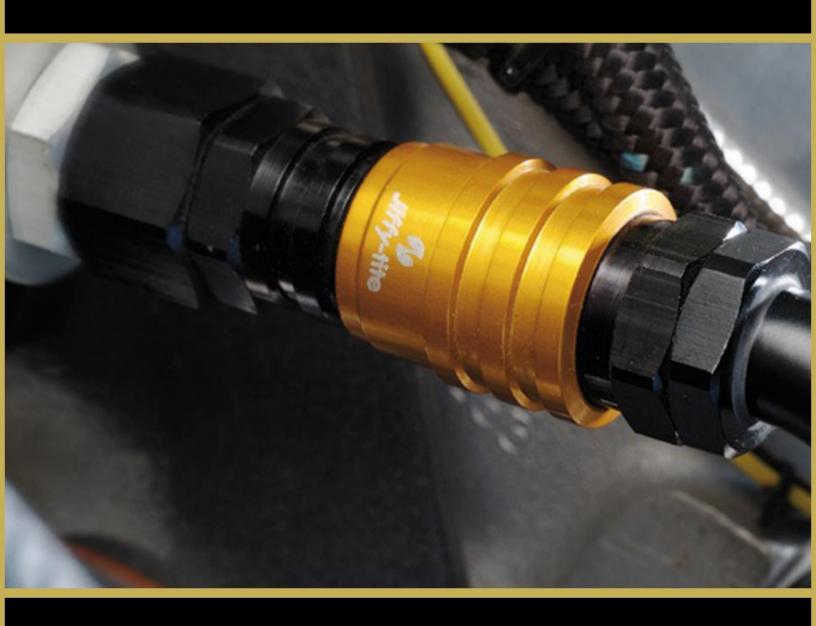
The Jiffy-tite Company Supplier Quality Manual (SQM)





Performance Fuel System Parts

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1.0. INTRODUCTION:

1.1 OVERVIEW

Jiffy-tite is committed to exceeding our customer's quality expectations. Suppliers play a vital role in helping Jiffy-tite achieve this level of customer satisfaction. The Jiffy-tite Supplier Quality Manual is intended to give our suppliers an understanding of Jiffy-tite's requirements related to the quality, delivery, procurement, and performance of production material suppliers.

- 1. Set clear requirements.
- 2. Provide timely and accurate feedback on supplier performance.
- 3. Act as a resource to improve supplier performance.
- 4. Actively seek supplier involvement with emphasis on continuous improvement.

Jiffy-tite welcomes feedback from our suppliers regarding our performance as a customer and suggestions on how we can become a better partner. It is the intent of Jiffy-tite to form strong partnerships with our suppliers so collectively we both can succeed. The Supplier Quality Manual is the property of Jiffy-tite, and is issued for reference and instruction to our suppliers. It is the responsibility of the supplier to execute these requirements throughout their organization.

In the event a significant revision occurs, the supplier will be notified via e-mail detailing the changes and will be instructed to go to the web site and download the revised page(s). The supplier is expected to:

- 1. Review the changes and communicate them throughout their organization.
- 2. Remove and destroy the old revisions of the manual.
- 3. Replace with new revision of the manual.
- 4. Acknowledge that the above steps were taken, (refer to Appendix A Supplier Acknowledgement).

1.2 MISSION STATEMENT

"Our Mission is to ensure our company's long-term success by thoroughly delighting our customers with quality, innovative and continually improving solutions that are second to none."

"We will achieve this mission with harmonious teamwork among employees, customers and suppliers."

"The achievement of our mission will be determined by our customers' success through using our products and services and the degree to which the company, employees and suppliers are enriched."

1.3 QUALITY POLICY

Jiffy-tite is committed to continually improve our products and services to ensure complete customer satisfaction.

1.4 ENVIRONMENTAL POLICY

Our Environmental Policy is to be a responsible corporate citizen in protecting the environment. We are committed to complying with accepted environmental practices, including the commitment to meet or exceed applicable legal and other requirements, to strive for continual improvement in our environmental management system, and to minimize the creation of wastes and pollution. We will, therefore, manage our process, our materials, and our people in order to reduce the environmental impact associated with our work.

2.0. QUALITY REQUIREMENTS:

2.1 QUALITY SYSTEM REQUIREMENTS

Jiffy-tite's quality system is based on the ISO/TS16949 Quality System Requirements. Jiffy-tite requires their suppliers to be compliant to ISO/TS 16949 standards through a third party registrar. At a minimum, Jiffy-tite suppliers must be ISO Certified.

Suppliers have the responsibility to provide goods and services that meet all quality requirements. The supplier will be held financially responsible for any non-compliance resulting in losses to Jiffy-tite Company or its customers.

Suppliers shall follow the requirements in this manual unless Jiffy-tite grants a written approval specifying the areas of deviation.

2.2 SUPPLIER REPRESENTATIVES

Jiffy-tite requires each supplier to designate a primary and back up contact for quality related issues. Contacts are responsible to see that quality issues and inquiries are communicated and addressed in a timely manner

2.3 ADVANCED PRODUCT QUALITY PLANNING

The supplier is required to conduct documented Advanced Product Quality Planning (APQP) activities on all new products and major re-design of existing products. The guide to be used in this process is the latest revision of the <u>Advanced Product Quality</u> Planning and Control Plan reference manual published by the AIAG.

To ensure that the appropriate planning activities are occurring, Jiffy-tite may evaluate the supplier's APQP activities at any time.

2.4 PRODUCTION PART APPROVAL PROCESS (PPAP)

Jiffy-tite requires that part sample submissions be in accordance with the latest revision of the AIAG PPAP Manual. The supplier is responsible for complying with any customer specific requirements. (see appendix in the AIAG PPAP Manual).

Annual PPAP for every production part is required and is the supplier's responsibility to track and manage.

The annual PPAP (Level 2) must be submitted three (3) weeks prior to the previous one (1) year supplier PSW submission date.

