

161Thorn Hill Road

Warrendale, PA 15086-7527

# Program Document CPBOK

PD 6103

CPBok-15-PL-2 REV. A

Issued: 20-Sept-19

Revised: N/A

Superseding: PD6103

## **BODY OF KNOWLEDGE:**

**ROLE DESCRIPTION: PLANNER** 

**SPECIAL PROCESS:** CHEMICAL PROCESSING **METHOD:** CONVERSION/PHOSPHATE COATINGS

All PRI Qualification<sup>SM</sup> program examinations are created using the applicable PRI Qualification<sup>SM</sup> program Body of Knowledge (BoK), which defines the baseline knowledge and experience required to be considered competent to perform the specified job role in aerospace special process manufacturing.

All BoKs are created by subject matter experts who participate in the PRI Qualification<sup>SM</sup> Body of Knowledge Review Boards. All BoKs are updated periodically according to the latest revision of PRI Qualification<sup>SM</sup> program documentation (PD6100: Industry Managed Special Process Bodies of Knowledge) to ensure consistency with current industry practice.

#### 1. INTRODUCTION

This document has been created by the PRI Qualification<sup>SM</sup> program Chemical Processing Body of Knowledge Review Board (CP-BoKRB) according to the requirements of PD6100.

This document constitutes the PRI Qualification<sup>SM</sup> program BoK for Chemical Processing: Conversion/Phosphate Coatings for Planner Level. It defines the baseline knowledge and experience required to be considered competent to perform this role.

Unless otherwise stated, the CP-BoKRB has followed guidelines as detailed in the current revision of International Aerospace Quality Group IAQG Guidance PCAP 001 (Competence Management Guideline) to develop this BoK.

The information in this BoK will provide guidance for the following:

- Training providers who wish to develop training courses intended to support PRI Qualification<sup>SM</sup> program examination candidate preparation
- Chemical Processing Examination Review Board (CP-ERB) for the development of PRI Qualification<sup>SM</sup> program examinations
- Candidates taking PRI Qualification<sup>SM</sup> program examinations who wish to prepare in advance

## 2. REFERENCES

PRI Qualification<sup>SM</sup> program documents:

PD6000 Governance & Administration of PRI Qualification<sup>SM</sup> Program
PD6100 Industry Managed Special Process Bodies of Knowledge
PD6200 Industry Managed Special Process Examinations System

IAQG documents:

IAQG Guidance PCAP 001 Competence Management Guideline

#### 3. **DEFINITIONS**

Definitions described within are specific to the Special Process BoK. For program-specific definitions, please refer to either the PD 6000 or the PRI Qualification<sup>SM</sup> Dictionary.

BODY OF KNOWLEDGE (BoK): Baseline knowledge and experience required to be considered competent for a target position.

GENERAL EXAMINATION: The General Examination is designed to ascertain the candidate's general knowledge required for a particular job, role or activity. All of the questions will be derived from the corresponding BoK.

EXPERIENCE: The accumulation of knowledge or skill that results from direct participation in events or activities over a period of time.

KNOWLEDGE: Information / understanding acquired over a period of time. Information acquired through study and retained over that period of time (education, training, experience etc.) The combination of data and information, to which is added expert opinion, skills and experience, to result in a valuable asset which can be used to aid decision making and problem solving.

LEVEL: A class or division of a group based on education, training and experience. There are 3 levels: Operator/Technician, Planner and Owner. Please refer to the current revision of PD 6000 for definitions.

METHOD: A well-defined division of a SPECIAL PROCESS widely recognized by industry. A specific area of a special process for example anodizing within Chemical Processing

NON-SPECIAL PROCESS RELATED REQUIREMENTS: Miscellaneous requirements such as Health and Safety, Environmental, etc.

PERSONAL ATTRIBUTES: A quality or characteristic expected and required for a particular job, role or activity.

PRACTICAL EXAMINATION: The Practical Examination shall consist of a demonstration of proficiency in performing tasks that are typical of those to be accomplished in the performance of the candidate's duties. The examination content is derived from the corresponding BoK.

SKILL: Ability to perform a particular task. The quality of being able to do something that is acquired or developed through training or experience.

SPECIFIC EXAMINATION: The Specific Examination shall cover requirements and use of the specifications, codes, equipment, operating procedures and test techniques the candidate may use in the performance of his/her duties with the employer. Examination content will be derived from the corresponding BoK where applicable.

WEIGHTING: The "weighting" of each line item, using a scale of 1, 3, 7, 10, (1 being least important; 10 being most important) indicates the relative importance of that aspect of the BoK and will determine the likelihood and frequency of a question on that topic appearing in the examination.

## 4. GUIDANCE TO EXAMINATION CANDIDATES

All PRI Qualification<sup>SM</sup> program examination candidates are recommended to read all documents referenced in section 2 of this document.

As stated in PRI Qualification<sup>SM</sup> program document PD6200, every exam question shall relate directly to and be derived from the information as detailed in the current revision of the BoK.

Re-assessment of candidates to this BoK is required every 5 years, unless otherwise specified.

Candidates are therefore advised to ensure familiarity with all aspects of the BoK as detailed in Table 1. This can be done through:

- Self-study
- · Completion of internal training
- Completion of external training (a list of Approved Training Providers can be found at https://p-r-i.org/)

Records of all qualified personnel shall be maintained and include:

- · Date of Qualification
- · Results of Written Exam
- Results of Practical Exam (if applicable)
- Summary of Experience (Owner level only)

# 5. LEVELS

		Level		
Dogovintoro	Operator (OP)/Technician(T)	Planner (PL)	Owner (OW)	
Descriptors	For descriptions, please refer to current version of PD6000	For descriptions, please refer to current version of PD6000	For descriptions, please refer to current version of PD6000	
Conversion/Phosphate Coatings Specific Criteria	No additional criteria for conversion/phosphate coatings.	No additional criteria for conversion/phosphate coatings.	No additional criteria for conversion/phosphate coatings.	
Technical Knowledge	Basic knowledge of the special process, its main processes, methods and tools.	Good level of knowledge in all aspects of the special process, all its processes, methods and tools.  Ability to coach others on contents and methods in the context of their workplace.	High or extensive knowledge in all aspects of the special process, all its processes, methods and tools to assess and validate improvements.  Able to contribute to set externally recognized standards.  Ability to define contents and methods for using knowledge effectively in influencing and developing international processes. Ability to influence the process with one's knowledge.	
Experience	Sufficient experience to deal with recurrent activity.	Has enough experience to deal with unforeseen issues.	Wide proven experience of the subject. Is recognized specialist within the special process.	
Personal Attributes	Takes into consideration behavioral characteristics such as but not limited to: team working, communication, direction and purpose, innovation and problem solving, mutual trust and respect, confidentiality and trustworthiness.			
Skills	Describes the activities necessary to perform each level of job function to comply with the Body of Knowledge			
Non-Special Process Related Requirements	Health & Safety, Environmental	& Safety, Environmental, Quality System Requirements.		

