

The following table lists all Benchmark Approved Quality (Restriction) Codes. These Codes and Descriptions are listed in the Corporate ERP System Quality (Restriction) Code table and outline specific Purchase Order expectations. Supply Chain should provide additional details in the Purchase Order text when needed. The Supplier should review these Codes and Descriptions with the Benchmark buyer/engineer for explicit needs or clarification, as needed.

<b>Restriction Code</b>	<b>Description</b>
01	BURN-IN REQ
<del>02</del>	<del>(Do Not Use)</del>
03	MOISTURE SENSITIVE MATERIAL
04	CERTIFICATE OF TEST REQ
05	IMPEDANCE TEST REQ
06	IMMERSION GOLD REQ
07	CERTIFICATE OF COMPLIANCE REQ
08	DO NOT BUY DATE OR LOT CODE
<del>09</del>	<del>BELLCORE REQ DO NOT USE</del>
10	SAFETY TRACEABILITY REQ
11	PROGRAM CRITICAL
<del>12</del>	<del>BUY PER DRAWING DO NOT USE</del>
<del>13</del>	<del>SEE EXPANDED ASL DO NOT USE</del>
14	TAPE AND REEL REQ
15	THIRD PARTY TEST REQ
16	CERTIFICATE OF ANALYSIS REQ
17	BUY BULK ONLY

Restriction Code	Description
48	<del>DEVIATION DO NOT USE</del>
49	<del>RECENT PURGE OR CONTAINMENT DO NOT USE</del>
20	DATE CODE TO BE PKG SEPARATELY
21	FIRST ARTICLE INSP REQ
22	CERT OF ROHS COMPLIANCE REQ
23	SOLDERABILITY INSP REQ >2 YRS
24	SEE SPECIAL INSTRUCTIONS
25	ROHS XRF TEST REQ
26	WAFFLE PACK OR TRAYS REQ
27	<del>RDC PENDING DO NOT USE</del>
28	DATE CODE MUST BE <2 YEARS OLD
29	EXPIRATION DATE REQ
30	REFRIGERATION REQ
31	MUST REMAIN FROZEN
32	FLAMMABLE MATERIAL
33	MFG PROCESS CONTROLS REQ
34	MICRO-SECTION ANALYSIS REQ
35	H-CLASS SIGNATURE REQ
36	HIGH ESD RISK MATERIAL
37	CLEANROOM REQUIREMENTS APPLY
38	DO NOT TOUCH PARTS

Restriction Code	Description
39	MATERIAL CERTIFICATION REQ
40	IPC SPECIFICATION REQ
41	PROGRAMMED PARTS
42	SECONDARY SOURCE RESTRICTED
43	SUBJECT TO GOVERNMENT INSP
44	NADCAP COMPLIANCE REQ
45	CONTROLLED CHEMICALS-MATERIALS
46	CONTROL OF DESIGN CHANGES
47	CUSTOMER SPECIFIC FA REQ
48	AS9102 FA REQ
49	BUY TUBE ONLY
50	X-OUTS NOT ALLOWED
51	MIL-SPEC OR MIL-STD REQ
52	GOLDEN UNIT PART REQ
53	CUSTOM INSP DOC
54	PICK-UP TAB REQ
55	EXPORT CONTROLLED
56	DATE CODE MUST BE <18 MONTHS
57	DATE CODE MUST BE <12 MONTHS
58	CHAIN OF CUSTODY REQ
59	<del>FAR/DFAR</del> DO NOT USE

Restriction Code	Description
60	LEAD TERMINATION REQ
61	MOISTURE BARRIER COMPLIANCE
62	COUNTRY OF ORIGIN REQ
63	FROZEN BELOW -40 DEGREES C REQ
64	SAFETY DATA SHEET REQUIRED
65	SUPPLIER SITE SOURCE INSP REQ
66	PROCESS\TEST VALIDATION REQ
67	SUPPLIER SELF SOURCE INSP REQ
68	DATE CODE RESTRICTIONS
69	HIGH IP CONTROL REQUIRED
70	MFGR SITE CHANGE APPROVAL REQ
71	X-RAY REQ
72	CHANGE NOTIFICATION REQUIRED
73	PCB SPEC BE-46003 REQUIRED
74	MOISTURE SENSITIVE PROCESS
75	75% REMAINING SHELF LIFE REQ
76	AMMO PACK REQ
99	180 CHANGE NOTIFICATION REQ

Highlighted and struck out (~~struck out~~) restriction codes are no longer in use or are being retired, and are not to be used on active items. The "REQ" in a title is an abbreviation for required.

