite ties

## Manufactured Products

- Overload testing
- Fatigue life testing
- Manufacturing qualification testing

We tackle a diverse set of challenges for our clients. Whether conducted in the field, or within our extensive facilities, our work with polymers and manufactured products includes: materials characterization, testing and analysis, addressing issues relevant to the polymer industry, including:

- Materials characterization
- Materials research + product development
- Materials + building system certification + code

- compliance
- Creep testing
- Dynamic testing
- Static testing
- Polymer, composite + natural rubber pad testing
- Composite railroad tie testing per the AREMA test method
- Freeze-thaw resistance testing
- Analysis of temperature + moisture effects
- Ultraviolet resistance testing

## Not Just Data — Solutions

CTLGroup offers a broad range of consulting and training services related to cement plant operations and cement properties.

- Raw material analysis
- Phase content by X-ray diffraction
- Clinker reactivity
- Sulfate form and content
- Cement/admixture interactions
- Stack emissions control