PPAP approval is required whenever one or more the following conditions occur:

- Initial material submission.
- Change in material.
- Any machine move (regardless of distance of the move or location).
- New machine is added/changed
 - O (Each Machine requires a separate PPAP, even for the same brand/make of machine i.e. P/N: XXXXXXX-10 is manufactured at a supplier facility using AMCE#7, AMCE#8, and ACME#9, <u>EACH machine</u> will require their own separate PPAP (initial and annual PPAP) to show individual machine capability.
- New manufacturing location(s).
- Improvements or changes to manufacturing process(s), including tooling, sequence changes/moving machine positions, change in tooling design/improvements to tooling, or any other major machine events. A new PPAP is NOT required for consumable tooling.
- A different sub-supplier or processor is introduced / change to PPAP Process Flow Document.
- A tool or process has been out of production for more than one (1) year.
- Any changes, including changes at a sub-supplier that affect fit, form, function, performance, or durability of the part.
- Change in test / inspection method (validation must be provided demonstrating measurement capability that is equivalent to the old method).

NOTE:

The supplier must notify Jiffy-tite before any changes occur for the life of the product (forever requirements).

All PPAP's are to be submitted per Level 3, as defined on the part submission warrant. Unless otherwise directed by Jiffy-tite, the supplier must provide a capability study on two features as agreed with Jiffy-tite (see table on the following page).

A separate warrant shall be used for each part number.

The submission package shall include verification of material and special characteristics for the supplier's product.

The supplier is responsible for performing the inspection, testing, and sample submission.

The supplier may not ship production material until signed PPAP PSW Warrant approval (or an approved deviation – see Section 2.8) is granted by Jiffy-tite, and direction is given by Jiffy-tite purchasing.

PPAP parts must be labeled with JWI 4.6.18-C label template for PPAP-Certified Parts. Label is located on the supplier section of the Jiffy-tite website.

Special Material Label (labels must be white).

- All label information must be completely filled out.
- The label SHOULD be on the same side of the box as the parts label. (Box Size May Prevent This)
- The label MUST NOT be on the top of the box unless the box size prevents this.
- Please DO NOT cover up any information on the production label.
- 100% Shipment ID

PPAP Requirements

The default PPAP is a Level 3 (Initial) and a Level 2 (for Annual Submission), unless otherwise specified.

PPAP Submission Level

No.	Document	Level 1	Level 2	Level 3
1	Part Submission Warrant (PSW)	X	X	X
2	Process Flow Diagram			X
3	Process FMEA			X
4	Control Plan		X	X
5	Capability Study		X	X
6	Gage R&R Study			X
7	Dimensional Results - Part Inspection Report (PIR)		X	X
8	Bubble Drawing aligned w/ PIR		X	X
9	Material/Performance test results		X	X
10	IMDS			X
11	Master Product Samples (used to create Dimension Results)		X	X
12	Copy of Quality System Certification (ISO/TS 16949 or similar)			X
13	Other requirements as applicable			X
	Additional Jiffy-tite Specific Requir	ements		
14	Jiffy-tite. Supplier PPAP Report (JWI 4.9.470)		= 11.	X
15	Sample - Bar code Label			X

Jiffy-tite may require that the supplier complete OEM specific documentation and this will be communicated at time of PPAP.

For a list of the PPAP terms defined, please see the appendix C

The PPAP package (including samples) shall be submitted to the Jiffy-tite Quality Department. Jiffy-tite will communicate the results of the submission to the supplier. A copy of the signed PSW will be forwarded to the supplier for all approved PPAP submissions.

All production parts are subject to comparison to the master sample in terms of visual and dimensional acceptance. Any deviation will be subject to rejection.

If Jiffy-tite is still using current inventory from a supplier (and the supplier does not expect to ship new material before the annual PPAP due date), the supplier is required to send a Level 1 PSW that states the following under the comments section on the PSW:

"Customer is using current inventory, a Level 3 PPAP will be forwarded upon issuance of a new Purchase Order or when new parts are ordered."

Incorrect or incomplete submissions will be rejected.

2.5 Supplier Change Request

Once part(s) have been PPAP approved, any changes need to be approved by Jiffytite. Types of changes that require approval are outlined within the body of the Supplier Change Request form. The supplier is required to submit form # JTF 7.4.1 defining the proposed change a minimum of 90 days prior to the proposed implementation. Please refer to Jiffy-tite website for the latest revision of the form. The supplier must not make any changes until approved to do so, after receiving the signed-off Supplier Change Request form.

2.6 PLATING TEST CERTIFICATION

Plating suppliers shall conform to the requirements outlined in JT3016M.

Yearly plating salt spray tests must be provided and show the <u>actual visual results</u> of the test versus specifications (before/during/after photos of the samples in test).

Blanket statements of conformity are not acceptable.

2.7 MATERIAL CERTIFICATIONS

At initial PPAP, Annual PPAP or when requested, the supplier must provide material certifications for all raw materials for products supplied to Jiffy-tite, verified by a Third Party A2LA certified test facility.

2.8 BOUNDARY SAMPLES

The supplier is responsible for establishing boundary samples for cosmetic issues not matching the PPAP master samples. All boundary samples require approval from Jiffy-tite prior to implementation.

In cases where boundary samples are required, the supplier will submit two sets, one will be kept by Jiffy-tite, and the supplier will retain the other. These samples will be used as visual aids for acceptance criteria. In cases where environmental influences may affect the appearance of the boundary samples, appropriate steps shall be taken to protect the samples or plans made for the periodic replacement of the samples.

2.9 CORRECTIVE ACTION

Suppliers are responsible for delivering defect-free products. If defective material occurs, the supplier is required to have a corrective action procedure in place to provide immediate response, root cause investigation, and reoccurrence prevention.

If defective material is identified during incoming inspection, manufacturing, assembly, packaging, audit, and/or at the end user location(s), Jiffy-tite will contact the supplier and a Corrective Action Report (CAR) may be issued. The supplier will be responsible for any costs associated with defective part(s) discovered in any part of the supply chain that was confirmed to be responsibility of the supplier.

Unless otherwise specified by Jiffy-tite, the following response is required for each Corrective Action Report (CAR) issued:

- 1. Within 24 hours the supplier must:
 - o Issue a quality alert to the production floor and train all effected operators of the reported defect(s).
 - o Issue a return authorization for non-conforming material or authorization to certify or rework material.
 - Provide identification and containment of any material in-transit to Jiffy-tite.
 - o Document the process to inspect, 100% certify, and label suspect material.
 - o Provide timing to replace suspect material with certified material.

If return of material is requested, a return material authorization (RMA) number **AND** shipping method with account number is required to be issued the same day.

