MERCURY

PPAP Fundamentals: Understanding Production Part Approval Process

21 – 25 November 2027
Online



Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

PPAP Fundamentals: Understanding Production Part Approval Process

Ref: 121347_1084865 **Date:** 21 – 25 November 2027 **Location:** Online **Fees:** 1900 Euro

Introduction

The PPAP Fundamentals: Understanding the Production Part Approval Process course provides a structured, in-depth theoretical understanding of PPAP as a core quality requirement in manufacturing and supply chain environments. The course explains the purpose of PPAP in ensuring consistent production quality, customer confidence, and compliance with industry standards. Participants will explore how PPAP supports risk reduction, process validation, and defect prevention across product lifecycles.

The PPAP Fundamentals: Understanding the Production Part Approval Process program covers essential documentation, submission levels, and approval requirements used by OEMs and Tier suppliers. It emphasizes understanding PPAP elements within the context of quality management systems and advanced product quality planning. Participants will possess a strong conceptual foundation for interpreting, reviewing, and managing PPAP requirements effectively.

Targeted Groups

This PPAP Fundamentals: Understanding Production Part Approval Process training targets professionals seeking specialized knowledge and skills:

- Quality engineers working in manufacturing environments.
- Supplier quality assurance professionals.
- Production and process engineers.
- Manufacturing supervisors and team leaders.
- Operations and plant managers.
- Procurement and supplier development staff.
- Automotive and industrial auditors.
- Professionals involved in APQP and quality planning.

Course Objectives

Participants will achieve the following objectives by completing the PPAP Fundamentals: Understanding Production Part Approval Process course:

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- Understand the purpose and structure of PPAP requirements.
- Explain the role of PPAP in quality management systems.
- Identify the standard PPAP submission levels.
- Interpret customer-specific PPAP requirements.
- Recognize the relationship between PPAP and APQP.
- Analyze the intent of each PPAP element.
- Understand how PPAP supports process consistency.
- Explain risk mitigation through production validation.
- Describe documentation control within PPAP.
- Understand approval status and decision criteria.
- Evaluate common PPAP challenges and causes of rejection.
- Apply theoretical knowledge to supplier approval scenarios.

Targeted Competencies

Participants will gain the following competencies during the program:

- Conceptual understanding of the Production Part Approval Process.
- Ability to interpret PPAP documentation requirements.
- Knowledge of process validation principles.
- Awareness of customer and regulatory expectations.
- Understanding of quality planning integration.
- Ability to assess PPAP completeness and readiness.
- Familiarity with defect prevention concepts.
- Insight into supplier approval workflows.
- Understand change management within PPAP.
- Analytical thinking for quality compliance decisions.

Studying Scenarios

In this training, participants will develop their skills through the analysis of the following scenarios:

- Reviewing PPAP submissions for new product launches.
- Evaluating supplier readiness before mass production.
- Analyzing rejected PPAP cases and corrective actions.
- Interpreting customer-specific PPAP requirements.
- Assessing process changes requiring PPAP resubmission.
- Understanding approval delays and escalation cases.

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Course Content

Unit 1: Foundations of PPAP and Quality Systems

- Definition and purpose of the Production Part Approval Process.
- Historical development of PPAP in manufacturing industries.
- Role of PPAP within quality management systems.
- Relationship between PPAP, ISO standards, and IATF requirements.
- Importance of PPAP in customer confidence and compliance.
- Overview of PPAP within automotive and industrial sectors.

Unit 2: PPAP Structure and Submission Levels

- Standard PPAP submission levels and their applications.
- Criteria for selecting appropriate submission levels.
- Customer-specific requirements and variations.
- Approval status definitions and decision logic.
- Timing of PPAP submissions in production cycles.
- Documentation expectations for each submission level.
- Communication flow between suppliers and customers.

Unit 3: Detailed Review of PPAP Elements

- Design records and authorized engineering changes.
- Customer engineering approval requirements.
- Process flow diagrams and their significance.
- Process failure mode and effects analysis concepts.
- Control plan structure and intent.
- Measurement system analysis fundamentals.
- Dimensional results and compliance evaluation.
- Material and performance test records interpretation.

Unit 4: Process Validation and Risk Management

- Concept of process capability and stability.
- Initial process studies and statistical expectations.
- Production trial runs and validation objectives.
- Defect prevention through early process verification.
- Managing variation and nonconformities.
- Understanding corrective action integration.
- Risk-based thinking within PPAP frameworks.
- Continuous improvement alignment with PPAP outcomes.

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Unit 5: PPAP Management, Changes, and Best Practices

- PPAP requirements for process and design changes.
- Resubmission triggers and documentation updates.
- Supplier management and approval lifecycle.
- Common PPAP errors and rejection causes.
- Best practices for maintaining PPAP compliance.
- Integration of PPAP with supplier quality management.
- Audit readiness and PPAP record control.
- Long-term value of PPAP in operational excellence.

Final Insights & Key Takeaways

A strong understanding of PPAP fundamentals enables professionals to support consistent production quality and supplier reliability. This course equips participants with the theoretical clarity needed to manage approval processes confidently and align quality practices with industry expectations.