

HEADQUARTERS  
PHILIPPINE ARMY  
OFFICE OF THE ARMY QUARTERMASTER  
Fort Andres Bonifacio, Metro Manila

PA SPECIFICATION

QM SPEC NR IC-21USRRN

MAY 27 2019

Interim

UNDERSHIRT, RAGLAN, POLYESTER SPANDEX, ROUND NECK

1. SCOPE

1.1. Scope - This specification covers one type of Undershirt, Raglan, Polyester Spandex, Round Neck (*for brevity, undershirt*) and applicable for use of military personnel of the Philippine Army as undergarment on GOU or PHILARPAT, BDU or other authorized Army Uniform.

1.2. Grade - The finished undershirt shall conform to the quality and grade of product prescribed by this specification.

1.3. Sizes - Sizes and measurements of the finished undershirt are as shown in para 2.3.4.

2. REQUIREMENTS

2.1. First Article - Two samples of the finished undershirt submitted to the Office of Army Quartermaster shall be subjected to first article inspection in accordance with para 3.1.

2.2. Materials

2.2.1. The basic material of the T-Shirt shall be the following:

2.2.1.1. Front Part: The front part basic material shall be 85%  $\pm$  5 polyester fabric and 15%  $\pm$  5 Spandex, Olive Drab in color and shall conform to the following requirements:

Thread Count/2.54 cm:

Wales	-	-	-	-	45 - 55
Courses	-	-	-	-	80 - 90
Thickness, mm	-	-	-	-	0.43 - 0.47
Weight, g/m <sup>2</sup> :	-	-	-	-	165 (maximum)
Type of Knit:	-	-	-	-	Plain
Absorbency, seconds	-	-	-	-	2 (maximum)
Color Quality (Color Difference) Spectrophotometric Method:	-	-	-	-	1.5 (maximum)
Dimensional Change, %	-	-	-	-	$\pm$ 3 % (max)

PA SPECIFICATION

QM SPEC NR IC-21USRRN

MAY 27 2019

Interim

Colorfastness	Change in Color	Staining
Laundering, rating - - - - -	Grade 4 (min)	Grade 4 (min)
Perspiration, rating - - - - -	Grade 4 (min)	Grade 4 (min)

2.2.1.2. Back Part: The back part basic material shall be 90%  $\pm$  5 polyester fabric and 10%  $\pm$  5 Spandex, Olive Drab with design and shall conform to the following requirements:

Thread Count/2.54 cm:

Wales	-	-	-	-	60 - 70
Courses	-	-	-	-	110 - 120
Thickness, mm	-	-	-	-	0.38 - 0.42
Weight, g/m <sup>2</sup> :	-	-	-	-	145 (maximum)
Type of Knit:	-	-	-	-	Plain
Absorbency, seconds	-	-	-	-	2 (maximum)
Color Quality (Color Difference)					
Spectrophotometric Method: -	-	-	-	-	1.5 (maximum)
Dimensional Change, % - -	-	-	-	-	$\pm$ 3% (max)

Colorfastness	Change in Color	Staining
Laundering, rating - - - - -	Grade 4 (min)	Grade 4 (min)
Perspiration, rating - - - - -	Grade 4 (min)	Grade 4 (min)

2.2.2. Collaret - The fabric for the collaret shall be the same material as specified in para 2.2.1.1 with 1.0 - 1.5 cm wide.

2.2.3. Thread, Sewing – The thread to be used for all stitching and sewing operations shall be polyester of the same color and shade of the basic material and conform to the following requirements:

No of Ply	- 2.0 (minimum)
Yarn Size, denier	- 130 (minimum)
Breaking strength, kg	- 1.0 (minimum)

2.2.4. Marking - The "ARMY" marking shall be printed on the left breast part of the T-shirt, Stencil font, size 100 using black paint. The location and distance of the marking shall be as follows:

Location and Distance of Marking (All Measurement in Centimeters)

SIZES	Y	X
Small	9.5 to 11.0	4.5 to 5.6
Medium	11.0 to 12.5	4.5 to 5.6
Large	11.0 to 12.5	4.5 to 5.6
X-Large	11.0 to 12.5	4.5 to 5.6

**PA SPECIFICATION**

**QM SPEC NR IC-21USRRN**

**MAY 27 2019**

Interim

**2.3. Construction**

2.3.1. Cutting – The undershirt shall be cut strictly in accordance with the design prescribed by this specification. All component parts shall be cut from the materials as specified in para 2.2.1. The body shall be in T-shirt type and raglan sleeve construction.