## Code Definitions

The following definitions explain the general purpose of each code. These definitions are to be used as guidelines for procedures regarding the usage and handling of items with codes.

Sites can define local policies which provide additional detail or processes for how codes are used internally and how supporting details may be conveyed to suppliers. However, sites may not redefine the general intent of the code as it is listed here.

### **01 – BURN-IN REQ**

A Burn-In test is required before the item is to be used. Burn-In is where the item is operated for a length of time in order to reveal defects or stabilize its characteristics.

### **02 – (Do Not Use)**

No longer in use.

**03 – MOISTURE SENSITIVE MATERIAL** The item is moisture sensitive and has a Moisture Sensitive Level (MSL). Moisture Sensitive items require special controls for packaging and exposure to air prior to assembly. The MSL is indicated in the Corporate ERP System and this code should be reserved for components defined as MSL 4 or above.

### **04 – CERTIFICATE OF TEST REQ**

A certificate of test is required for the item. Suppliers or Manufacturers must provide a certificate showing the item has been tested. This would include electrical test data as required. Certificates will be stored by Benchmark, or imbedded with the item.

### **05 – IMPEDANCE TEST REQ**

An impedance test is required on a sample of the item or lot, before the items in the lot are to be stocked or used. Items are typically Printed Circuit Boards or electronic packages. The requirement for an impedance test is specified by the customer. Suppliers or Manufacturers must provide documentation that the item or lot passes the test, unless Benchmark is to perform the test.

### **06 – IMMERSION GOLD REQ**

Electroless nickel with immersion gold (ENIG) is the required surface finish for the Printed Circuit Board.

NOTE: The surface finish\coating should be specified on the PCB fabrication drawing.

### **07 – CERTIFICATE OF COMP REQ**

A Certificate of Compliance is required for the item. Suppliers or Manufacturers must provide a certificate showing the item complies with listed specifications or standards. Certificates will be stored by Benchmark, or imbedded with the item.

Note: Code 07 is not used for RoHS certificates – See Code 22.

**08 – DO NOT BUY DATE OR LOT CODE**

Specific Date or Lot Codes of the item should not be purchased or received. This code requires additional text to be entered in the purchase order to indicate the Date or Lot code(s) to be excluded. Date Codes should be listed in the format provided by the manufacturer or supplier.

**09 – ~~BELLCORE REQ~~ DO NOT USE**

No longer in use – refer to print requirements.

**10 – SAFETY TRACEABILITY REQ**

Traceability is required per regulatory or safety standards. Items are defined as safety critical within independent agency laboratory reports (e.g. UL, TUV SUD, BABT, CSA, etc.).

**11 – PROGRAM CRITICAL**

The item has been identified as being in limited supply or requires specific controls or component management. Contact Benchmark for specific requirements.

**12 – ~~BUY PER DRAWING~~ DO NOT USE**

No longer in use.

**13 – ~~SEE EXPANDED ASL~~ DO NOT USE**

No longer in use.

**14 – TAPE AND REEL REQ**

Tape and reel packaging is required. This code is used on Surface Mount Devices, to ensure they are on reels for automated placement equipment. Items are to be purchased and provided in tape and reel packaging.

**15 – THIRD PARTY TEST REQ**

A third-party test certificate or document is required. The test is performed by a third party, not Benchmark or the item's manufacturer. Testing must be done by an accredited/certified lab and results must be traceable to statutory standards.

**16 – CERTIFICATE OF ANALYSIS REQ**

A certificate of analysis is required for the item, typically for each lot received. This includes specific conformance data not found in a Certificate of Compliance (07).

**17 – BUY BULK ONLY**

The item should be purchased and provided in bulk packaging.

**18 – ~~DEVIATION~~ DO NOT USE**

No longer in use.

**19 – ~~RECENT PURGE OR CONTAINMENT DO NOT USE~~**

No longer in use.

**20 – DATE CODE TO BE PKG SEPARATELY**

Individual date codes or material lots must be packaged individually.

**21 – FIRST ARTICLE INSP REQ**

A First Article Inspection is required by the supplier for each new revision of the component. Specific data may be requested from the supplier beyond items defined by the print. Contact Benchmark for specific requirements.

**22 – CERT OF ROHS COMPLIANCE REQ**

A certificate of RoHS and/or ROHS2 compliance is required for the item. Suppliers or Manufacturers must provide a certificate showing the item meets RoHS compliance.