NOTE: The supplier must issue an RMA number, and shipping method/account number. Jiffy-tite will return the parts via a carrier of the supplier's choosing; however, the supplier must coordinate the pick-up and return of their parts (the cost for returned parts is the supplier's responsibility).

See Section 5.4 related to rejected material.

Jiffy-tite <u>must</u> be informed about the results of any sort activities within 48 hours of the sort completion.

2. Within 2-weeks:

- o A documented response on the Jiffy-tite 8D CAR form outlining root cause(s), corrective, and preventive measures, and verification of compliance.
 - If the root cause has not been determined within the 2-week period, then the supplier is responsible for providing an action plan with timing, showing the activities needed to determine root cause and implementation of corrective action(s), including due dates and ownership.
- o Relevant PPAP documents updated.

A Corrective Action Report (CAR) will be considered closed when the supplier has demonstrated its capability by providing Jiffy-tite with 100% conforming material through effective containment, material certification, and documented corrective and preventive action implementation.

Jiffy-tite reserves the right to reject, scrap or return material at the supplier's expense should the supplier not comply with the above requirements.

2.10 100% CERTIFIED MATERIAL

Jiffy-tite requires a minimum of three (3) consecutive shipments after a quality concern is reported (either formal or informal notification) to be 100% certified for the reported defects. More certified shipments may be required depending on the event (i.e., until a customer approval is in place or until corrective action has been implemented). The supplier is responsible for providing an example of the certified label.

Every certified box/tote must be identified with the supplier's approved certified label.

- o The first shipment would begin with the letter "A".
- Any subsequent shipments will be identified with the next letter of the alphabet the second shipment would be "B", third would be "C".
- o The "100% Certified Material Pallet Tag "must be attachd to the outside of packaging on at least 2 sides of the pallet. All four (4) sides is better.

2.11 CONTAINMENT / THIRD PARTY CERTIFICATION

All suppliers are required to have a containment process to provide additional verification – outside normal processes – prior to shipment. The process shall include the means to identify and isolate suspect material from unaffected material until such time that its quality conformance may be assessed.

LEVEL I CONTAINMENT (CS-I): Level I containment requires the supplier to implement 100% inspection of product to contain a specific non-conformance. Containment actions must verify conformance and be approved by Jiffy-tite. Jiffy-tite will define exit criteria based on severity of non-conformance, corrective action(s), and detection levels (the process should be separated from the normal production flow to another area in in the plant).

LEVEL II CONTAINMENT (CS-II): Level II containment is initiated once the supplier's CS-I activity has proven ineffective either through inadequate detection, containment, or contamination. Level II containment requires the supplier to contract an independent 3rd party to 100% inspect product that had previously been CS-I inspected by either the supplier or supplier's contractor. Jiffy-tite reserves the right to choose the 3rd party contractor. Exit criteria to be determined on a case-by-case basis. Before exiting Level II Containment, it is also required that the supplier provide a documented response to the Vendor Discrepancy. It is further expected that any changes in process will be documented, evaluated, and approved by Jiffy-tite. Jiffy-tite reserves the right to conduct an on-site audit to verify effectiveness of corrective actions taken.

Note: Escalation to Level II Containment (CS-II) can occur without prior notification of Level I Containment (CS-I) should the severity of the non-conformance(s) warrant.

2.12 Third Party Sorts

In the event that non-conforming parts are received, the order or shipment of non-conforming parts will be quarantined in Jiffy-tite's non-conforming parts holdings area. Within 24 hours of being notified of the non-confirming parts, the supplier must have the parts removed from the holding area. The parts may either be used under an approved deviation for release to production, returned to the supplier or be sent to a local 3rd party sorting company.

Jiffy-tite can provide a list of 3rd party sorting companies near our facility, but will not recommend any particular company. Any communication with the 3rd party sorting companies will be the responsibility of the supplier, and it will be the supplier's

responsibility to provide any work instructions, samples, and gaging needed to conduct the sort. All 3rd party sorting invoices must be billed directly to the supplier.

Effective January 1, 2017, only limited sorting will be allowed at Jiffy-tite facilities, and only to ensure continuity of our production. All other parts must be dispositioned back to the supplier or a 3rd party sorting facility. Once the parts have been sorted and certified to print, the parts may be shipped to Jiffy-tite under a new or modified lot number so that the parts can be clearly identified as those which have been sorted.

Any costs related to receipt of non-conforming parts, including freight to and from the 3rd party sorting company or supplier, are the responsibility of the supplier. If any sorting is conducted at Jiffy-tite, on an exception basis, the supplier will be notified by the Supplier Development Manager or his/her designee, and the supplier will be charged \$25.00 per sorting employee per hour. This expense and any associated costs related to the sort including the purchase of specific gages or freight, will be debited from the supplier's next invoice.

2.13 REQUEST FOR DEVIATION

A product waiver/deviation is used when the condition of material being manufactured, shipped, or used, is non-compliant with the specified drawing, inspection criteria, or standards but, for other reasons, may still be acceptable for use. Any material in this condition must be documented using Jiffy-tite's Deviation Review Record JWI 4.9.466. The maximum deviation that will be granted is for 90 days.

This form shall be submitted to Jiffy-tite noting the detail and nature of the deviation. Jiffy-tite approval of the deviation is required before any material can be shipped. The deviation number must be clearly visible on the container label for all material affected by the deviation.

The supplier is expected to pay associated costs incurred by Jiffy-tite due to special processing or handling as a result of the deviation. These costs will be communicated with the supplier prior to Jiffy-tite taking any action.

2.14 REWORK / REPAIR OF PRODUCT

The supplier shall not rework or repair material without receiving prior authorization. The supplier must have written rework instructions for any rework or repair operations performed prior to requesting approval. Any parts shipped prior to obtaining the appropriate approvals may be rejected and returned to the supplier at their expense. Any costs incurred by Jiffy-tite due to processing non-approved material will be the responsibility of the supplier.

2.15 SUPPLIER CHANGE REQUEST

Once part(s) have been PPAP approved, any changes need to be approved by Jiffytite. Changes that require approval are outlined within the body of the Supplier Change Request form JTF 7.4.1. Supplier is required to submit form JTF 7.4.1 defining the proposed change a minimum 90 days prior to proposed implementation. Please refer to Jiffy-tite website for latest revision of the form. Supplier must not make any changes until receipt of an approved Supplier Change Request form.

