# Michael Ferreira

Senior Materials Engineer

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## SKILLS

- Materials Engineering
- Materials Testing
- Failure Analysis
- SEM
- Data Analysis
- DOE
- Minitab
- Polymers
- Problem-Solving
- Communication Skills

## EDUCATION

**Master of Science** 05/2017

University of Michigan

Ann Arbor, MI

Materials Science and Engineering

## CERTIFICATES

**Six Sigma Black Belt** 11/2020

American Society for Quality

## SUMMARY

Senior materials engineer with 9 years in automotive materials engineering for polymers, aluminum and steel parts. Leads materials testing, failure analysis and supplier approvals for a body and chassis program, and uses data analysis to settle design questions early. Strong communication skills with design, purchasing and plant teams across 3 sites.

## EXPERIENCE

### Senior Materials Engineer

03/2022 - Present

Great Lakes Mobility Systems — Troy, MI

Materials engineering for a Tier 1 supplier of body, chassis and battery enclosure parts.

- Lead materials engineering for **4** vehicle programs, approving 120+ material and supplier changes a year.
- Direct failure analysis with SEM, fractography and chemical analysis on 30 field and test failures a year.
- Plan materials testing for a new aluminum battery enclosure, cutting mass by 18% at the same crash rating.
- Apply data analysis and DOE in Minitab to set weld and adhesive windows, saving $1.1M in scrap.
- Mentor 3 materials engineers and run monthly design reviews on problem-solving cases.

### Materials Engineer

06/2017 - 02/2022

Rouge River Automotive Components — Dearborn, MI

Materials lab for an interior and exterior trim supplier.

- Tested polymer and coating properties against OEM specifications for 200+ part numbers.
- Investigated paint delamination and cracked bumper failures, closing 45 root cause reports.
- Created a lab test request system that cut average turnaround from 10 days to 6.
- Trained 5 lab technicians on DSC, FTIR and tensile test methods for polymer parts.