1. **Governing Specifications**

**FEDERAL**

TT-I-735 - Isopropyl Alcohol

**MILITARY**

A-A-59691- Silicone Compound, NATO Code Number S-736

MIL-L-24131 - Lubricant, Colloidal Graphite in isopropanol

DOD-G-24508- Grease, High Performance, Multi-Purpose

MIL-DTL -24671 - Cloth, Lint-Free, Flushing and Cleaning

MIL-DTL-24777 - Nonmetallic Materials with Special Requirements

**STANDARDS**

MIL-STD-2041 Control of Detrimental Material

MIL-STD-767- Control of Hardware Cleanliness

MIL-STD-1684- Control of Heat Treatment

MIL-STD-2132- Nondestructive Examination Requirements for Special Applications

1. **Production and Processing Concerns**

Foreign material, in contact with hardware can have a deleterious on the hardware. If it is not removed from hardware, can enter the primary loop and block flow paths in the reactor core, can prevent valves from closing and thus cause leakage, can obstruct moving parts, can interfere with heat transfer, and can clog filters.

Foreign material trapped in crevices can cause accelerated local corrosion, and may be released later in life potentially causing the problems listedabove.

1. **Checklist Items**

**Part A: Contract Compliance Items.** An explanation should be provided for any “no” response and follow-up questions should be asked as appropriate. Also, the “REMARKS” column should be used to explain the supplier’s method of compliance or other pertinent observations. **All applicable contract specific items should be filled in prior to the visit to customize the checklist for each visit.**

**Part B: Additional Supplier Capability and Data Gathering Items.**  Additional “how” or data-gathering type questions should be asked as appropriate to gain better understanding of the supplier’s operations, and the answers documented.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Supplier:** |  | **Date:** |  | **QAR:** |  |