2.16 SHIPMENT - NEW/CHANGED MATERIAL

All initial shipments must be clearly identified. Jiffy-tite requires all suppliers to attach reference document JWI 4.6.18-C "Special Material" label to each container for the first three (3) shipments of new production material and to all prototype, PPAP, preproduction, trial, print revision, PTR, breakpoint, and sample shipments. Failure to comply will affect the supplier Delivery Performance Score and may also result in rejection of material.

2.17 SAFE LAUNCH

Jiffy-tite requires all suppliers to utilize Safe Launch (also known in the industry as General Motors GP-12).

Safe Launch control is a method to ensure that launch risks are mitigated and launch problems are corrected as quickly as possible during ramp-up. The Safe Launch control supports the verification of product and process robustness through an additional temporary inspection activity (i.e. outside normal series process – Quality Gate).

Jiffy-tite's objective is Zero Defects at launch.

The Safe Launch Control requires the creation of a Pre-Launch Control Plan (Inspection instruction), in addition to the normal production quality controls.

Upon PPAP approval, Jiffy-tite requires the first three (3) production shipments of any new product* from the supplier to be <u>at a minimum 100%</u> visually inspected for non-conformities, or an agreed to plan with Jiffy-tite representative/SDE in writing.

*New product is defined as no shipments in the previous 12 months to Jiffy-tite.

Exit Criteria – Three (3) consecutive 100% certificated shipments **WITH ZERO (0) DEFECTS** found during the supplier certification, or an agreed to plan with Jiffy-tite representative/SDE.

The supplier must maintain records of the certification, including the features/defects reviewed, date, shift, inspector, machine/tool, lot number, and corresponding Safe Launch Shipment letter.

3.0. PURCHASING REQUIRMENTS

3.1SUPPLIER ASSESSMENT

A Supplier Self-Assessment (SSA) is a process used to verify that a current or potential new supplier has the appropriate quality and business systems in place to meet the minimum requirements of Jiffy-tite. The SSA must be completed and returned to Jiffy-tite prior to a supplier quality system audit by Jiffy-tite personnel. These assessments may also include suppliers that have not met Jiffy-tite's performance expectations and/or who are not ISO-9001 or TS-19649 registered. Jiffy-tite reserves the right to perform a supplier quality system audit at the supplier's manufacturing location(s).

3.2 SUPPLIER RESPONSIBILITY

All suppliers must provide Jiffy-tite with the following prior to a supplier quality system audit:

- An up-to-date copy of their supplier quality manual
- A completed Supplier Selection Criteria (JWI 4.6.5)
- A copy of Supplier's Quality Management System Certification (TS or ISO Cert)
- A copy of the supplier's disaster recovery plan

The supplier shall designate a primary contact who is responsible to ensure all necessary staff members are available for the supplier quality system audit.

The supplier shall comply with the principles contained in the Corporate Sustainability Statement (JWI 4.3.15) which are included in the Jiffy-tite Terms and Conditions, located on Jiffy-tite's website.

3.3 REQUEST FOR QUOTE PACKAGE

The Request for Quote (RFQ) form will be forwarded to each current or prospective supplier. The supplier is required to review all information contained in the quote package provided by the purchasing department.

3.4 RESPONDING TO A REQUEST TO QUOTE

Quoting packages must include information related, but not limited, to: pricing, service, payment terms, quality and engineering compliance referencing Jiffy-tite part number and revision. The bidder is responsible to quote exactly what is specified, including all quality requirements, specifications, and/or prints dimensions. All exceptions must be clearly defined in writing at the time of quote. Jiffy-tite reserves the right to reject late responses.

In order to provide a timely response to our customers, Jiffy-tite requires that suppliers turn around requested quotes per specified date on the Request for Quote (RFQ) document provided by Jiffy-tite.

3.5 CONFIDENTIALITY

All correspondence and information passed between Jiffy-tite and suppliers is to be treated in a confidential manner. This includes, but is not limited to, written, verbal and viewed material in the forms of documents, product, components, ideas, concepts, etc. A Non-Disclosure Agreement will be sent prior to an initial RFQ or presented at the initial visit to Jiffy-tite. This agreement must be signed by an officer or purchasing agent of the supplier and returned to Jiffy-tite Purchasing.

3.6 LOT CONTROL AND TRACEABILITY

The purpose of lot control and traceability is to define the method of identifying supplier's lot numbers. Lot numbers are required for all incoming material and component parts. The lot number shall be included on the label (see Labeling & Packaging Requirements for additional information and requirements). The supplier shall maintain records for each shipment (see Lot No. information referenced on the Packing Slip, Section 4.3).

Supplier's procedures for traceability shall include reference to the lot number used on the product label. Lot numbers shall be traceable to a date, shift, machine, machine operator and all relevant quality data. Each lot shall not exceed the quantity of parts previously agreed upon by both the supplier and Jiffy-tite.

A container must contain only one (1) lot number.

All Jiffy-tite parts must have a Jiffy-tite logo and/or supplier identifying stamp as directed by Jiffy-tite Standard #JT3001D (unless exempted in writing by Jiffy-tite).

3.7 CONTROL OF CUSTOMER SUPPLIED MATERIAL

The supplier shall establish procedures for the control, storage, preservation, and maintenance of any Jiffy-tite supplied material to prevent loss or damage. Examples may include consigned material, sub-assemblies, returnable packaging or tooling. The supplier shall record and report any lost or damaged material to Jiffy-tite Purchasing.

3.8 TOOLING

The suppler shall be responsible for any tooling maintenance or repair over the quoted tool life. "Tooling" refers to any mold, gauge, die or fixture required to produce or measure a part. The supplier is responsible for maintaining the tool for the life of the program and to procure and stock all spare parts necessary to support tooling requirements during the contracted production period. At the discontinuation of the program, the tool shall be returned to Jiffy-tite. Jiffy-tite reserves the right (upon written notification), to remove the tool from the supplier's facility for any reason.

If the tooling is the property of Jiffy-tite or its customer, it must be permanently identified and photographic evidence provided to Jiffy-tite's Purchasing Department.

Jiffy-tite reserves the right to conduct an audit on all customer-owned tooling. Jiffy-tite must approve any modification to tooling previously PPAP approved (see section 2.4).