**2.3.2. Measurements as to different sizes in centimeters:**

		Small	Medium	Large	XL	XXL	XXXL	Tolerance
AB	Body Width	48	50	53	56	60	64	+/- 2.0
BC	Body Length	66	68	70	72	74	76	+/- 2.0
CD	Shoulder Sleeve Length	34	35	36	37	38	39	+/- 1.0
DE	Sleeve Opening	16	17	18	19	20	21	+/- 1.0
EF	Length of Sleeve	10	11	12	13	14	15	+/- 1.0
FG	Neck Width	11.5	12.5	13.5	14.5	15.5	16.5	+/- 1.0
GH	Neck Drop	8.5	9	9.5	10	10.5	11	+/- 0.5

**2.4. Workmanship**

2.4.1. Design - The undershirt shall be of the men's pull over athletic type and of a design essentially the same as shown in the Figures 1 & 2 and the official sample of the Philippine Army.

2.4.2. Finish - The undershirt shall be clean, well-finished, well-pressed and free from any defect which may affect its appearance or serviceability. Overall workmanship shall be the best known to the trade. Poor quality of sewing or workmanship shall be sufficient ground for rejection of the finished article.

2.4.3. Contractor's Label with Washing Instruction – The contractor's label shall be printed on the inside back portion of the undershirt, 2.5 ± 0.5 cm below the collaret seam using Black paint, Arial font, Size 12. The contents of the label shall consist of the following:

**UNDERSHIRT, RAGLAN, POLYESTER SPANDEX, ROUND NECK**

**Name of Contractor:**

**Size:**

**WASHING INSTRUCTION**

**MACHINE WASHABLE / WASH WITH LIKE COLORS**

**DO NOT BLEACH / TUMBLE DRY LOW / WARM IRON**

**DO NOT IRON DESIGN / DO NOT DRY CLEAN**



**PA SPECIFICATION**

**QM SPEC NR IC-21USRRN**  
**MAY 27 2019**

Interim

**3. VERIFICATION**

3.1. First Article Inspection – The two pieces samples of the finished undershirt including materials and components submitted in para 2.1 shall be subjected to first article inspection by Philippine Army representative/agency. The samples shall be subjected to tests and examination to verify if the requirements in para 2.2 through 2.4 are satisfied with reference to the attached test parameters.

**3.2. Sampling**

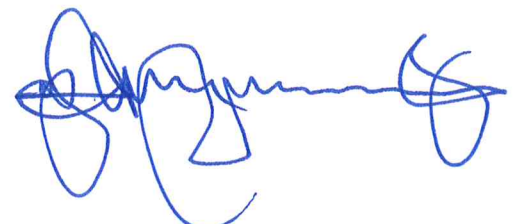
3.2.1. Samples of finished undershirt shall be taken at random during acceptance and shall be subjected to test evaluation at authorized agency/facility. In-process inspection shall be conducted when stipulated in the contract for the purpose of examination to determine compliance with the requirements of the specification and immediate correction on the overall workmanship can be conducted.

**4. QUALITY ASSURANCE PROVISIONS**

4.1. Responsibility for Inspection – Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. The Government reserves the right to perform any of the inspections set forth in this document where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2. Responsibility for Compliance – All items must meet all requirements of Sections 2 and 3. The absence of any inspection requirements in the document shall not relieve the contractor of the responsibility of assuring that all product or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept of defective material.

4.3 Samples – The samples of the finished undershirt and materials shall be submitted for testing in accordance to the test procedure set forth by the Philippine Army to determine the extent of compliance with this specification insofar as quality of materials used is concerned. The Philippine Army representative shall determine the extent of compliance with the specification insofar as workmanship, style and finish are concerned.

A large, stylized handwritten signature in blue ink, likely belonging to a representative of the Philippine Army.

