

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.

Restriction Code	Description
01	BURN-IN REQ
02	(Do Not Use)
03	MOISTURE SENSITIVE
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
09	BELLCORE REQ DO NOT USE
10	SAFETY TRACEABILITY REQ
11	PROGRAM CRITICAL
12	BUY PER DRAWING DO NOT USE
13	SEE EXPANDED ASL DO NOT USE
14	TAPE AND REEL REQ
15	THIRD PARTY TEST REQ
16	CERTIFICATE OF ANALYSIS REQ
17	BUY BULK ONLY
18	DEVIATION DO NOT USE
19	RECENT PURGE OR CONTAINMENT DO NOT USE
20	DATE CODE TO BE PKG SEPARATELY
21	FIRST ARTICLE INSP REQ

Restriction Code	Description
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	RDC PENDING DO NOT USE
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
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

Restriction Code	Description
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	FAR\DFAR DO NOT USE
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
99	AMAT 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, but 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

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 BEI, 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 BEI 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 BEI, 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.). Safety critical items are also identified by the Safety Critical field on the Part in Agile.

11 – PROGRAM CRITICAL

The item has been identified by the customer as being in limited supply or requires specific customer controls or component management. Contact BEI 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, or items are reeled in-house.

15 – THIRD PARTY TEST REQ

A third-party test certificate or document is required. The test is performed by a third party, not BEI or the item's manufacturer. Certificates will be stored by BEI, or imbedded with the item.

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). The analysis document will be stored by BEI, or imbedded with the item.

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

Specific date codes or material lots must be packaged individually. Date codes or lots are segregated, and not combined in a single package.

21 – FIRST ARTICLE INSP REQ

A First Article Inspection is required by the supplier for the item and specific data may be requested from the supplier. Contact BEI for specific requirements.

22 – CERT OF ROHS COMPLIANCE REQ

A certificate of RoHS compliance is required for the item. Suppliers or Manufacturers must provide a certificate showing the item meets RoHS compliance. Certificates will be stored by BEI, or imbedded with the item.

23 – SOLDERABILITY INSP REQ >2 YRS

If the item is more than 2 years old, then an inspection of the item is required to ensure it meets solderability requirements. Inspection is performed by BEI, before the item is stocked or used.

24 – SEE SPECIAL INSTRUCTIONS

Special instructions are associated with the item for Purchasing, Receiving, Inspection, or Supplier Process and/or Inspection Controls. These instructions may be on the purchase order or substantial enough to be contained in other documentation. Contact BEI for specific requirements.

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 compliance or listed specifications. BEI performs the XRF test, before the item is stocked or used.

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. Items are to be purchased or provided in tray packaging.

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 of the item by BEI.

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. The dates are normally recorded in the Corporate ERP System Batch Lot for the item.

If the expiration date is to be calculated by BEI, notes concerning the date are stored in Comments 2. Standard abbreviations and mathematical characters should be used:

DOM = Date of Manufacture

Example: DOM + 2 Years = Date of Manufacture plus two years.

30 – REFRIGERATION REQ

The item is temperature sensitive and requires refrigeration when being stored.

31 – MUST REMAIN FROZEN

The item is temperature sensitive and must be kept frozen (below 0°C) when being stored.

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 BEI for specific requirements.

34 – MICRO-SECTION ANALYSIS REQ

A micro-section analysis 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. This is also known as a cross-section analysis. BEI performs the analysis of the PCB or item.

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) can have Code 36 applied. The items require special handling beyond normal ESD requirements when received or transferred to locations.

37 – CLEANROOM REQUIREMENTS APPLY

The item must be opened or removed from its sealed packaging in a dedicated cleanroom only. The cleanroom is an area with a controlled environment, to regulate airborne particles to be below specified limits. Packages are not to be opened in normal Receiving or Inspection areas.

38 – DO NOT TOUCH PARTS

The item should not be physically handled without special care. Fingerprints or oils from the skin may damage the item. The item could also be extremely fragile, and should not be handled except by specialized personnel or machinery. Receivers should not open packaging or handle the item without taking precautions to avoid damage. Inclusive of Clean Room packaged and handled material.

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 BEI for specific requirements.

40 – IPC SPECIFICATION REQ

Specific IPC requirements have been defined, although the requirement may not be defined by print. Typical applications, pending the item commodity, include: IPC-A-600, IPC-A-610, and IPC/WHMA-A-620. Contact BEI for categories or classes when not defined by print or specification.

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 written authorization from the customer.

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, ROHS II, CE markings, or REACH 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 BEI prior to the change. Refer to the Supplier Assurance Manual (BE-46002).

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 BEI for specific requirements.

48 – AS9102 FA REQ

The supplier must provide an AS9102 first article document.

49 – BUY TUBE ONLY

Tube packaging is required. Items are to be purchased or provided in tube packaging.

50 – X-OUTS NOT ALLOWED

PCB arrays must be complete and fully compliant. Industry referenced X-out boards, non-conforming, are not allowed in a delivered array. Refer to the Supplier Assurance Manual (BE-46002).

51 – MIL-SPEC OR MIL-STD REQ

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

52 – GOLDEN UNIT PART REQ

This identifies that a golden unit is available for inspection at Benchmark Electronics.

53 – CUSTOM INSP DOC

This identifies that a marked-up inspection document is available for inspection at Benchmark Electronics.

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 BEI.

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 BEI.

58 – CHAIN OF CUSTODY REQ

To assure Benchmark compliance to AS5553 and AS6081, traceability of material back to the manufacturer is required.

59 – ~~FAR~~FAR 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.

64 – SAFETY DATA SHEET REQUIRED

Safety Data Sheets must be sent 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 part number 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.

69 – HIGH IP CONTROL REQUIRED

Material where Intellectual Property must be protected by secure means in receipt, storage, use, and transfer at all times.

70 – MFR 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.

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.

99 – AMAT 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 AMAT's expectation of 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:
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 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	CORP003884
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