## 6. TABLE 1

**ROLE DESCRIPTION: Planner** 

**SPECIAL PROCESS:** Chemical Processing **METHOD:** Conversion/Phosphate Coatings

REFERENCE GUIDELINES: Addendum 1 is a list of the International Standards and Reference Documents

applicable to Conversion/Phosphate Coatings processes.

Row#	COMPETENCE	Weight (1,3,7,10)	Exam Type Written/ Practical	Reference Guidelines
	KNOWLEDGE:			
	The basic knowledge of the special processes, methods and tools  GENERAL KNOWLEDGE			
1.	Understand how to determine if there has been damage to the part surface.	10	Written	AC7108
2.	Full and complete understanding of Internal Work instructions.	10	Written	AC7108
3.	Know how to access customer specifications and requirements (i.e. where to find them).	10	Written	AC7108
4.	Understand how to interpret customer specification and requirements in the context of	7	Written	AC7004; AS9100;
••	performing the Conversion Coating process.	-		AC7108/11
5.	Understand how to interpret Industry Standards (see Addendum 1 of this document).	7	Written	Addendum 1
6.	Knowledge and understanding of the accept/reject criteria for Conversion Coating, including	10	Written	AC7108;
	thickness, appearance and corrosion resistance.			AC7108/11
7.	Knowledge of the surface preparation procedures.	10	Written	AC7108; AC7108/11
8.	Have an awareness of the basic control and calibration requirements for equipment.	7	Written	AC7004; AS9100
9.	Know how to perform the Water Break Free Cleanliness Verification.	7	Written	AC7108; AC7108/11
10.	Knowledge and understanding of mathematics, including decimal and fractions.	10	Written	General Industry
11.	Know how to use precision measuring instruments and equipment.	7	Written	AC7108; AC7108/11
12.	Know and understand job documentation including awareness of fixed and frozen process requirement.	10	Written	AC7004; AS9100; AC7108
13.	Know and understand proper chemistry, both usage and application.	10	Written	General Industry
14.	Know and understand the surface preparation requirement prior to conversion coating including general cleaning, mechanical cleaning and chemical cleaning.	10	Written	AC7108/11; MIL- DTL-5541; MIL- DTL-16232
15.	Know and understand laboratory procedure.	7	Written	AC7108
16.	Know and understand analytical requirements and limits.	7	Written	AC7108
17.	Know and understand how to review and take action on analytical data and limits.	7	Written	AC7108
18.	Understand the mechanics and importance of racking, part set-up and masking.	7	Written	AC7108; AC7108/11
19.	Understand the need for pre-process checks (such as calibration status and solution temperatures) and understand proper verification methods.	7	Written	AC7108
20.	Knowledge and ability to write and review internal procedure and practices.	10	Written	AC7108/11
21.	Know how to recognize unsafe and/or inappropriate work practices.	7	Written	AC7108; ISO14001; OHSAS18001
22.	Know and understand the importance of cleanliness of the work area.	10	Written	AC7108
	CONVERSION PHOSPHATE COATING			
23.	Understand the importance of temperature control for the conversion coating process and the need for the tank solution to be at the correct temperature before immersion of parts.	10	Written	AC7108; AC7108/11
24.	Know and understand how to correct and adjust the tank solution temperature for the conversion coating process.	10	Written	AMS2473; AMS2475;
25.	Understand the significant of pH and grades of water purity and their measurement.	10	Written	AMS2477;
26.	Understand how to deal with incorrect or inappropriate conversion coating.	10	Written	AMS2480;
27.	Know and understand how to review and take action on conversion coating test result data.	7	Written	AMS2481; AMS2485;
28.	General knowledge and understanding of the conversion coating process including chemical, masking, tanks condition, work environment etc.	10	Written	AMS2486; MIL- DTL-5541; MIL-
29.	Know and understand about the selection of appropriate jigging equipment for use in the conversion coating process.	7	Written	DTL-16232; MIL- DTL-13924; ASTM
30.	Know and understand the key conversion coating test procedures such as water break free, visual, thickness, salt spray, tape adhesion etc.	7	Written	B117; ASTM