4.0. LABELING AND PACKAGING REQUIREMENTS

4.1 INTRODUCTION

This section provides guidelines for the printing and placement of shipping labels and container requirements. The intent of the label is to accurately communicate necessary data when material is received at Jiffy-tite. Containers should be adequately designed to prevent damage, loss, contamination or degradation of material during transit and storage.

To enable our system to differentiate the various fields on the label, each field must start with a unique one or two character prefix as described below:

Date Identifier (DI)	Definition	Comment	Example
P	Jiffy-tite Part Number		<u>P</u> 12345678
Q	Quantity	Typically expressed in pieces.	Q 160
K	PO Number		<u>K</u> JT1234
28	Packing List Number		<u>2S</u> B0231231
1T	Lot Number	Typically used for shipment traceability	<u>1T</u> ABC123

Please review this requirement with the appropriate personnel at your company and then forward a new sample label for our review (before initial parts shipment).

4.2 LABELING REQUIRMENTS

Individual containers must have a 4 x 6 label (see below) affixed to one side of each container with the label facing outward. It is the responsibility of the supplier to provide bar-coded labels that meet Barcode text 39 specifications. Information in the barcode must only include the specified information, with no spaces or extra characters. The label shall provide the following information (note letter/Number requirement after Part No., Quantity, etc.):

• Jiffy-tite part number

- Jiffy-tite drawing revision level
- Quantity of material in container
- PO number
- Job number (for those suppliers that provide an additional operation to consigned material)
- Lot number
- Supplier name/address

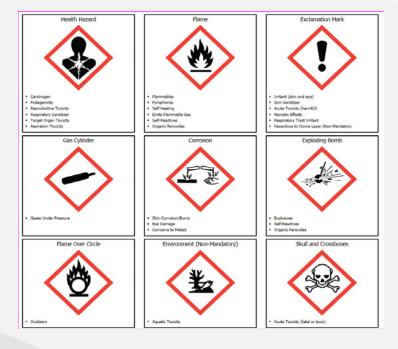
A container (ex: box or tote) must contain only one (1) lot number.

When multiple containers are packaged together, a master label must also be included with the following information (<u>note letter/number requirement after Part No., Quantity, etc.</u>):

- Part Number
- PO Number
- Total Quantity of Containers
- Total Quantity of Material
- Lot Number

Each container shall be marked with a Hazardous Materials Identification System (HMIS) label as required by the SDS documents.

• Hazardous Materials Identification System (HMIS)



Any mislabeled product will be treated as 100% non-conforming material. Label errors will impact the Suppliers Scorecard.

4.3 PACKAGING REQUIREMENTS

Suppliers are responsible for providing a package design that insures part integrity during shipping, handling, and storage. Part protection is the key element and should be considered in the package design.

A packing slip must be included with every shipment and contain the following information:

- Jiffy-tite purchase order and line release number(s)
- Part number
- Drawing revision number
- Lot number(s) & quantity of each lot numbers.
- Total quantity shipped.

The line release number must also be referenced on the invoice.

Packages / containers / packaging materials must be free of debris, foreign material and fluids when they are received at Jiffy-tite.

The use of metal banding materials for packaging is not permitted.

Boxes or totes must not be stacked no more than four (4) high on a pallet.

Per JT3032P - Supplied Materials Packaging Standard

2.0 Protection Requirements

- 2.1. Damage: Supplier packaging must protect all components and materials from physical damage during shipping and handling.
- 2.1.1. Physical damage includes that caused by heat, cold, humidity, vibration, or impact.
- 2.2. Contamination: Supplier packaging must protect all components and materials from any contamination, especially particulates of any type.

Including:

- 2.2.1. Contamination originating in the supplier's manufacturing environment and typical in environment during shipping, handling, and storage.
- 2.2.2. Contamination generated by any adjacent packaging materials employed by the supplier.

- 2.2.3. Contamination generated by the supplied components or materials themselves (i.e. insufficiently secured components moving within pack during transport causing a particulate by fretting).
- 2.3. Corrosion: Supplier packaging must protect all components and materials from corrosion for a minimum of three (3) months, corrosion free. In addition, ferrous components must be protected from rust during shipping and storage for, at least, three (3) months after receipt at Jiffy-tite.

3.0 Primary Container

- 3.1. Sized for hand carry, whenever size and physical nature of purchased material will allow.
- 3.2. RSC corrugated box construction is acceptable. Fiberboard used must have certified physical properties sufficient for the components or materials to be contained (i.e. box is stamped with Construction, Burst Test, ECT, or Gross Wt. Lt as applicable).
- 3.3. Gross weight of each hand carry container preferred to be < 30lbs. Depending on the materials purchased, gross up to 40lbs may be allowed. Pack gross weights of 30 40lbs must be discussed at initiation of new business.
- **4.0 Dunnage**, packaging materials internal to the primary container.
- 4.1.1. Unless otherwise specified, all containers must have, at minimum, a new poly bag liner containing the purchased materials.
- 4.1.2. Ferrous materials supplied unprotected by plating or other rust preventing coatings are to be supplied with adequate vapor corrosion inhibiting packaging (VCI). Packets containing clay or desiccant are not recommended, as they may rupture and contaminate packaged components.
- 4.1.3. Small components are to be supplied in zip lock type bags, 2mil thick or better, maximum size 9"x 12". Typical application would be components small enough for 9" x 12" bag to contain 100's or 1000's of components per bag and where several bags will fit in a primary container within weight restrictions. Bag count limited to maximum 12,000 PCs.

4.4 RETURNABLE CONTAINERS

Whenever possible, returnable packaging is preferred. Returnable containers must be stackable and/or collapsible.

Suppliers are responsible for removing and/or updated all labels from containers before returning them to Jiffy-tite.

Any costs incurred by Jiffy-tite for failure to meet any of the above requirements will be charged to the supplier.

5.0. SUPPLIER PERFORMANCE AND EVALUATION

5.1 INTRODUCTION

Jiffy-tite rates its material suppliers on a monthly basis, in three (3) key areas of performance. The purpose is to provide an objective method of determining a supplier's performance

5.2 SUPPLIER RATING CRITERIA

Quality Score (Parts Per Million (PPM))
 50 points (section 5.3)

Delivery Performance30 points (section 5.4)

Supplier CAR (Corrective Action Request)
 20 points (section 5.5)

Jiffy-tite strives to ensure its ratings are accurate and to drive a supplier's continuous improvement efforts. If a supplier believes there is a discrepancy in the rating report, they should contact the Supplier Development Manager within two (2) business days of the report date.