PA SPECIFICATION

QM SPEC NR IC-21USRRN

MAY 27 2019

Interim

5. PACKAGING AND PACKING

5.1 Packaging – Each undershirt shall be placed in a transparent (cellophane) bag with markings printed legibly on one face at the center portion of the bag using black indelible ink. The contents of the bag marking shall be as follows:

- UNDERSHIRT, RAGLAN, ROUND NECK
- Designed for undergarment

Size	S	M	L	XL
Body Width (cm)	48	50	53	56

Color
<input checked="" type="radio"/> Olive Drab

Washing Instruction

- Hand Wash
- Do not bleach
- Hang dry but do not expose to direct sunlight

5.2 Packing – One hundred (100) pieces of the T-Shirt shall be packed in a corrugated carton. The top cover, when closed, shall be sealed with a binding tape and finally secured with nylon straps. The box shall be labeled as follows:

UNDERSHIRT, RAGLAN, ROUND NECK

Name of Contractor:

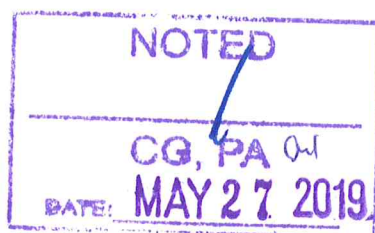
QTY: 100 pieces

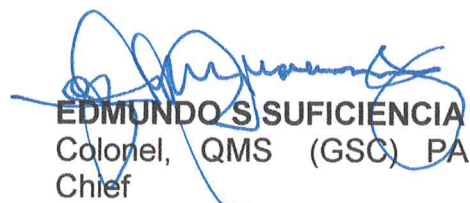
Color: Olive Drab

SIZE:

6. MISCELLANEOUS

6.1 Any point not covered by this text shall be supplement and supported by the attached illustration as reference guide.



  
EDMUNDO S. SUFICIENCIA  
Colonel, QMS (GSC) PA  
Chief

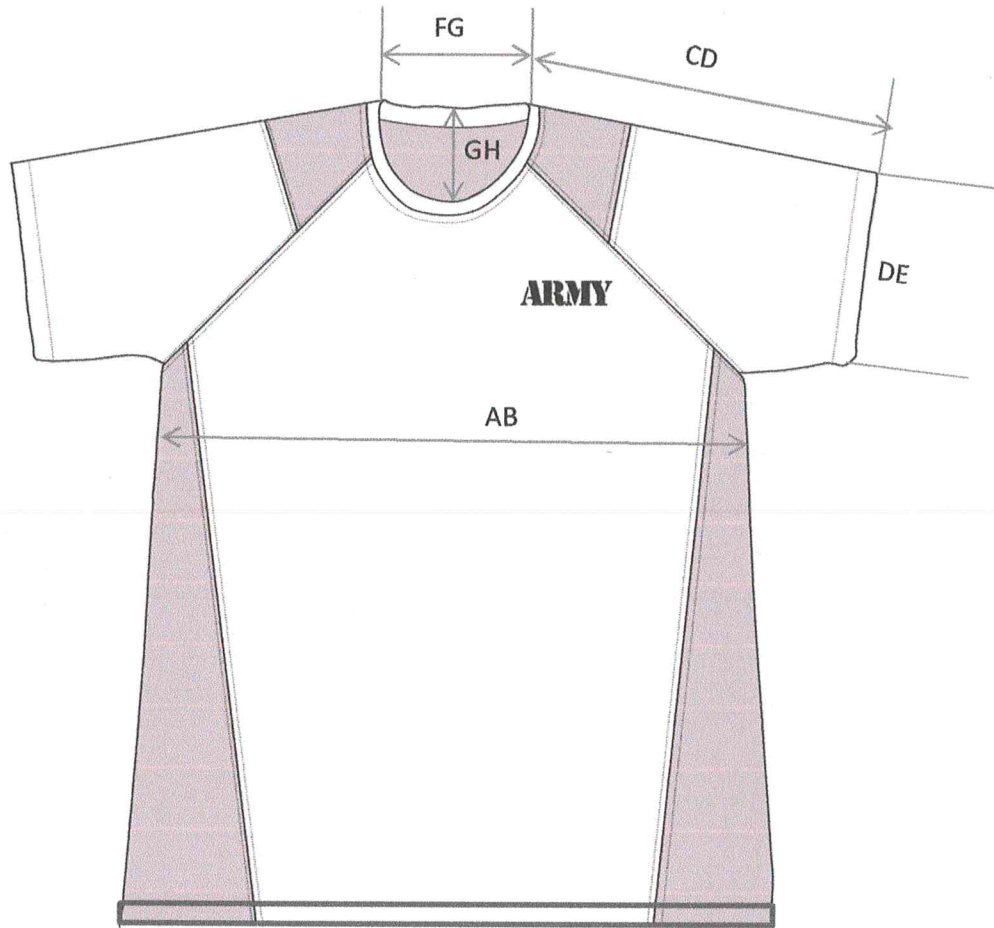
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QM SPEC NR IC-21USRRN