33. Understand the application requirements for conversion pating.  34. Understand the imitations for conversion pating.  35. Understand the imitations for conversion pating.  37. Written  38. Understand the imitations for conversion pating.  37. Written  38. Understand the schemical data scheme for the inchinocalism.  38. Understand the schemical data scheme for the inchinocalism.  39. Written  39. Understand the label inchinocalism.  39. Understand the label inchinocalism.  40. Understand the label inchinocalism.  41. Know the pre-deceaning and cleaning steps and restrictions for conversion coating.  42. Knowledge of selfact of imaginating data scheme for the inchinocalism.  43. Understand the label inchinocalism.  44. Knowledge of imitations allowed for post-treatment revork.  45. Knowledge of imitations allowed for post-treatment revork.  46. Knowledge of imitations allowed for post-treatment revork.  47. Written  48. READ AND UNDERSTAND WITTEN INSTRUCTIONS:  48. Apply conversion coating techniques appropriately.  49. Verify and validate the conversion coating results.  40. Written  41. Property report non-conformances.  41. Property report non-conformances.  42. Property report non-conformances.  43. Written  44. Ability to understand specification requirements and customer flow-down requirements.  44. Apply to-conversion coating results.  45. Apply conversion coating techniques appropriately.  46. Apply to-context on coating results.  47. Property report non-conformances.  48. Apply to-context on coating results.  49. Be familiar with the scope and limitations of conversion coating.  40. Written  41. Active in the scope and limitations of conversion coating.  41. Active in the scope and limitations of conversion coating.  42. Indicate the conversion requirements.  43. Written  44. Ability to follow instructions.  45. Interpretation of an acceptable conversion requirements.  46. Lipid and validate the conversion requirements.  47. Written  48. Apply to-chincal knowledge in a skillful way when solving probl	31.	Thorough understanding of the conversion coating process and an awareness of the different types of chemicals.	7	Written	D3359; MIL-DTL- 81706
34. Understand the tenholoid data sheets for the chemicals used in conversion coating. 7 Written 35. Be aware of substate requirements for conversion coating. 7 Written 37. Know the pre-cleaning and cleaning sleps and restrictions for conversion coating. 7 Written 38. Understand "Accept & Reject Circles and testing for conversion coating. 7 Written 39. Understand "Accept & Reject Circles and testing for conversion coating. 7 Written 40. Understand "Accept & Reject Circles and testing for conversion coating. 7 Written 41. Knowledge of effect of temperature on conversion coating. 8 Written 42. Knowledge of dimitations allowed for post-treatment rework. 7 Written 43. Knowledge of dimitations allowed for post-treatment rework. 7 Written 44. Knowledge of dimitations allowed for post-treatment rework. 7 Written 45. Knowledge of dimitations allowed for post-treatment touch-up. 3 Written 46. Verify and validate the conversion coating results. 8 Written SKILLS:  Defined within these rolls describes the range of skills. The skills required to perform a particular special process task.  READ AND UNDERSTAN WRITTEN INSTRUCTIONS: 46. Apply conversion coating techniques appropriately. 3 Written AC7108;	32.	Know uses, features and applications for conversion coating.	7	Written	
35. Understand the technical data sheets for the chemicals used in conversion coating.  36. Be aware of substrate requirements for conversion coating.  37. Written 38. Understand how to identify which features require conversion coating.  39. Understand how to identify which features require conversion coating, masking etc. as 7. Written 41. Written day governing regimenting occurrence coating, masking etc. as 7. Written 42. Knowledge of effort of temperature on conversion coating, masking etc. as 7. Written 43. Knowledge of indications allowed for post-treatment revoir.  43. Knowledge of indications allowed for post-treatment revoir.  43. Knowledge of indications allowed for post-treatment revoir.  44. Ability to understand specification requirements and customer flow-down requirements.  45. Apply conversion coating techniques appropriately.  46. Verify and validate the conversion coating results.  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  49. Be familiar with the scope and limitations of conversion coating.  49. Use of appropriate equipment for the conversion coating.  40. Written AC7004; AS9100; AC7108; AC7108	33.	Understand the application requirements for conversion plating.	10		
36. Be aware of substrate requirements for conversion coating. 37. Know the pre-cleaning and cleaning steps and restrictions for conversion coating. 38. Understand "Accept & Reject Cirteria and testing for conversion coating. 39. Understand "Accept & Reject Cirteria and testing for conversion coating. 39. Understand "Accept & Reject Cirteria and testing for conversion coating. 39. Understand how to identify which features require conversion coating. 39. Understand how to identify which features require conversion coating making etc. as 39. Understand how to identify which features require conversion coating making etc. as 40. Understand the environmental, worker stadely and health concerns associated with conversion. 41. Knowledge of effect of temperature on conversion coating properties and temperature imitations for drying. 42. Knowledge and ability to perform post-teatment touch-up. 30. SKILLS:  Defined within these roils describes the range of skills. The skills required to perform a particular special process task  READ AND UNDERSTAND WRITTEN INSTRUCTIONS: 44. Apply to understand specification requirements and customer flow-down requirements. 45. Apply conversion coating techniques appropriately. 46. Verify and validate the conversion coating results. 47. Property report non-conformances. 48. Apply technical knowledge in a skillful way when solving problems. 49. Be familiar with the scope and limitations of conversion coating. 40. Written 41. Ability to follow instructions. 41. Ability to follow instructions. 42. The property report non-conformances. 43. Apply technical knowledge in a skillful way when solving problems. 44. Apply technical knowledge in a skillful way when solving problems. 45. May to deep appropriate equirement for the conversion coating. 46. Verify and validate the conversion of conversion coating. 47. Property report non-conformances. 48. Apply technical knowledge in a skillful way when solving problems. 49. Be familiar with the scope and limitations of conversion coating. 40. Written Ac	34.	Understand the limitations for conversion coating.	7		
38. Understand *Accept & Reject* Citeria and testing for conversion coating.  7 Written 39. Understand how to identify which features require conversion coating, masking etc. as required by governing enjonering documents.  40. Understand the environmental, worker safety and health concerns associated with conversion.  41. Knowledge of infract of Imperature on conversion coating properties and temperature.  42. Knowledge of infract of Imperature on conversion coating properties and temperature.  43. Knowledge and ability to perform post-treatment rework.  43. Knowledge and ability to perform post-treatment trouch-up.  5 KILLS:  Defined within these rolls describes the range of skills. The skills required to perform a particular special process task.  READ AND UNDERSTAND WRITEN INSTRUCTIONS:  SKILLS:  Defined within these rolls describes the range of skills. The skills required to perform a particular special process task.  READ AND UNDERSTAND WRITEN INSTRUCTIONS:  44. Apply conversion coating techniques appropriately.  55. Apply conversion coating techniques appropriately.  56. Verify and validate the conversion coating results.  57. Written  67. AC71084; AS9100; AC71084  68. Apply technical knowledge in a skilful way when solving problems.  69. Be familiar with the scope and limitations of conversion coating.  60. Use of appropriate equipment for the conversion coating process.  70. Written  60. AC71086; AC71086  60. Use of appropriate equipment for the conversion coating process.  71. Written  61. Ability to follow instructions.  62. Interpretation of an acceptable conversion plating process.  73. Written  64. AC71087; AS9100; AC71088  65. Must be able to created drawings and specifications.  65. Must be able to interpret specification requirements.  66. Written  67. AC71088  67. APPROVALATRIBUTES:  67. Are statements that will enable judgment of the person's personal attributes  68. Be able to work independently with a minimum of supervision.  69. Be attentive to details.  60. Be attentive to details.  61. AC	35.		7		
38. Understand "Accept & Reject" Criteria and testing for conversion coating, masking atc. as 7 Written required by governing engineering documents.  40. Understand how to lotentify which features require conversion coating, masking atc. as 7 Written required by governing engineering documents.  41. Knowledge of effect of temperature on conversion coating properties and temperature 7 Written imitations for dying.  42. Knowledge of effect of temperature on conversion coating properties and temperature 7 Written imitations for dying.  43. Knowledge of imitations allowed for post-treatment revork. 7 Written 2 KILLS:  44. Knowledge of limitations allowed for post-treatment four-up.  54. Knowledge of imitations allowed for post-treatment four-up.  55. Knowledge of imitations allowed for post-treatment four-up.  56. Knowledge of imitations allowed for post-treatment four-up.  57. Written 2 KILLS:  58. Crowledge of effect of temperature on conversion coating propers task 3 Written 2 KILLS:  58. Crowledge of effect of temperature on conversion coating septicular special process task 3 Written 2 KILLS:  58. Apply conversion coating techniques appropriately. 3 Written AC7108; AC710	36.		7		