5.3 QUALITY SCORE

Purpose: Measures the number of individual pieces that are defective as identified either at incoming inspection, value add, point of assembly, or Jiffy-tite tier customer rejections, in relation to the total number of pieces shipped in the month.

This score is calculated on the amount of non-conforming material versus the total amount of material received in a given month. This number is then adjusted to reflect a constant of one million units received.

- If parts are able to be sorted, *Jiffy-tite* can update and adjust a supplier's score card PPM.
 - o Example − 3,000 parts are returned to a vender, if the vender does not report the sort totals to Jiffy-tite, then the entire 3,000 pieces is applied to their score card.
 - If the supplier received the material back, sorted the material, and rejected 35 pieces, then if they report the fallout to Jiffy-tite, their scorecard can be updated to 35 PPM.

If parts have to be reworked, this would NOT adjust a supplier's score card PPM.

o Jiffy-tite's goal is to capture the true First Time Quality (FTQ), if parts have to be reworked, non-conforming material was manufactured, and shipped, and no update can be made to the DPPM.

DPPM = (Total Nonconforming Material / Total Supplier Pieces Shipped) X 1,000,000

EXAMPLE: A supplier ships 50,000 parts to Jiffy-tite. Of these, 10 are found to be non-conforming. The DPPM calculation will be $(10/50,000) \times 1,000,000 = 200$ PPM. The supplier's quality score for this example would be 38 points.

Note: PPM may be applied even if no CAR was issued, or material returned.

PPM Rating	Score	PPM Rating	Score
0-50	50	2501–2600	24
50-100	49	2601–2700	23
101-200	48	2701-2800	22
201-300	47	2801-2900	21
301-400	46	2901-3000	20
401-500	45	3001-3100	19
501-600	44	3101-3200	18
601-700	43	3201-3300	17
701-800	42	3301-3400	16
801-900	41	3401-3500	15
901-1000	40	3501-3600	14
1001-1100	39	3601-3700	13
1101-1200	38	3701-3800	12
1201-1300	37	3801-3900	11
1301-1400	36	3901-4000	10
1401-1500	35	4001-4100	9
1501-1600	34	4101-4200	8
1601-1700	33	4201-4300	7
1701-1800	32	4301-4400	6
1801-1900	31	4401-4500	5
1901-2000	30	4501-4600	4
2001-2100	29	4601-4700	3

2101-2200	28	4701-4800	2
2201-2300	27	4801-4900	1
2301-2400	26	4901 or greater	0
2401–2500	25		

5.4 DELIVERY PERFORMANCE SCORE

This score is calculated on the amount of *non-conforming* shipments versus the *total* amount of shipments received in a given month. This information is presented as a percentage of conforming orders. Delivery ratings can be affected by the following criteria when it is determined to be the supplier's responsibility.

- Damaged parts
- Early or late deliveries
- Label errors
- Premium freight
- Dangerous Packaging
- Over Weight
- Broken Pallet
- Insufficient Plastic Wrapping
- Wrong Labels
- Labels That Can Not Scan
- Missing Labels
- Covered Labels
- Labels With Printing Defects
- Prototype Material Not Labeled or Incorrectly
- Quality Issue / 100% Certified Material Not Labeled or Incorrectly
- Safe Launch Material Not Labeled or Incorrectly

*Note this is only an example of past supplier concerns, and is not an exclusive list.

The system calculates the delivery percentage and associated points based on the following formula:

Delivery $\% = [(\text{total shipments} - \text{number of occurrences}) / \text{total shipments}] \times 100$

Non-conformances will not negatively impact the delivery performance score if prior written approval/notification is given and approved by Jiffy-tite Purchasing. An updated negotiated new promise date must be agreed upon, and cannot be left open ended.

EXAMPLE: A supplier sends 36 shipments for the month. Of those 36 shipments, one shipment is late and one shipment is short of the quantity ordered. This would count as two occurrences. The delivery percentage calculation will be $[(36-2)/36] \times 100 = 94.4\%$. See table below.

Delivery Score (%)	Total Score	Delivery Score (%)	Total Score
100	30	84	14
99	29	83	13
98	28	82	12
97	27	81	11
96	26	80	10
95	25	79	9
94	24	78	8
93	23	77	7
92	22	76	6
91	21	75	5
90	20	74	34
89	19	73	23
88	18	72	12
87	17	71	1
86	16	70 or less	0
85	15		

5.6 PREMIUM FREIGHT

Suppliers are responsible for premium freight charges incurred when delivery schedules are not met.

Premium freight (also named special deliveries or expedited shipments) is considered to be outside the standard logistics handling as agreed between Supplier and Jiffy-tite in the supply contract.

Supplier shall record, at least on a monthly basis, the premium freight for which it has been responsible (including as a minimum the instances of such shipments, the additional freight costs, and the cause). Supplier must be prepared to provide information about premium freight shipments – if required by Jiffy-tite.

The supplier shall have a system to monitor all premium freight that shall include documentation describing the necessity and authorization for premium freight. The program shall also include a documented program for reduction/elimination of premium freight that includes corrective action and monthly reporting to Jiffy-tite on the necessity of the premium freight and corrective action taken. The supplier is responsible for all premium freight charges and subsequent charges associated with product that is delayed, to Jiffy-tite or its customers, due to the supplier's logistical, quality or scheduling problems.

5.7 VENDOR DISCREPANCY SCORE

This score is calculated on the number of Corrective Action Reports issued or still open from previous months.

No. of CAR's	Total Score
0	20
1	15
2	10
3	5
4	0

5.8 SUPPLIER PERFORMANCE SCORE:

The overall monthly performance of a supplier will be determined by adding the scores allocated to each of the individual categories. It is the goal of Jiffy-tite to have all of its suppliers to achieve a "Preferred" (90+) rating. The supplier performance rating levels are as follows:

Total Score	Performance Score
90 - 100	Preferred
80 - 89	Needs Improvement
<80	Unacceptable/Probation

6.0. CONTINUOUS IMPROVEMENT REQUIRMENTS

Jiffy-tite expects production material suppliers to maintain a minimum performance rating of "acceptable" (\geq 90 points). If the supplier fails to meet this goal and rates below 80 for three (3) consecutive months, Jiffy-tite may elect to:

- Issue an 8D detailing the specific improvements required (see 8D response requirements)
- Conduct an on-site audit to determine root cause of the supplier's poor performance.