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UNDERSHIRT, RAGLAN, ROUND NECK



Front View

Legend: Color



Olive Drab stated in Para 2.2.1.1



Olive Drab with Design stated in Para 2.2.1.2

FIGURE 1



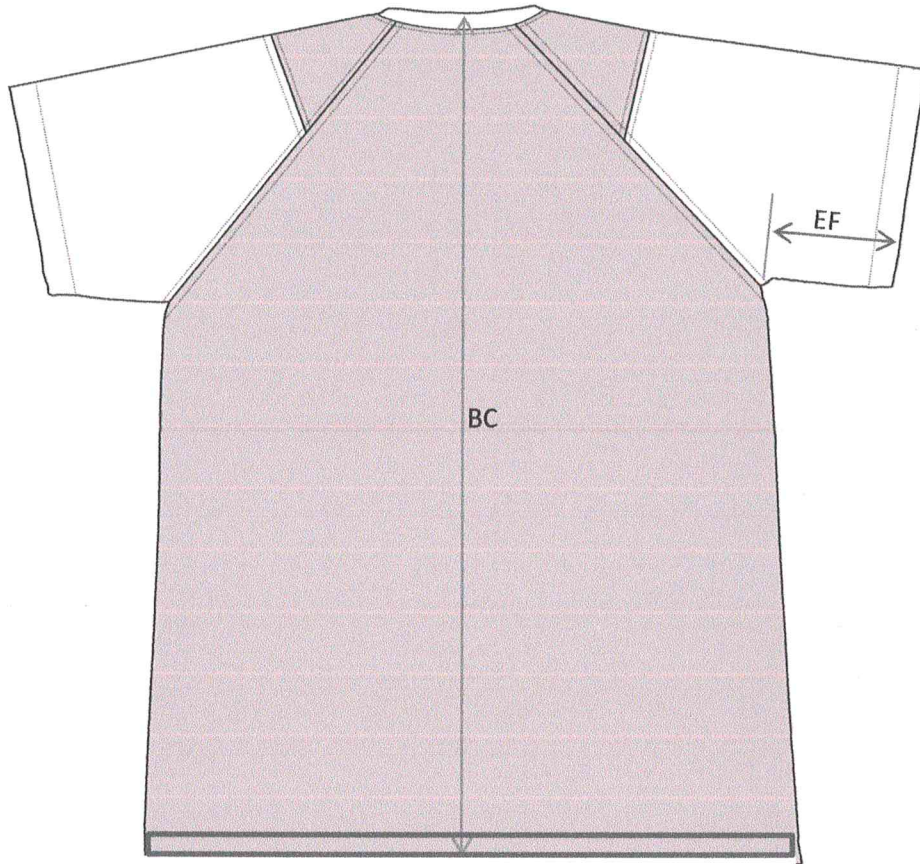
PA SPECIFICATION

QM SPEC NR IC-21USRRN

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**Back View**



**FIGURE 2**

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Actual Picture

Front



Back



FIGURE 3



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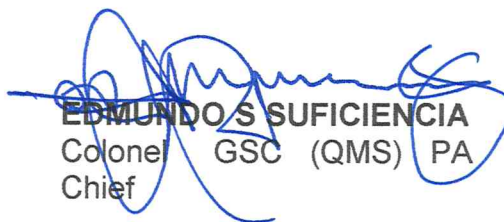
**TEST PARAMETERS**

