



# IVP Plastics Supplier Quality Manual

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# IVP Plastics Supplier Quality Manual

## 1. Introduction

The purpose of this Supplier Quality Manual is to define the Quality System Requirements that IVP Plastics requires of its suppliers. This manual applies to all IVP Plastics' suppliers of products and services, including shipments to all IVP locations as well as shipments going directly to IVP Plastics' customers. Acceptance of an IVP Plastics purchase order constitutes acceptance of the requirements of this manual. This manual is not intended to replace a supplier's existing quality system. Suppliers should perform a self-evaluation to determine where their quality system aligns with this manual, and should also perform an evaluation of their supply chain.

Suppliers of raw materials and manufactured components are expected to have a minimum of ISO 9001:2008 compliance. Suppliers are expected to have procedures in place designated to ensure that they comply with the laws, rules, and regulations of the countries and locations in which they operate. Suppliers who out-source any processes are responsible for ensuring that their sub-suppliers meet all print and specification requirements and that those suppliers are able to provide inspection and quality data for their processes.

The supplier organization shall ensure the confidentiality of customers' products, related product information, and data, including projects being quoted and those under development.

IVP Plastics and its customers may request access to audit the areas of the supplier's facility involved in the production of IVP products. This shall include access to all applicable records.

## 2. Quality Requirements

### Zero Defect Culture

- Our goal is to supply our customer with zero defect products. This goal can only be achieved with the support and commitment of our supplier.
- Suppliers are required to accept 'Zero Defects' as a target, and have action plans in place to continually reduce PPM defective levels in line with the mission to supply our customers with zero defects.

### Non-Conforming Product

- All parts must meet the customer specifications. The supplier must notify IVP Plastics of non-conforming product and must obtain approval for non-conforming product disposition.
- In the event that non-conforming product has been shipped, the supplier may be required to implement corrective and preventive actions and provide documentation to IVP upon request and in a timely manner.
- In the event that containment actions are necessary due to non-conforming product, the supplier may be required to inspect, sort, and/or rework product.
- The supplier has financial responsibility for nonconforming materials and their effects, which may include warranty issues and/or cost recoveries for sorting, re-work, scrap, premium transportation, etc.

- Colorant Suppliers – IVP requires all colorant to meet the IVP Engineering Approved Standard. The allowable tolerance shall be Delta E CMC <1.0. Colorants shall be uniform in color and appearance, free of contaminants and foreign particles or other defects considered detrimental to the final product performance, and shall be accompanied by a certificate of conformance to the required specification, including sample color plaques.
- Plastic Material Suppliers – Plastic materials shall be uniform in color and appearance, free of contaminants and foreign particles or other defects considered detrimental to the final product performance, and shall be accompanied by a certificate of conformance to the required specification. Plastic material shall be packaged in such a manner as to ensure the parts will be protected against damage and permanent distortion during normal handling and storage.
- Purchased Components Suppliers - Purchased components shall comply with all print specifications. Components shall be free of contaminants and foreign particles or other defects considered detrimental to the final product performance, and shall be accompanied by a certificate of conformance. Components shall be packaged in such a manner as to ensure the parts will be protected against damage and permanent distortion during normal handling and storage.

## Regulatory Compliance

- IVP Plastics requires its suppliers to comply with all applicable regulatory requirements, including RoHS (Restriction on Hazardous Substances), REACH (Registration, Evaluation, Authorization and Restriction of Chemical Substances), and Conflict Minerals (natural resources extracted in a conflict zone).
- It is the responsibility of the Supplier to verify that the substances that are not in compliance with applicable regulatory requirements are not in any products, parts, components, or materials supplied to IVP.
- Suppliers may be required to submit documentation of purchased and supplied components into IMDS database.

## PPAP Requirements

- A level 3 PPAP is required to be submitted for any new or modified part, in accordance with AIAG requirements, whenever any of the following conditions exist:
  - ✓ Initial submission of a production part
  - ✓ Engineering changes
  - ✓ Tooling changes
  - ✓ Correction of discrepancy
  - ✓ Material change
  - ✓ Process change
  - ✓ Manufacturing location change
- All required documents must be submitted to IVP Quality. PPAP Approval must be granted prior to shipping parts per the purchase order. IVP will not accept PPAP charges if they were not included on the original quote.