39. Understand how to identify which features require conversion coating, masking etc. as required by governing engineering documents.  40. Understand the environmental, worker safety and health concerns associated with conversion 7 written coating properties and temperature 7 written finitations for drying.  41. Knowledge of effect of temperature on conversion coating properties and temperature 7 written finitations for drying.  42. Knowledge and admity to perform post-treatment touch-up.  5 KILLS:  Defined within these rolls describes the range of skills. The skills required to perform a particular special process task  READ AND UNDERSTAND WRITTEN INSTRUCTIONS.  44. Apply to understand specification requirements and customer flow-down requirements.  45. Apply conversion coating techniques appropriately.  46. Verify and validate the conversion coating results.  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  49. Be familiar with the scope and limitations of conversion coating.  49. Use of appropriate equipment for the conversion coating process.  50. Use of appropriate equipment for the conversion plating process.  70. Written AC7108.  51. Ability to follow instructions.  52. Interpretation of an acceptable conversion plating process.  53. Must be able to read drawings and specifications.  54. Must be able to read drawings and specifications.  55. Must be able to interpret specification requirements.  56. Must be able to interpret specification requirements.  57. Written AC7108.  58. Must be able to interpret specification requirements.  59. Must be able to interpret appearations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  59. Must be able to interpret specification requirements.  50. Written AC7004; AS9100; AC7108.  51. Has an appropriate understanding of where this process falls in the sequence of events.  51. Must be able to und	37.		7		
### required by governing engineering documents. ### 40. Understand the environmental, workers asfety and health concerns associated with conversion or coding coding. ### 41. Knowledge of effect of temperature on conversion coding properties and temperature ### 42. Knowledge of instancions allowed for post-treatment rework. ### 43. Knowledge of instancions allowed for post-treatment rework. ### 44. Knowledge of instancions allowed for post-treatment rework. ### 55. Knowledge of instancions allowed for post-treatment rework. ### 56. Knowledge of instancions allowed for post-treatment rework. ### 57. Written ### 57. Apply conversion coating techniques appropriately. ### 57. Properly report non-conformances. ### 57. Properly report non-conformances. ### 57. Written ### 57. Apply technical knowledge in a skillful way when solving problems. ### 57. Written ### 57. Apply technical knowledge in a skillful way when solving problems. ### 57. Written ### 57. Apply technical knowledge in a skillful way when solving problems. ### 57. Written ### 57. Written ### 57. Apply technical knowledge in a skillful way when solving problems. ### 57. Apply technical knowledge in a skillful way when solving problems. ### 57. Written ### 57. Apply technical knowledge in a skillful way when solving problems. ### 58. Be familiar with the scope and limitations of conversion coating. ### 57. Apply technical knowledge in a skillful way when solving problems. ### 57. Apply technical knowledge in a skillful way when solving problems. ### 57. Apply technical knowledge in a skillful way when solving problems. ### 57. Apply technical knowledge in a skillful way when solving problems. ### 57. Apply te	38.	Understand "Accept & Reject" Criteria and testing for conversion coating.	7	Written	
required by governing engineering documents.  40. Understand the environmental, worker safety and health concerns associated with conversion coating coating.  41. Knowledge of effect of temperature on conversion coating properties and temperature  42. Knowledge of instancions allowed for post-treatment rework.  43. Knowledge of instancions allowed for post-treatment rework.  44. Knowledge of instancions allowed for post-treatment rework.  5 KILLS:  Defined within these rolls described by a properties and temperature on the post-treatment found-up.  SKILLS:  Defined within these rolls described the range coating stake. The skills required to perform a particular properties to the ready of the properties to the ready of the properties to the ready of the properties to the range of the properties to the ready of the properties to the properties of t	39.	Understand how to identify which features require conversion coating, masking etc. as	7	Written	
coating.  41. Knowledge of effect of temperature on conversion coating properties and temperature imitations for drying, and the imitations allowed for post-treatment rework.  42. Knowledge and ability to perform post-treatment rework.  53. Knowledge and ability to perform post-treatment touch-up.  54. Knowledge and ability to perform post-treatment touch-up.  55. SKILLS:  Defined within these roils describes the range of skills. The skills required to perform a particular special process task  READ AND UNDERSTAND WRITTEN INSTRUCTIONS:  44. Ability to understand specification requirements and customer flow-down requirements.  45. Apply conversion coating techniques appropriately.  46. Verify and validate the conversion coating results.  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  49. Use of appropriate equipment for the conversion coating.  50. Use of appropriate equipment for the conversion coating process.  70. Written  67. AC7108.11  51. Ability to follow instructions.  10. Written  67. AC7108.11  52. Interpretation of an acceptable conversion plating process.  10. Written  67. AC7108.11  53. Must be able to read drawings and specifications.  54. Must be able to read drawings and specifications.  55. Must be able to interpret specification requirements.  56. Must be able to interpret specification requirements.  57. Are statements that will enable judgment of the person's personal attributes  58. Be able to work independently with a minimum of supervision.  59. Must be able to understanding of where this process falls in the sequence of events.  60. Be alternitive to defails.  61. On A General Industry  62. Tolerate stress.  63. Cround A Service.  64. Personal ALTRIBUTES:  65. Are statements that will enable judgment of the person's personal attributes  65. Be able to work independently with a minimum		required by governing engineering documents.			
Illinitations for drying.   42. Knowledge of Immitations allowed for post-treatment rework.   7   Written   43. Knowledge and ability to perform post-treatment touch-up.   3   Written   SKILLS:	40.	coating.	7	Written	
43. Knowledge and ability to perform post-treatment touch-up.   SKILLS:		limitations for drying.	7		
Defined within these rolls describes the range of skills. The skills required to perform a particular special process task.  READ AND UNDERSTAND WRITTEN INSTRUCTIONS:  44. Ability to understand specification requirements and customer flow-down requirements.  45. Apply conversion coating techniques appropriately.  46. Verify and validate the conversion coating results.  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  49. Be familiar with the scope and limitations of conversion coating.  50. Use of appropriate equipment for the conversion coating process.  7 Written AC7108:  47. Ac7108:  47. April ty follow instructions.  51. Ability to follow instructions.  52. Interpretation of an acceptable conversion plating process.  53. Must be able to read drawings and specifications.  54. Must be able to interpret specification requirements.  55. Must be able to interpret specification requirements.  56. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  57. Must be able to understand and interpret shop travelers.  58. Be able to work independently with a minimum of supervision.  59. Must be able to understand and interpret shop travelers.  50. Must be able to understand and interpret shop travelers.  51. Ac7108:  52. PERSONAL ATTRIBUTES:  Are statements that will enable judgment of the person's personal attributes  54. Be able to work independently with a minimum of supervision.  55. Be able to work independently with a minimum of supervision.  56. Be able to work independently with a minimum of supervision.  57. NA General Industry.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  61. On A General Industry.  62. Tolerate stress.  63. And General Industry.  64. Decision making ability.  65. The minimum experience requirement e	42.		7		
Defined within these rolls describes the range of skills. The skills required to perform a particular spealal process task  READ AND UNDERSTAND WRITTEN INSTRUCTIONS:  44. Ability to understand specification requirements and customer flow-down requirements.  45. Apply conversion coating techniques appropriately.  46. Verify and validate the conversion coating results.  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  49. Be familiar with the scope and limitations of conversion coating.  50. Use of appropriate equipment for the conversion coating process.  70. Written AC7108; AC71	43.	Knowledge and ability to perform post-treatment touch-up.	3	Written	