**23 – SOLDERABILITY INSP REQ >2 YRS**

Material is more than 2 years old, requires solderability testing to ensure it meets solderability requirements.

**24 – SEE SPECIAL INSTRUCTIONS**

Special instructions are associated with the item for Purchasing, Receiving, Inspection, or Supplier Process and/or Inspection Controls. Contact Benchmark for specific requirements if not provided.

**25 – ROHS XRF TEST REQ**

An XRF (X-Ray Fluorescence) Test is required on the item or a sample of the lot, to verify it meets RoHS or ROHS2 compliance or listed specifications.

**26 – WAFFLE PACK OR TRAYS REQ**

Waffle Pack or Matrix Tray packaging is required. This code is used on Surface Mount Devices, to ensure they are on trays for automated placement equipment..

**27 – ~~RDC PENDING DO NOT USE~~**

No longer in use.

**28 – DATE CODE MUST BE <2 YEARS OLD**

The Date Code on the item must be less than 2 years from date of receipt by Benchmark.

**29 – EXPIRATION DATE REQ**

An expiration date is required for the item. Expiration dates indicate when the item must be used by. Expiration dates are provided by the supplier or manufacturer.

**30 – REFRIGERATION REQ**

The item is temperature sensitive and requires refrigeration when being stored. Refer to product specific requirements once opened.

**31 – MUST REMAIN FROZEN**

The item is temperature sensitive and must be kept frozen (below 0°C) when being stored. Refer to product specific requirements once opened.

**32 – FLAMMABLE MATERIAL**

The item is flammable and must be handled with caution. Items are to be stored in hazardous material cabinets or containers. Safety policies are followed when the item is handled or stored.

**33 – MFG PROCESS CONTROLS REQ**

The item has been identified as requiring special process controls at the supplier. This may include test points, process flow, FOD mitigation, control plans, PFMEA, SPC, capability requirements, or other means of process control or verification. Contact Benchmark for specific requirements.

**34 – MICRO-SECTION ANALYSIS REQ**

A micro-section analysis is required on a sample of the item per lot. Contact Benchmark for specific requirements if not provided.

**35 – H-CLASS SIGNATURE REQ**

A H-Class (high value class) signature is required to have access to the item. Items are stored in a secure area, with limited access.

**36 – HIGH ESD RISK MATERIAL**

The item has extremely high sensitivity to Electrostatic Discharge. Items which are Class 0 on the Human Body Model (HBM). The items require special handling beyond normal ESD requirements.

**37 – CLEANROOM REQUIREMENTS APPLY**

The item must only be opened or removed from its sealed packaging in a dedicated cleanroom meeting ISO class requirements for the product. Packages must not be opened in normal Receiving or Inspection areas.

**38 – DO NOT TOUCH PARTS**

The item may not be physically handled without special care. For example, fingerprints or oils from the skin or contact with a table top may damage the item. The item could



also be extremely fragile, and should not be handled except by specialized personnel. Receivers should not open packaging or handle the item without taking precautions to avoid damage.

Notes concerning necessary precautions may be available in other documentation.

**39 – MATERIAL CERTIFICATION REQ**

The item requires documented material content confirmation, through test data or traceability of origin, as it applies. Contact Benchmark for specific requirements.

**40 – IPC SPECIFICATION REQ**

Specific IPC requirements have been defined, although the requirement may not be defined by print. Typical applications include: IPC-A-600, IPC-A-610, and IPC/WHMA-A-620. Contact Benchmark if not defined.

**41 – PROGRAMMED PARTS**

The item must be pre-programmed and must include validation data that assures acceptable programming per description or purchase order.

**42 – SECONDARY SOURCE RESTRICTED**

This item may not be procured from a secondary (broker) source without specific written authorization from the customer per purchase order.

**43 – SUBJECT TO GOVERNMENT INSP**

The item and related processes are subject to government source inspection.

**44 – NADCAP COMPLIANCE REQ**

The item is subject to NADCAP compliance.

**45 – CONTROLLED CHEMICALS-MATERIALS**

Suppliers shall attest that parts meet current materials directives, rules, or disclosures as defined by Benchmark. This may include elements such as Country of Origin, Conflict Materials, CE markings, or other documented requirements.

**46 – CONTROL OF DESIGN CHANGES**

When product design is the supplier's responsibility, changes shall not be made to the design without written acknowledgement from Benchmark prior to the change.

