

Training CATALOG

Mangrove International

Plastic Welding Expertise and Training

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Fundamentals

Introduction

- Examples of everyday plastic welds
- Effects of poor welds

Polymer Basics

- Polymer chemistry and structure
- Important thermal properties
- Effect of additives and fillers
- Environmental effects (contaminants, humidity)
- Overview of common polymers

Polymer Welding Basics

- Welding vs Adhesive Bonding
- Intermolecular Diffusion
- Simulation and Modeling
- Anatomy of a weld
- Weld strength

Weld Quality Evaluation

- Evaluation techniques
- Destructive vs Non-Destructive
- Qualitative vs Non-Qualitative
- Testing schedule
- Record keeping

Overview of over a dozen Plastic Joining Processes

- Process description
- Advantages / Disadvantages
- Cost / Geometry Restrictions
- How to pick a process

Welding Processes

(Currently Ultrasonic and Laser are available)

- Theory
- How it works
- Important equations
- Equipment description
- Limitations
- Average costs
- Tooling
- Key process parameters
- Primary and secondary parameters
- Initial recommendations
- Design and material considerations
- Common mistakes
- Joint designs
- Troubleshooting basics