44. Ability to understand specification requirements and customer flow-down requirements.  45. Apply conversion coating techniques appropriately.  46. Verify and validate the conversion coating results.  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  50. Use of appropriate equipment for the conversion coating process.  51. Ability to follow instructions.  52. Interpretation of an acceptable conversion plating process.  53. Must be able to read drawings and specifications.  54. Must be able to interpret specification requirements.  55. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. De attentive to declaris.  61. NA General Industry  63. Exhibit conflict resolution.  64. Exhibit Leadership.  65. Item worker.  65. Item worker.  66. Esthibit Leadership.  67. Exhibit Leadership.  68. High School Diploma or GED or Secondary Education.  68. High School Diploma or GED or Secondary Education.		Defined within these rolls describes the range of skills. The skills required to perform a particular special process task			
45. Apply conversion coating techniques appropriately.  46. Verify and validate the conversion coating results.  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  49. Be familiar with the scope and limitations of conversion coating.  50. Use of appropriate equipment for the conversion coating process.  7 Written AC7108; AC7108; AC710811  51. Ability to follow instructions.  52. Interpretation of an acceptable conversion plating process.  53. Must be able to read drawings and specifications.  54. Must be able to interpret specification requirements.  55. Must be able to interpret specification requirements.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  50. Deficiency and the sequence of events.  51. On A General Industry.  52. Are statements that will enable judgment of the person's personal attributes  54. Are statements that will enable judgment of the person's personal attributes  56. Must have a high degree of integrity.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  50. Be still the sequence of events.  50. No A General Industry.  51. An A General Industry.  52. The sequence of events.  53. Exhibit conflict resolution.  54. On A General Industry.  55. Must have a high degree of integrity.  56. Description and an interpret shop travelers.  57. No General Industry.  58. Description and an interpret shop travelers.  58. Description and an interpret shop travelers.  59. No A General Industry.  60. Be sterily be chosed by the sequence of events	44	Ability to understand specification requirements and customer flow-down requirements	10	Written	AC7004: AS9100:
45. Apply conversion coating techniques appropriately.  46. Verify and validate the conversion coating results.  3 Written AC7108/11  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  50. Use of appropriate equipment for the conversion coating process.  51. Ability to follow instructions.  52. Interpretation of an acceptable conversion plating process.  53. Must be able to read drawings and specifications.  54. Must be able to interpret specification requirements.  55. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  61. NA General Industry  62. Tolerate stress.  7 NA General Industry  63. Exhibit conflict resolution.  64. Be flexible.  65. Exhibit Leadership.  65. Exhibit Leadership.  66. Be ligh School Diploma or GED or Secondary Education.	<b></b> .	Tunity to anadistana specimeation requirements and customer now-down requirements.	.0	Willen	
46. Verify and validate the conversion coating results.  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  49. Be familiar with the scope and limitations of conversion coating.  50. Use of appropriate equipment for the conversion coating process.  7 Written AC7108; AC7108 AC7108 AC7108; AC7108 AC7108; AC7	45	Apply conversion coating techniques appropriately	3	Written	
46. Verify and validate the conversion coating results.  47. Properly report non-conformances.  48. Apply technical knowledge in a skillful way when solving problems.  49. Be familiar with the scope and limitations of conversion coating.  49. Be familiar with the scope and limitations of conversion coating.  50. Use of appropriate equipment for the conversion coating process.  51. Ability to follow instructions.  52. Interpretation of an acceptable conversion plating process.  53. Must be able to read drawings and specifications.  54. Must be able to interpret specification requirements.  55. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Be attentive to details.  50. Be attentive to details.  51. Accordance of integrity.  52. Interpretation of an acceptable conversion plating process.  53. Must be able to interpret specification requirements.  54. Must be able to interpret specification requirements.  55. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  7 NA General Industry.  61. Be flexible.  7 NA General Industry.  62. Tolerate stress.  63. Exhibit conflict resolution.  64. Decision making ability.  7 NA General Industry.  65. Team worker.  67. Exhibit Leadership.  67. Exhibit Leadership.  68. High School Diploma or GED or Secondary Education.	40.	Apply conversion coating teeninques appropriately.	,	Willen	
47. Properly report non-conformances.   10   Written   AC7004; AS9100; AC7108	46.	Verify and validate the conversion coating results.	3	Written	AC7108;
49. Be familiar with the scope and limitations of conversion coating.  40. Use of appropriate equipment for the conversion coating process.  7 Written AC7108/11  51. Ability to follow instructions.  52. Interpretation of an acceptable conversion plating process.  10 Written AC7004; AS9100; AC7108/11  53. Must be able to read drawings and specifications.  54. Must be able to interpret specification requirements.  55. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Must be able to understand and interpret shop travelers.  58. Must be able to understand and interpret shop travelers.  59. Must be able to understand and interpret shop travelers.  50. Written AC7004; AS9100; AC7108  51. AC7108  52. Interpretation of an acceptable conversion plating process.  10 Written AC7004; AS9100; AC7108  52. Interpretation of an acceptable conversion plating process.  10 Written AC7004; AS9100; AC7108  53. Must be able to interpret specification requirements.  10 Written AC7004; AS9100; AC7108  54. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  55. Must be able to understand and interpret shop travelers.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  61. Default have a high degree of industry of the person's personal attributes  62. Tolerate stress.  7 NA General Industry  63. Exhibit Leadership.  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. NA General Industry  68. High School Diploma or GED or Secondary Education.  68. High School Diploma or GED or Secondary Education.	47.	Properly report non-conformances.	10	Written	AC7004; AS9100;
AC7108/11	48.	Apply technical knowledge in a skillful way when solving problems.	10	Written	AC7108
51. Ability to follow instructions.  52. Interpretation of an acceptable conversion plating process.  53. Must be able to read drawings and specifications.  54. Must be able to interpret specification requirements.  55. Must be able to interpret specification requirements.  56. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  50. Be attentive to details.  50. Decision making ability.  51. Are statements that will enable judgment of the person's personal attributes  58. Be flexible.  59. Tolerate stress.  70. NA. General Industry.  60. Be attentive to details.  71. NA. General Industry.  62. Tolerate stress.  72. NA. General Industry.  63. Exhibit conflict resolution.  73. Are General Industry.  64. Decision making ability.  65. Ethical behavior.  66. Ethical behavior.  67. Exhibit Leadership.  EXPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  68. High School Diploma or GED or Secondary Education.	49.				AC7108/11
52. Interpretation of an acceptable conversion plating process.  53. Must be able to read drawings and specifications.  54. Must be able to interpret specification requirements.  55. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  50. Be attentive to details.  50. Be attentive to details.  51. An General Industry.  52. Tolerate stress.  53. Must be able to understanding of where this process falls in the sequence of events.  54. Written AC7004; AS9100; AC7108  CA7004; AS9100;					AC7108/11
AC7108/11					AC7108
54. Must be able to interpret specification requirements.  55. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  61. Tolerate stress.  62. Tolerate stress.  63. Exhibit conflict resolution.  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  EXPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  10. Written  AC7004; AS9100;  AC7108  10. Written  AC7004; AS9100;  AC7108  4C70108  10. Written  AC7004; AS9100;  AC7108  AC7108  10. Written  AC7004; AS9100;  AC7108  AC7108  10. Written  AC7004; AS9100;  AC7108  AC7108  10. Written  AC7004; AS9100;  AC7108  10. NA General Industry					AC7108/11