**47 – CUSTOMER SPECIFIC FA REQ**

The supplier must provide specific documentation, such as: first article protocols, data supporting customer specific specifications, GR&R data, inspection protocols, proof parts, process flow, control plans, PFMEA, capability requirements, or other specific elements as defined by the customer. Contact Benchmark for specific requirements.

**48 – AS9102 FA REQ**

The supplier must provide an AS9102 first article document.

**49 – BUY TUBE ONLY**

Items are to be purchased or provided in tube packaging only.

**50 – X-OUTS NOT ALLOWED**

PCB arrays must be complete and fully compliant. Industry referenced X-out boards, non-conforming, are not allowed at all in a delivered array. Segregated packaging including X-out panels may be allowed as an exception when pre-approved.

**51 – MIL-SPEC OR MIL-STD REQ**

This component must comply with at least one MIL-SPEC or MIL-STD. Contact Benchmark for specific requirements.

**52 – GOLDEN UNIT PART REQ**

This identifies that a golden unit has been identified for inspection at the supplier and/or Benchmark. The golden example must be reconfirmed annually.

**53 – CUSTOM INSP DOC**

This identifies that a customized inspection document has been defined for inspection. Specific elements such as Control Elements\Dimensions and their requirement may be included. Contact Benchmark for specific requirements if not provided.

**54 – PICK-UP TAB REQ**

This identifies that components require a pick-up pad consistently oriented when on a reel or within a tray.

**55 – EXPORT CONTROLLED**

This identifies that the defined material requires specific export documentation or is limited from export entirely.

**56 – DATE CODE MUST BE <18 MONTHS**

The Date Code on the item must be less than 18 months from date of receipt of the item by Benchmark.

**57 – DATE CODE MUST BE <12 MONTHS**

The Date Code on the item must be less than 12 months from date of receipt of the item by Benchmark.

**58 – CHAIN OF CUSTODY REQ**

To assure Benchmark compliance to AS5553 and AS6081, traceability of material back to the manufacturer or authorized distributor is required. This includes company purchase order(s), quantity, and dates.

**59 – FAR\DFAR DO NOT USE**

No longer in use.

**60 – LEAD TERMINATION REQ**

No pure tin allowed on the terminations for soldering. This material must contain lead in the termination solder or pads.

**61 – MOISTURE BARRIER COMPLIANCE**

Storage and shipping bags must be compliant with J-STD-033C\ MIL-PRF-81705 moisture barrier and ESD requirements.

**62 – COUNTRY OF ORIGIN REQ**

Country of origin composition/analysis summary is required.

**63 – FROZEN BELOW -40 DEGREES C REQ**

The item is temperature sensitive and must be kept frozen below -40°C when being stored and temperature protected as best possible in shipping\transit prior to use. Refer to product specific requirements once opened.

**64 – SAFETY DATA SHEET REQUIRED**

Safety Data Sheets must be included with the material.

**65 – SUPPLIER SITE SOURCE INSP REQ**

On-site source inspections at the supplier may be required by Benchmark, Benchmark's customer, or government personnel pending the product and program.

**66 – PROCESS\TEST VALIDATION REQ**

On-site source witness\validation\verification at the supplier of production process may be required by Benchmark, Benchmark's customer, or government personnel pending the product and program.

**67 – SUPPLIER SELF SOURCE INSP REQ**

For a supplier that has been certified by Benchmark to perform a self-source inspection. Benchmark shall determine when a supplier meets the requirement to be certified to perform Self Source Inspection for a specific product by part number and revision as needed, being procured from the supplier. Certification for supplier self-source inspection may be canceled based on supplier performance.

**68 – DATE CODE RESTRICTIONS**

Specific date codes or ranges of date codes have been restricted from use and cannot be shipped to Benchmark. Contact Benchmark for specific requirements if not provided.

**69 – HIGH IP CONTROL REQUIRED**

Material where Intellectual Property must be protected by secure means in receipt, storage, use, and transfer at all times. Specific guidance and requirements will be provided as needed.

**70 – MFGR SITE CHANGE APPROVAL REQ**

Benchmark must be notified of any intent to move production to alternate equipment or manufacturing site prior to any such move. Re-qualification or validation may be required. Sufficient notice must be provided to review, and if needed, re-validate prior to resuming shipping without interruption.

**71 – X-RAY REQ**

Benchmark requires a sample of the material be x-rayed for confirmation of internal structure prior to shipment. The results must be shared with Benchmark upon request.

**72 – CHANGE NOTIFICATION REQUIRED**

Benchmark must be notified in writing of any production change in material, qualified process, defined sub-tiers, or location with sufficient time to validate the change as needed. (Minimum of 90 days.)