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- The following items are required to be submitted for a level 3 PPAP:

1.	<b>Design Record</b>	Include a ballooned print with correct revision level. Balloons should correspond to Dimensional Results.
2.	<b>Engineering Change Documents</b>	Include authorization for anything that varies from the print (marked prints, e-mails, etc.) Deviation requests should also be included in this section.
3.	<b>Customer Engineering Approval</b>	Include any approvals received from IVP engineering.
4.	<b>Design FMEA</b>	Not required unless supplier is design responsible. If required, please refer to Potential Failure Mode and Effects Analysis manual, published by AIAG.
5.	<b>Process Flow Diagrams</b>	Include a diagram of product flow through the plant, from receiving to shipping. Flow diagrams for subcontractors also need to be included.
6.	<b>Process FMEA</b>	Include a PFMEA for all potential failure modes in the process. Refer to Potential Failure Mode and Effects Analysis manual, published by AIAG. PFMEA for subcontractors also need to be included.
7.	<b>Control Plan</b>	Include a Control Plan that defines all methods used for product/process control. Refer to Advanced Product Quality Planning and Control Plan manual, published by AIAG. Control Plans for subcontractors also need to be included.
8.	<b>Measurement Systems Analysis Studies</b>	Include a Gage R&R for any gage listed on the Control Plan or used to measure a critical characteristic. Refer to Measurement System Analysis manual, published by AIAG.
9.	<b>Dimensional Results</b>	All dimensions on the print must be measured for five (5) pieces. A ballooned print must correspond to the dimensional results.
10.	<b>Material, Performance Test Results</b>	Include the material cert, plating cert, and/or any other tests required for material or part performance as specified on the print.
11.	<b>Initial Process Study</b>	Include a 30 piece capability study for any critical characteristic listed on the print. Cpk must be 1.67 or greater.
12.	<b>Qualified Laboratory Documentation</b>	Include lab scope and any other documents showing the lab is qualified for the type of measurements/tests conducted.



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13.	<b>Appearance Approval Report</b>	Required only for parts with color, grain, or surface appearance requirements on the print.
14.	<b>Sample Product</b>	Send five (5) sample parts to IVP quality, unless otherwise specified.
15.	<b>Master Sample</b>	Supplier may retain a master sample part from the approved PPAP batch at their facility.
16.	<b>Checking Aids</b>	If applicable, show evidence that any checking aid (fixture, template, Mylar, etc.) meets print dimensional requirements.
17.	<b>Records of Compliance with Customer-Specific Requirements</b>	If applicable, any document requested by IVP in addition to PPAP requirements.
18.	<b>Part Submission Warrant (PSW)</b>	Include PSW page. Submit level 3, unless otherwise specified.
	<b>Bulk Material Requirements Checklist</b>	Only required for bulk material suppliers

### 3. Product Packaging

IVP Plastics expects products to be packaged in such a way to insure delivery of product intact, and in usable condition. Further, packaging must be labeled with a minimum of the following:

- IVP part number
- IVP purchase order number
- Quantity
- Supplier name
- Item description
- Country of Origin

In addition:

- Partial count cartons or packages must be clearly identified
- Item number must appear on all packing lists
- Containers that are not on skids shall not exceed 35 pounds
- It is the suppliers' responsibility to ensure that product received is packaged in such a manner as to preserve and protect the contents delivered (i.e. rust, damage, deterioration, etc.)
- In accordance with USDA regulations, all pallets must be approved for use and free from infestations.
- Certifications of Conformance and packing lists are required for incoming raw materials.



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## **4. Delivery**

All deliveries are expected to be 100% on-time based on delivery dates agreed upon when the purchase order is issued and acknowledged. On-time for suppliers is defined as 3 days before to 0 days after the agreed upon delivery date.

It is the supplier's responsibility to inform IVP Plastics of any change in ship dates. IVP will accommodate changes in ship dates if possible.

It is the supplier's responsibility to pay for expedited charges if they were late on delivering material.

Deliveries shall be arranged per the carrier specified on the Purchase Order. Shipments received via an unauthorized carrier may result in a charge back to the vendor for the extra cost of freight.

## **5. Management Responsibility**

The supplier's top management is required to take an active role in their quality management system. This commitment shall address the managerial processes of quality planning, quality control, quality improvement, and management review.



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## Supplier Manual Receipt Acknowledgement

I acknowledge receipt and acceptance of terms outlined in IVP Plastics Supplier Quality Manual. This contract for service once signed becomes a binding document between your company and IVP Plastics.

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date