55. Must be able to set-up operations (equipment, rates, timers and temperatures) including alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  61. De flexible.  62. Tolerate stress.  63. Exhibit conflict resolution.  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  EXPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  AC7108  RAC7108  4. Written  AC7004; AS9100;  AC7108  AC710					AC7108
alternate procedures as appropriate.  56. Must be able to understand and interpret shop travelers.  57. Has an appropriate understanding of where this process falls in the sequence of events.  FERSONAL ATTRIBUTES:  Are statements that will enable judgment of the person's personal attributes  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  61. Be flexible.  62. Tolerate stress.  63. Exhibit conflict resolution.  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  EXPERIENCE:  AC7004; AS9100; AC7108  BAC7108  BAC7108  AC7004; AS9100; AC7108  BAC7108  BAC7108  BAC7108  BAC7108  AC7004; AS9100; AC7108  BAC7108  BAC7108  BAC7108  AC7004; AS9100; AC7108  BAC7108  BAC					AC7108
SEQUENCING  57. Has an appropriate understanding of where this process falls in the sequence of events.  PERSONAL ATTRIBUTES:  Are statements that will enable judgment of the person's personal attributes  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  10 NA General Industry  61. Be flexible.  7 NA General Industry  62. Tolerate stress.  7 NA General Industry  63. Exhibit conflict resolution.  7 NA General Industry  64. Decision making ability.  65. Team worker.  10 NA General Industry  66. Ethical behavior.  10 NA General Industry  67. Exhibit Leadership.  EXPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  10 NA General Industry  68. High School Diploma or GED or Secondary Education.  10 NA General Industry		alternate procedures as appropriate.			AC7108
FERSONAL ATTRIBUTES:  Are statements that will enable judgment of the person's personal attributes  Be able to work independently with a minimum of supervision.  Be attentive to details.  Colorate stress.  Be able to estatements that will enable judgment of the person's personal attributes  10 NA General Industry  10 NA General Industry  10 NA General Industry  11 NA General Industry  12 Tolerate stress.  13 NA General Industry  14 Decision making ability.  15 Team worker.  16 Ethical behavior.  17 NA General Industry  18 General Industry  19 NA General Industry  10 NA General Industry  10 NA General Industry  10 NA General Industry  10 NA General Industry  11 NA General Industry  12 Team worker.  13 NA General Industry  14 NA General Industry  15 Team worker.  16 Ethical behavior.  17 NA General Industry  18 General Industry  19 NA General Industry  10 NA General Industry	56.		10	vvritten	
PERSONAL ATTRIBUTES: Are statements that will enable judgment of the person's personal attributes  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  61. Be flexible.  62. Tolerate stress.  63. Exhibit conflict resolution.  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  EXPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  A General Industry  AC7108  NA General Industry  10 NA General Industry  AC7108  AC7108  A General Industry  10 NA General Industry  11 NA General Industry  12 NA General Industry  13 NA General Industry  14 O NA General Industry  15 O NA General Industry  16 O NA General Industry  16 O NA General Industry  17 NA General Industry  18 O NA General Industry  19 O NA General Industry  10 NA General Industry	57		10	Writton	AC7004: AS9400:
PERSONAL ATTRIBUTES: Are statements that will enable judgment of the person's personal attributes  58. Be able to work independently with a minimum of supervision.  10 NA General Industry  59. Must have a high degree of integrity.  10 NA General Industry  60. Be attentive to details.  10 NA General Industry  61. Be flexible.  7 NA General Industry  62. Tolerate stress.  7 NA General Industry  63. Exhibit conflict resolution.  7 NA General Industry  64. Decision making ability.  10 NA General Industry  65. Team worker.  10 NA General Industry  66. Ethical behavior.  10 NA General Industry  67. Exhibit Leadership.  7 NA General Industry  68. High School Diploma or GED or Secondary Education.  10 NA General Industry	57.	Tido an appropriate understanding of where this process falls in the sequence of events.	10	vviitteii	
Are statements that will enable judgment of the person's personal attributes  58. Be able to work independently with a minimum of supervision.  59. Must have a high degree of integrity.  60. Be attentive to details.  61. Be flexible.  62. Tolerate stress.  63. Exhibit conflict resolution.  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  68. High School Diploma or GED or Secondary Education.  68. High School Diploma or GED or Secondary Education.  10. NA. General Industry		DEDCOMAL ATTRIBUTES.			A37100
58.Be able to work independently with a minimum of supervision.10NAGeneral Industry59.Must have a high degree of integrity.10NAGeneral Industry60.Be attentive to details.10NAGeneral Industry61.Be flexible.7NAGeneral Industry62.Tolerate stress.7NAGeneral Industry63.Exhibit conflict resolution.7NAGeneral Industry64.Decision making ability.10NAGeneral Industry65.Team worker.10NAGeneral Industry66.Ethical behavior.10NAGeneral Industry67.Exhibit Leadership.7NAGeneral IndustryEXPERIENCE:Are the minimum experience requirement expected to demonstrate their competence.EDUCATION68.High School Diploma or GED or Secondary Education.10NAGeneral Industry					
59.Must have a high degree of integrity.10NAGeneral Industry60.Be attentive to details.10NAGeneral Industry61.Be flexible.7NAGeneral Industry62.Tolerate stress.7NAGeneral Industry63.Exhibit conflict resolution.7NAGeneral Industry64.Decision making ability.10NAGeneral Industry65.Team worker.10NAGeneral Industry66.Ethical behavior.10NAGeneral Industry67.Exhibit Leadership.7NAGeneral IndustryEXPERIENCE:Are the minimum experience requirement expected to demonstrate their competence.EDUCATION68.High School Diploma or GED or Secondary Education.10NAGeneral Industry		Po chie to work independently with a minimum of the person's personal attributes	40	NA	Compared In direction
60. Be attentive to details.  61. Be flexible.  7 NA General Industry  62. Tolerate stress.  7 NA General Industry  63. Exhibit conflict resolution.  7 NA General Industry  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  7 NA General Industry  68. High School Diploma or GED or Secondary Education.  10 NA General Industry  7 NA General Industry  80 NA General Industry  81 NA General Industry  82 NA General Industry  83 OF NA General Industry  84 OF NA General Industry  85 OF NA General Industry  86 OF NA General Industry					
61. Be flexible.  62. Tolerate stress.  7 NA General Industry  63. Exhibit conflict resolution.  7 NA General Industry  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  68. High School Diploma or GED or Secondary Education.  7 NA General Industry  7 NA General Industry  7 NA General Industry  7 NA General Industry  8 General Industry					
62. Tolerate stress.  63. Exhibit conflict resolution.  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  CAPPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  68. High School Diploma or GED or Secondary Education.  7 NA General Industry  6 NA General Industry  6 General Industry  7 NA General Industry  6 General Industry  6 General Industry  6 NA General Industry  6 General Industry					
63. Exhibit conflict resolution.  64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  68. Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  68. High School Diploma or GED or Secondary Education.  7 NA General Industry  6 NA General Industry  7 NA General Industry  6 Seneral Industry  6 Seneral Industry  6 Seneral Industry  6 Seneral Industry					
64. Decision making ability.  65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  CAPPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  68. High School Diploma or GED or Secondary Education.  10 NA General Industry  7 NA General Industry  68. High School Diploma or GED or Secondary Education.  10 NA General Industry					
65. Team worker.  66. Ethical behavior.  67. Exhibit Leadership.  Care the minimum experience requirement expected to demonstrate their competence.  EDUCATION  68. High School Diploma or GED or Secondary Education.  10 NA General Industry  Care the minimum experience requirement expected to demonstrate their competence.  EDUCATION  NA General Industry					
66. Ethical behavior.  67. Exhibit Leadership.  CAPPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  68. High School Diploma or GED or Secondary Education.  10 NA General Industry  CAPPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  DAMA General Industry  NA General Industry					
67. Exhibit Leadership.  EXPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  68. High School Diploma or GED or Secondary Education.  7 NA General Industry  68. General Industry					
EXPERIENCE:  Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  68. High School Diploma or GED or Secondary Education.  10 NA General Industry					
Are the minimum experience requirement expected to demonstrate their competence.  EDUCATION  68. High School Diploma or GED or Secondary Education.  10 NA General Industry	67.		7	NA	General Industry
68. High School Diploma or GED or Secondary Education.  10 NA General Industry		Are the minimum experience requirement expected to demonstrate their competence.			
69.   Apprenticeship.   3   NA   General Industry					
70. Industry Training or Courses. 3 NA General Industry	70.	Industry Training or Courses.	3	NA	General Industry

