

40 years of expertise in laser safety and laser technologies, serving your most critical challenges.

# Plastics and Polymer Welding

Ref: AL.2-6

Laser welding is now an operational joining method for thermoplastics. This fully mastered technology offers numerous possibilities and meets a wide range of requirements such as speed, quality, flexibility, precision and appearance quality.

## Practical information

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**DATES ( INTER-COMPANY / IN-HOUSE / E-LEARNING )**

On request

**ORGANISATION**

IREPA LASER - Strasbourg / Illkirch

**DURATION**

2 days (14 hours)  
Starts at 1.30 pm

**PRICES**

1790€ excl. VAT

**TECHNICAL/TEACHING LEAD:**

Franck RIGOLET

**DO YOU HAVE A DISABILITY?**

Contact our disability officer at [referent.handicap@irepa-laser.com](mailto:referent.handicap@irepa-laser.com)

**CUSTOMER SATISFACTION**

**99,3%**

*Satisfaction rate based on 2025 sessions*

## Key information

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**PREREQUISITES**

Technical knowledge of polymers.

**ACCESSIBLE LASER CLASSES**

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**CERTIFICATION**

Certificate of completion issued.

**TECHNICAL/TEACHING LEAD:**

Franck RIGOLET

## Training objectives

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- Master the behaviour of thermoplastic materials under the laser beam.
- Prepare the welding operation.
- Master the operating parameters and assess their influence.
- Analyse and correct welding defects.
- Define the laser sources dedicated to joining thermoplastics.

## Target audience

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Engineers, technicians, current or future users of laser welding systems wishing to acquire the essential skills to optimise process quality and performance.

## Programme

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### over 2 days

#### **Lasers and Technology**

- Lasers used
- Optical principles

#### **Safety awareness**

#### **Joining techniques**

- Principle of polymer joining
- Common bonding and welding techniques
- Welding thermoplastics
- surface preparation

#### **Practical implementation**

- Laser joining of thermoplastics
- Operating parameters and their influence
- Quality of laser welding of thermoplastics

#### **Plastics**

- Definition and classification
- Families, properties and processing
- Specific applications
- Additives and reinforcements

#### **Laser welding of plastics**

- Behaviour of polymers
- Laser devices and equipment
- Welding principle and methodology
- Quality of welded joints