**PART A**

**CONTRACT COMPLIANCE ITEMS**

| **Line** | **Checklist Item** | **Yes** | **No** | **N/A** | **Remarks / Method of Compliance** |
| --- | --- | --- | --- | --- | --- |
| **A.1** | **Contract Review in preparation for performing this Addendum to MPR 13**  Describe parts/ material to be inspected (physical description): |  |  |  |  |
| **A.2** | What is the application of the parts/material? |  |  |  |  |
| **A.3** | What are the contract requirements? (Fill in as applicable) |  |  |  |  |
|  | * Contract No.? |  |  |  |  |
|  | * Purchase Order No? |  |  |  |  |
|  | * Was a PAOC performed? When?   (If yes, it should be reviewed for notes and/or comments related to MIL-STD 2041 and/or MIL STD 767), and agreed to actions applicable to this Standard |  |  |  |  |
|  | * Clarifications (Any unclear, and/or requirement in need of additional interpretation) |  |  |  |  |
|  | * Procedure submittal and approval |  |  |  |  |
|  | * Is MIL-STD 2041 evoked in the Contract/Purchase Order Technical Requirements? |  |  |  |  |
|  | * Is MIL-STD 767 evoked in the Contract/Purchase Order Technical Requirements? |  |  |  |  |
| **A.4** | Are mandatory inspection (MI) hold point requirements related to cleanliness/detrimental material controls to be administered by DCMA? (if yes): |  |  |  |  |
|  | * Review the DCMA QAR MI letter issued to the supplier, and verify that the required MIs were transmittal to the Supplier. |  |  |  |  | |
|  | * Does the DCMA QAR MI letter also include Notification points? |  |  |  |  | |
|  | * If yes to A.4, how does the supplier ensure that DCMA is properly notified?) |  |  |  |  | |
|  | **NOTE: The Checklist paragraphs references, all refer to MIL-STD 2041** |  |  |  |  | |
| **A.5** | Does the supplier have a written detrimental material control procedure? (document the procedure number and current revision) |  |  |  |  | |
| **A.6** | Is the detrimental material control procedure available for review or approval upon request? |  |  |  |  | |
| **A.7** | Does the procedure include the following information (as, applicable?):   * Procedure identifier, * Revision level, * date, and * name of the organization. |  |  |  |  | |
| **A.8** | Verify Procedure content for: Maintenance and use of the Acceptable Products List (APL) (see 5.1.6.1)  **NOTE: *For use of generic products and equipment, and those procured to specifications without controls on chemical composition, the requirements of this standard shall apply unless specifically waived by other NAVSEA approved documents.*** |  |  |  |  | |
| **A.9** | Does the procedure address visual inspections to verify cleanliness prior to thermal treatments and after final? (see para 4.2.2) |  |  |  |  | |
| * Controls on controlled shop products? |  |  |  |  | |
| * Controls on tools and handling equipment? |  |  |  |  | |
| * Recovery actions (see Appendix C). |  |  |  |  | |
| **A.10** | Observe material processing for evidence of **transfer**. Transfer has a major detrimental effect to hardware. It can occurs when shop products contact the surfaces of hardware being manufactured. (see papa 3.22, 4.3.2, 5.1.4, 5.2.1.3, 5.2.2, and 5.3.8,) |  |  |  |  | |
| **A.11** | Are solid nonmetallic materials that contact hardware surfaces not intended to be a permanent part of plant hardware such as elastomers, plastics, cloths, sheet, tubing, stickers, bags, gloves, consumable ceramics and tape unless otherwise allowed by exceptions contained herein or in other applicable contract documents, controlled to prevent transfer of material that may have a deleterious effect on the hardware, to delivered to the Navy?  (see Table II and Sections 5.2 and 5.3 for examples). |  |  |  |  | |
| **A.12** | Observe manufacturing process where metals and alloys can transfer when:   * mechanically abrade * smear * gall * forcibly impact the hardware surface, |  |  |  |  | |
| **A.13** | Verify that the supplier invokes the requirements of MIL-STD 2041 on subcontractors who perform thermal treatments, and subcontractors who provide hardware with final cleaned surfaces. (see4.3 1).  For exceptions (see4.3.1.1) |  |  |  |  | |
| **A.14** | Verify that the supplier provides Certification of detrimental material status documents that accompany hardware that conforms to the requirements of this standard. |  |  |  |  | |
| **A.15** | Review the document for the following statement:  *Hardware meets the detrimental material control requirements of MIL-STD-2041. (see 4.4)* |  |  |  |  | |
| **A.16** | Are thermal treatment operations, which are any operation where the temperature of hardware exceeds 350°F (177°C)? Examples include heat treating, welding, brazing, and preheating for welding or brazing, hot forming, stress relieving, hot tests, baking for embrittlement relief, and hot plant operations. Metal removal (other than thermal cutting) which is not a thermal treatment, controlled to prevent the transfer of material that may have a deleterious effect on the hardware, to be delivered to the Navy? |  |  |  |  | |
| **A.17** | Are manufacturing, processing and test area free from foreign material?  Foreign material is any material or object that should not be on or within clean hardware:  grit, chips, particles,  oil, slag, scale, fibers,  tape, tools, and loose articles  or parts. |  |  |  |  | |