	TRAINING / HANDS-ON EXPERIENCE			
71.	Completed on the job training: Minimal number of hours for Planner – 160 hours.	10	NA	General Industry
	NON-SPECIAL PROCESS RELATED REQUIREMENTS:			
	Defined within these rolls are other general or pre-requisite needed			
72.	General understanding of Quality Systems AS/EN/JISQ 9100 or AC7004 or equivalent.	10	Written	AS/EN/JISQ 9100; AC7004
	SAFETY & ENVIRONMENTAL REQUIREMENTS:			
73.	Knowledge and understanding of safety and handling of hazardous material, chemicals, etc. including safe storage, interpretation of Health & Safety Data Sheets and Regulatory Requirements.	10	Written	AC7108; ISO 14001; OHSAS 18001
74.	Understand Safety Data Sheets (SDS) and Personal Protective Equipment Requirements: When and how to use appropriate personal protective equipment (googles, gloves, rubber boots, aprons, etc.).	10	Written	AC7108; ISO 14001; OHSAS 18001
75.	Understand which personal protective equipment to use, when and why.	10	Written	AC7108; ISO 14001; OHSAS 18001
76.	Understand the safe storage, shelf life and mixing of chemicals.	10	Written	AC7108; ISO 14001; OHSAS 18001
77.	Ability to recognize symbols associated with chemicals and their usage.	10	Written	AC7108; ISO 14001; OHSAS 18001