If the supplier continues to fall below the minimum performance rating and shows no immediate signs of improvement, Jiffy-tite may elect to exercise the following options:

- Continue working with the supplier to help improve their status requiring the commitment and resource allocation from the supplier's upper management.
- Maintain heightened inspection at both the supplier's facility and/or at Jiffy-tite.
- Place the supplier on new business hold until they can achieve 3 consecutive months with a performance rating ≥80. While on new business hold, the supplier will not be asked to bid on any Jiffy-tite material.
- Establish an exit strategy to remove the supplier from Jiffy-tite's approved supplier list

Attachment A – Supplier Acknowledgement

We have received a copy of your Supplier Quality Manual and are returning this letter as acknowledgement of receipt, and full understanding of the changes. We have communicated any changes to our team and updated our records. See section 1.1

We understand that Jiffy-tite requires annual (once a year) Level 2 PPAP submittal, and it is the supplier's responsibility to track and manage their annual submissions.

Supplier annual PPAP due dates are three (3) weeks prior the due date. This one year annual PPAP period is measured to the supplier's <u>previous PSW submission date</u>, not the Jiffy-tite approval date, or customer approval date.

Company Name		
Primary Contact Information	Alternate Contact Information	
Printed Name	Printed Name	
Signature	Signature	
Telephone Number / Extension	Telephone Number / Extension	
E-mail Address	E-mail Address	
Date of Receipt	Date of Receipt	
Supplier Quality Manual Revision #	Supplier Quality Manual Revision #	

Appendix B – Acronyms & Definitions

<u>APQP</u> – Advanced Product Quality Planning – a structured method of planning to ensure that all quality requirements are fully understood, addressed, and implemented prior to start of production. APQP focuses on defect prevention and continuous improvement rather than defect detection.

<u>Cp</u> – Process Capability Index – defined as the ratio of the specification width to the natural variation of the process. Defined as six (6) times the standard deviation. Cp indicates if a process is capable of producing parts within specification. The process must be normally distributed and in control when calculating Cp.

<u>Cpk</u> – Process Capability Index – an index similar to Cp but it takes into account the centering of the process. It does this by taking the ratio of the difference between process average and lower specification limit (or upper specification – whichever is less) to half the natural variation of the process. The goal for Cpk is to achieve a value of 1.33 or greater. The process must be normally distributed and in control when calculating Cpk.

<u>Corrective Action</u> – an action to eliminate the cause of nonconformities in order to prevent recurrence.

<u>8D</u> – The 8D Process is a problem solving method for product and process improvement. It is structured into 8 steps (or disciplines, the D's) and emphasizes the use of crossfunctional teams. This is often required and a considered a standard in the automotive industry. The 8 basic steps are: Define the problem and prepare for process improvement, establish a team, describe the problem, develop interim containment, define and verify root cause, choose permanent corrective action, implement corrective action, prevent recurrence, recognize and reward the contributors.

<u>GR&R</u> – Gage Repeatability & Reproducibility - a statistical tool that measures the amount of variation in the measurement system due to the measurement device and the people taking the measurement.

<u>Gage Repeatability</u> – the variation obtained with one measurement instrument, used several times by one appraiser, while measuring the identical characteristic on the same part.

<u>Gage Reproducibility</u> – the variation in the average of measurements made by different appraisers, using the same measurement instrument, used several times by each appraiser, while measuring the identical characteristic on the same part.

<u>HMIS</u> - Hazardous Materials Identification System - a system that provides information on the type of personal protective equipment (PPE) that should be used when handling this material.

Hazard Rating		
4 - Extreme	2 - Moderate	0 - Minimal
3 - Serious	1 - Slight	

Protective Equipment (PPE)		
A - Safety glasses	E - Safety glasses, gloves, dust respirator	I - Safety glasses, gloves, dust and vapor respirator
B - Safety glasses, gloves	F - Safety glasses, gloves, chemical apron, dust respirator	J - Splash goggles, gloves, chemical apron, dust and vapor respirator
C - Safety glasses, gloves, chemical apron	G - Safety glasses, gloves, vapor respirator	K - Air line hood or mask, gloves, full chemical suit, boots
D - Face shield, gloves, chemical apron	H - Splash goggles, gloves, chemical apron, vapor respirator	L – Z - specified by Jiffy-tite

<u>IMDS</u> – International Material Data System - an automotive industry material data system resulting from a joint effort of numerous automotive companies. In the IMDS, all materials used in automotive manufacture are listed, archived and maintained. This makes it possible for car manufacturers, and thus their suppliers, to meet the obligations of national and international standards, laws and regulations. This database will facilitate the recycling of cars in future.

<u>KPC</u> – Key Product Characteristic – characteristics identified if exceeding tolerance or specification could create customer dissatisfaction.

<u>PFMEA</u> – Process Failure Modes Effects Analysis - a group of activities intended to: (a) recognize and evaluate the potential failure of a product/process and its effect, (b) identify actions which could eliminate or reduce the occurrence, (c) document the process and (d) track changes or improvements to the process to reduce or eliminate potential failures.

<u>PPAP</u> – Production Part Approval Process – a process that outlines the methods used for the manufacture of production material including part submission warrant and the Advanced Quality Planning process. The purpose of the PPAP process is to ensure that suppliers of material are capable of manufacturing to design specification and can run consistently without interruption to the flow of material.

<u>PPM</u> – Parts per Million - A measure of supplier performance based on total parts rejected divided by the total parts received x 1,000,000.

<u>PSW</u> – Part Submission Warrant - a procedure by which the supplier of a component, subassembly, material or service provides evidence that it will meet the customer's requirements. All PPAP submissions will include a PSW.

<u>Preventive Action</u> – an action to eliminate the cause of potential nonconformities in order to prevent their occurrence.

<u>Process Control Plan</u> – a written description of the system for controlling parts and processes. The Control Plan describes the actions that are required at each phase of the process, from receiving to shipping, to assure that all process outputs remain in control. The Control Plan reflects a strategy that is responsive to changing process conditions and is used and maintained throughout the product life cycle. Any significant changes that affect your Control Plan methods must be submitted using JTF 7.4.1.