| **A.18** | Are Visual inspections to verify cleanliness prior to **thermal treatments** and after final cleaning performed? (see 5.4.3)  Is the visual inspection performed (1X) on |  |  |  |  | |
| * cleaned surfaces for evidence of incomplete removal of shop products or solid nonmetallic materials from hardware, and for evidence of transfer of prohibited metals or alloys (see 5.4.3)   (see 5.4.3.1 for exceptions) |  |  |  |  | |
| **A.19** | Review the Frequency of analysis or certification for acceptable shop products and acceptable solid nonmetallic materials. (see 5.1.6.2).  Verify that it is obtained on each procurement, or once every four years, whichever is less frequent. |  |  |  |  | |
| **A.20** | If the supplier performs Mercury Test, to measure concentrations of mercury and mercury compounds, is the Heated, or unheated method used? (Appendix A, para A.3.) |  |  |  |  | |
| **A.21** | Review the Acceptable Shop Product and Acceptable Solid Nonmetallic Material Analysis Records, are the latest analysis record for each acceptable shop product and acceptable solid nonmetallic material. |  |  |  |  | |
| **A.22** | Verify that the analysis records are maintained as long as the product or nonmetallic material is used. |  |  |  |  | |
| **A.23** | Are records available for review at the organization's facility upon request of NAVSEA or its authorized representative, or the Government inspector? |  |  |  |  | |
| **A.24** | Verify that records are retained for items listed on the Consolidated Acceptable Products List (CAPL) for which an electronic copy of the record is available through the combined CAPL/ MQPL website. |  |  |  |  | |
| **A.25** | Are all test results (including failures) entered into the CAPL/MQPL website by the testing organization within 5 business days of receipt of product test results |  |  |  |  | |
| **A.26** | Verify that non-consumable ceramic tools used in a liquid environment are analyzed as solid nonmetallic materials.  (see 5.1 Analysis and Classification requirements) |  |  |  |  | |
| **A.27** | Are plastic containment covers, glass or plastic shields used for protection of permanent light fixtures, containing mercury? (see 5.3.1) |  |  |  |  | |
| **A.28** | Are shop products and solid nonmetallic materials classified as either acceptable or controlled? (see 515) |  |  |  |  | |
| **A.29** | Are shop products and solid nonmetallic materials determined to meet the applicable detrimental material limits of Table II classified as acceptable? |  |  |  |  | |
| **A.30** | Observe and evaluate inaccessible areas in hardware’s during manufacturing and processing surveillance for surfaces that are not readily accessible for cleaning or visual, wipe, or swab inspection. This includes any crevices between mating surfaces in which shop products could be entrapped and not readily observed or removed. |  |  |  |  | |
| **A.31** | Is final cleaned hardware adequately protected from environmental precipitates and foreign material during shipment and storage? |  |  |  |  | |
| **A.32** | Is final cleaned hardware stored outside in an overnight storage area, properly protected? |  |  |  |  | |
| **A.33** | If MIL-STD-767 or NAVSEA 0989-064-3000 is not used, for final cleaning does the suppler use Table V solvent or water, conforming to Table Ill requirements? (see para 5.5.1) |  |  |  |  | |
| **A.34** | Verify that the supplier’s visual inspection and acceptance of final cleaned surfaces, are free of foreign material visible to the unaided eye with normal visual acuity (natural or corrected) and 50 lumens/ft2 of illumination. Discrete lint fibers less than 1/4 inch in length left after cleaning. (see para 5.5.2) |  |  |  |  | |
| **A.35** | Observe and evaluate inaccessible area in hardware’s during manufacturing and processing surveillance for surfaces that are not readily accessible for cleaning or visual, wipe, or swab inspection. This includes any crevices between mating surfaces in which shop products could be entrapped and not readily observed or removed. (see para 5.2.2) |  |  |  |  | |
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| **PART B**  **ADDITIONAL SUPPLIER CAPABILITY AND DATA GATHERING ITEMS** | | |
| **Line** | **Item** | **Remarks** |
| **B.1** | Describe the material (alloy) – specification, form, type, condition, etc., as cross contamination is a source of detrimental material. |  |
| **B.2** | What is the contract number? |  |
| **B.3** | What project and equipment is this material used in? |  |
| **B.4** | What is the part and drawing number? |  |
| **B.5** | Does the vendor perform other types of mechanical, chemical, physical, or nondestructive testing? |  |
| **B.6** | What other specifications does the vendor work to? |  |
| **B.7** | List any specifications the supplier works with which have requirements or acceptance criteria more restrictive than the governing specification. |  |
| **B.9** | Describe the supplier’s process flow, especially as it pertains to sub-tier procurement controls |  |
| **B.10** | List processes that are possible sources of metal transfer contamination |  |
| **B.11** | Describe the supplier’s other capabilities. |  |