# 7. DOCUMENT REVISION HISTORY

REVISION DATE	SUMMARY		
3 December 2019	Editorial revision to update program name from eQualified to PRI Qualification <sup>SM.</sup>		

ADDENDUM 1

LIST OF INTERNATIONAL STANDARDS & REFERENCE DOCUMENTS FOR CONVERSION COATING

SPECIAL PROCESS	DOCUMENT TITLE	DOCUMENT NUMBER
Quality	Audit Criteria for Aerospace Management System	AC7004
Chemical Process	Audit Criteria for Chemical Processing	AC7108
Chemical Process	Audit Criteria for Conversion Coating	AC7108/11
Chemical Process	Chemical Film Treatment for Aluminum Alloys General Purpose Coating	AMS2473
Chemical Process	Protective Treatments, Magnesium Alloys	AMS2475
Chemical Process	Conversion Coating for Aluminum Alloys Low Electrical Resistance Coating	AMS2477
Chemical Process	Phosphate Treatment Paint Base	AMS2480
Chemical Process	Phosphate Treatment Antichafing	AMS2481
Chemical Process	Coating, Black Oxide	AMS2485
Chemical Process	Conversion Coating of Titanium Alloys Fluoride-Phosphate Type	AMS2486
Quality	Quality Management System-Requirements for Aviation, Space and Defense Organization	AS9100
Chemical Process	Operating Salt Spray (Fog) Testing Apparatus	ASTM B117
Chemical Process	Measuring Adhesion by Tape Test	<b>ASTM D3359</b>
Safety	Occupational Health and Safety Management	BS OHSAS 18001
Environment	Environment Management System	ISO14001
Chemical Process	Chemical Conversion Coatings on Aluminum and Aluminum Alloys	MIL-DTL-5541
Chemical Process	Phosphate Coating, Heavy, Manganese or Zinc Base	MIL-DTL-16232
Chemical Process	Coating, Oxide, Black, for Ferrous Metals	MIL-DTL-13924
Chemical Process	Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys	MIL-DTL-81706

## **ADDENDUM 2**

## **ADDITIONAL SAFETY & ENVIRONMENTAL REQUIREMENTS**

## REACH REGULATION INFORMATION

Several metal finishing processes (painting, anodize, chromate conversion, passivate, electroplating) may have REACh regulated substances that are either used as process chemicals or are contained within the finished product after a process is completed. Chemical suppliers are obliged to provide a legislatively compliant safety data sheet. Below are topics of concern that a chemical processing owner should be aware of and have adequate understanding if products are produced within or shipped to the European Union.

- •REACh (Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals)
- Affects raw materials/substances that go into products either produced within or shipped to the European Union.
- •Under EU REACh regulation, substances that are one of the following can be regarded as substance of very high concern (SVHC):
  - ocarcinogenic, mutagenic or toxic to reproduction (CMRs);
  - opersistent, bio-accumulative and toxic (PBTs);
  - overy persistent and bio-accumulative (vPvBs);
  - oseriously and / or irreversibly damaging the environment or human health, as substances damaging the hormone system;
- •The SVHC candidate list is a moving target that will continue to grow with 168 substances as of January 2016. This list is reviewed nominally twice a year by ECHA.
- Some typically used SVHC's contained in or used but not limited to during chemical processing are;
  - o Cadmium
  - o Strontium Chromate
  - Chromium trioxide
  - Sodium dichromate
- •SVHC content is allowable up to 0.1% of an article produced within or shipped to the EU.
- Additionally, SVHC's may at some time be added to the Authorization List known as Annex 14 or XIV which contains a sunset date for each SVHC in this list.
- •Owner needs to be aware of sunset dates for SVHC's contained in the Authorization list. Once an SVHC from the Authorization List reaches the sunset date, it can no longer be used in the EU without specific authorization from ECHA (European Chemicals Agency).
- •Manufacturing sites either located within or if shipping product to the EU must comply with all aspects of REACh. Chemical suppliers in the EU must provide safety data sheets that reflect any conditions of an authorization.
- •Further information/current SVHC and Authorization list with sunset dates can be obtained by accessing (<a href="http://www.echa.europa.eu/web/guest/candidate-list-table">http://www.echa.europa.eu/web/guest/candidate-list-table</a>)