<u>SDS</u> – Safety Data Sheet - details of any hazards associated with a chemical, and gives information on its safe use

<u>SPC</u> – Statistical Process Control - the application of statistical methods to identify and control the cause(s) of variation in a process. Characteristics identified as exceeding tolerance or specification could affect primary product function.

 \underline{SSA} – Supplier Self-Assessment – a documented questionnaire provided by Jiffy-tite. The questionnaire collects information regarding the supplier's quality system and the control of their processes and material.

<u>Supplier</u> – provider of production material or service.

Appendix C – PPAP Acronyms & Definitions

PPAP Terms Defined:

<u>Capability Studies</u> – For initial submissions, a minimum 30 piece capability study on a production run of at least 300 pieces is required for all special characteristics denoted on the drawing by an SPC designation. Per AIAG Manual, a Cpk equal or greater to 1.67 is required for these characteristics. For a multi-station manufacturing process sub-grouping should be used. For annual submission, a Cpk equal or greater to 1.33 is required. In the abscence of special characteristic features on a print, the supplier must provide a capability study on at least one feature as agreed with Jiffy-tite

<u>Control Plan</u> – suppliers shall provide a Control Plan with each submission package outlining all the methods used to control the manufacturing process. All Special Characteristics denoted on the drawing by a KPC or SPC designation must be maintained through the control plan and quality procedures.

<u>Cover page (JWI 4.9.470)</u> – this form details the minimum submission requirements for a level 3 PPAP and shall be included in the documentation submission package. Document submissions shall be in PDF format and organized as listed on **JWI 4.9.470** (Supplier PPAP report form).

<u>Dimensional Results</u> – results shall include all dimensions, characteristics and specifications that are noted on the drawing and control plan. A result for each individual part is required for the sample submission, NO ranges are allowed. Each measured feature MUST include the measurement tool used i.e. CMM, Calipers, etc. Each feature on the dimensional report must be tied to the "bubbled" drawing.

<u>Drawing</u> – a "bubbled" drawing must be included of the most current Jiffy-tite revision.

<u>GMW-3059 or Equivalent (Restricted and Reportable Chemicals)</u> - The supplier will comply with General Motor's specification GMW-3059 or equivalent OEM similar requirements as required. Suppliers unfamiliar with this specification should contact Jiffy-tite for further explanations.

<u>Gage Repeatability and Reproducibility Study (GR&R)</u> – measurement devices used to evaluate special characteristics require a GR&R study. If additional studies are required, Jiffy-tite will notify the supplier.

Guidelines for Gage Acceptance

< 10% = Gage is satisfactory

10% - 30% = Gage may be acceptable based on the importance of application

> 30% = Gage is unacceptable and must be corrected before PPAP is approved

<u>IMDS</u> - Chemical composition of components shall be communicated to Jiffy-tite at the time of PPAP (Jiffy-tite ID #23125). Details to include: name of constituent parts, percentage of total weight (in grams), CAS (as appropriate) and total part weight (in grams, to 3 decimal places).

<u>Manual</u> located on the same page (select Supplier Quality Manual then "JWI 4.6.18 PDF to view or print the manual).

<u>Material & Plating Certification</u> – material and plating test certifications - for the various physical, chemical and plating properties and/or tests - **must show <u>actual results</u>** versus specifications. <u>Blanket statements of conformity are not acceptable.</u> Where a distributor provides material certifications, the producing mill must be documented and included in the PPAP submission. Plating suppliers shall conform to requirements outlined in JT 3016M.

<u>Part Submission Warrant (PSW)</u> – upon completion of the required testing and dimensional analysis, the supplier shall complete a part submission warrant with all the relevant information provided. The part submission warrant shall clearly reflect the reason for submission and requested submission level.

<u>Process Failure Mode and Effects Analysis (PFMEA)</u> – The supplier shall provide a PFMEA describing potential failures, severity, occurrence and the means to detect such failures. Risk Priority Numbers (RPN) should be calculated. A RPN > 100 must include timing and responsibility to reduce it to less than 100.

<u>Process Flow Diagram</u> – suppliers shall provide a Process Flow Diagram with each submission package outlining the manufacturing process referencing all quality inspection steps used to determine conformance.

<u>Quality Certification</u> – the supplier shall submit a copy of their ISO-9001 or TS16949 registration certificate

<u>Safety Data Sheets (SDS)</u> - the supplier will provide Safety Data Sheets as required. Each container shall be marked with a Hazardous Materials Identification System (HMIS) label as required by the SDS documents. Refer to Section 4.2 (Labeling).

<u>Salt Spray Plating Tests</u> - are required annually, and must show visual results of the test. Blanket statements of conformity are not acceptable.

The supplier or third party laboratory responsible for material testing must be certified to ISO/IEC 17025 by an accredited body such as A2LA (American Association for Laboratory Accreditation) or national equivalent (Standards Council of Canada, APLAC – Asia Pacific Laboratory Accreditation Cooperation, EA – European Cooperation for Accreditation, IAAC – Inter-American Accreditation Cooperation, etc.). Required for PPAP submission is a copy of accreditation and the scope of accreditation defining the tests for which the laboratory is accredited.

<u>Sample of Container Label</u> – the supplier shall submit a sample of the container label in order that Jiffy-tite can verify proper format and ability of bar codes to be scanned.

<u>Sample Parts</u> – the supplier shall submit a minimum of five (5) PPAP samples unless noted below. Sample parts must be included and submitted with PPAP documentation. Parts are to be taken from a significant run (300-piece minimum) and shall be representative of normal production material and process and will serve as the 'master' for comparison purposes. If parts are produced from more than one cavity or spindle, then

one piece per cavity or spindle must be numbered and submitted with PPAP documentation. If parts are produced from more than one mold, tool or dye, then specific requirements may be given at the time of request for PPAP.

A larger sample may be requested or stated on the purchase order. Jiffy-tite requires all suppliers attach the (JWI 4.6.18-C) "NEW MATERIAL" label to each container. The label is to be placed on two (2) opposing sides of each container.

<u>Special Characteristic</u> – Per AIAG Manual, a characteristic designated by the customer or supplier as safety, key, critical, or significant; will be denoted on Jiffy-tite prints as