**73 – PCB SPEC BE-46003 REQUIRED**

Benchmark PCB Specification (BE-46003) compliance required.

**74 – MOISTURE SENSITIVE PROCESS**

This item is extremely moisture sensitive and must be managed closely once opened and throughout processing. The material may require a humidity-controlled manufacturing environment. Verify the MSD rating as it applies or specification/instructions for any specific controls necessary prior to opening the package and using in manufacturing processes.

**75 – 75% REMAINING SHELF LIFE REQ**

Requires that a minimum of 75% shelf life remains upon receipt at the Benchmark..

**76 – AMMO PACK REQ**

To be used on Plated Through Hole components, to ensure they are loaded in ammo pack for automated insertion equipment. Items are to be purchased and provided in ammo pack packaging.

**99 – 180 CHANGE NOTIFICATION REQ**

The supplier agrees to meet Benchmark's expectation of 180 days' notice for all proposed changes in fabrication and availability of the material ordered. Additionally, the supplier agrees to use commercially reasonable effort to meet 365 days' notice of any such changes or confirm the inability to make such a commitment.

**Revision History**

Date	Rev	Reason for Change:	ECO Number:
08/07/2023	T	Correct code number error alignment from Rev P and R updates for codes 74-76. Updated header definition for 74 from "MATRL" to "PROCESS" for clarity, updated header definition for 75 to include "75%", switched 74 and 75 number assignments. ERP tables had not yet been updated for Rev P and none of these corrections will have impact on code usage from that release. Updated header definition for 03 to add "MATERIAL" and clarify differences from 74.	DCO0000069
06/02/2023	R	Correct code number error in the table. Duplicated 74 = 76.	DCO0000039
05/26/2023	P	Cleaned-up, clarified, and edited codes without changing intent: 7, 10, 11, 14-16, 20-26, 29-31, 33, 34, 36-38, 40, 42, 45, 46-53, 58, 63, 64, 67-70. Retitled code 99 to avoid customer specific reference while maintaining intent. Added two codes that guidance was removed from the Supplier Assurance Manual: 73 – PCB SPEC BE-46003 REQUIRED 74 – REMAINING SHELF LIFE REQ Added two codes at the request of Operations Excellence: 75 – MOISTURE SENSITIVE MATRL 76 – AMMO PACK REQ	DCO0000022
10/25/2021	N	Added 72 – CHANGE NOTIFICATION REQUIRED	CORP004660
06/22/2021	M	Template change only, no content change	CORP004564
1/6/2020	L	Added: 99 – AMAT CHANGE NOTIFICATION REQ	CORP004262
7/30/2019	K	Added: 71 – X-RAY REQ	CORP004218
12/4/2018	J	Added 65 – SUPPLIER SITE SOURCE INSP REQ, 66 - PROCESS\TEST INSPECTION REQ, and 67 – SUPPLIER SELF SOURCE INSP REQ 68 – DATE CODE RESTRICTIONS 69 – HIGH IP CONTROL REQUIRED 70 – MFGR SITE CHANGE APPROVAL REQ Updated introduction.	CORP004101
6/13/2017	H	Rev G changes were never implemented. Revised the document title, clarified priority of the Quality (Restriction) Codes on the PO as "definition of expectations", re-clarified some of the codes, added DO NOT USE to all removed codes. Removed references to BaaN. Removed code: #59 – FAR\DFAR	CORP003884

Date	Rev	Reason for Change:	ECO Number:
		Re-defined codes: #57 – DATE CODE MUST BE <12 MONTHS (was in ERP and used as this title, but was not reflected in the procedure. Previous #57 moved to #64.) #61 – MOISTURE BARRIER COMPLIANCE (was #64) #62 – COUNTRY OF ORIGIN REQ (was #65) New codes: #63 – FROZEN BELOW -40°C REQ #64 – SAFETY DATA SHEET REQUIRED	
10/19/2016	G	Added six new restriction codes and made clarification edits throughout the codes and intent. Update document template.	CORP003788
12/29/2015	F	Added new restriction codes #55 – EXPORT CONTROLLED, #56 – DATE CODE MUST BE <18 MONTHS, #57 – MSDS REQUIRED, #58 – CHAIN OF CUSTODY REQ, and #59 – FAR\DFAR. Update document template.	CORP003517
2/19/2015	E	Added a new restriction code #54 – PICK-UP TAB, update document template.	CORP003307