**UNDERSHIRT, RAGLAN, POLYESTER SPANDEX, ROUND NECK**

TEST PARAMETERS	QM SPEC NR IC-21USRRN dated 27 May 2019	Classification	
		Major	Minor
<b>Materials</b>			
<b>(Front Part)</b>	85% $\pm$ 5 Polyester fabric and 15% $\pm$ 5 Spandex	x	
Color	Olive Drab	x	
Thread Count/2.54 cm			
Wales	44 - 55		x
Courses	80 - 90		x
Thickness, mm	0.43 – 0.47	x	
Weight, g/m <sup>2</sup>	165 (maximum)	x	
Type of Knit	Plain	x	
Absorbency, seconds (RDC method)	2 (maximum)		x
Color Quality (Color Difference)	1.5 (maximum) Spectrophotometric Method	x	
Dimensional Change, %	$\pm$ 3% (max)	x	
Colorfastness	Change in Color                      Staining		
Laundering	Grade 4 (minimum)              Grade 4 (minimum)	x	
Perspiration	Grade 4 (minimum)              Grade 4 (minimum)	x	
<b>(Back Part)</b>	90% $\pm$ 5 Polyester fabric and 10% $\pm$ 5 Spandex	x	
Color	Olive Drab w/ Design	x	
Thread Count/2.54 cm			
Wales	60 - 70		x
Courses	110 - 120		x
Thickness, mm	0.38 – 0.42	x	
Weight, g/m <sup>2</sup>	145 (maximum)	x	
Type of Knit	Plain	x	
Absorbency, seconds (RDC method)	2 (maximum)		x
Color Quality (Color Difference)	1.5 (maximum) Spectrophotometric Method	x	
Dimensional Change, %	$\pm$ 3% (max)	x	
Colorfastness	Change in Color                      Staining		
Laundering	Grade 4 (minimum)              Grade 4 (minimum)	x	
Perspiration	Grade 4 (minimum)              Grade 4 (minimum)	x	
<b>Collaret</b>	Shall be the same material as specified in para 2.2.1.1.	x	
<b>Thread, Sewing</b>	Polyester		x
Color	Same color and shade of the basic material	x	
No. of Ply	2 ply (minimum)		x
Yarn Size, Denier	130 (minimum)		x
Breaking Strength, kg	1 (minimum)	x	



TEST PARAMETERS	QM SPEC NR IC-21USRRN dated 27 May 2019	Classification	
		Major	Minor
<b>ARMY Marking</b>			
Location and Distance	Shall be placed on the left breast part of the T-Shirt with the following distances: Y and X	x	
Color and Type of material	Using black paint	x	
Type & Size of Lettering	Stencil font, Size 100		x
<b>Construction</b>			
<b>Design</b>	The design of the undershirt shall be of the men's pull over athletic type and of a design essentially the same as shown in the Figures 1 & 2	x	
<b>Contractor's Label</b>			
Location	Shall be printed inside back portion of the Undershirt, 2.5 ± 0.5 cm below the collaret seam	x	
Type of Ink	Black paint		x
Type & Size of Lettering	Arial font, Size 12		x
Contents of Label	UNDERSHIRT, RAGLAN, POLYESTER SPANDEX, ROUND NECK Name of Contractor: Size  WASHING INSTRUCTION  MACHINE WASHABLE / WASH WITH LIKE COLORS DO NOT BLEACH / TUMBLE DRY LOW / WARM IRON DO NOT IRON DESIGN / DO NOT DRY CLEAN		x
<b>Size and Measurements, cm</b>			
<b>T-Shirt</b>	Size:		
Body Width	See page 8, Measurements as to Different Sizes in Centimeters Table 1 (T-Shirt)	x	
Body Length		x	
Shoulder Sleeve Length		x	
Sleeve Opening		x	
Sleeve Length		x	
Neck Width		x	
Neck Drop		x	
Width of Hem			x
	2.5 ± 0.2		
	<b>TOTAL TEST POINTS</b>	<b>32</b>	<b>14</b>

  
**EDMUNDO S. SUFICIENCIA**  
 Colonel GSC (QMS) PA  
 Chief

By 2028, world-class Army that is a source of national pride.

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**UNDERSHIRT, RAGLAN, POLYESTER SPANDEX, ROUND NECK**  
**QM SPEC NR IC-21USRRN dtd 27 May 2019**

**LIST OF REQUIRED PROTOTYPE SAMPLES AND SWATCH MATERIALS FOR TESTING**

**1. FOR POST QUALIFICATION TEST**

**PROTOTYPE SAMPLES**

RDC – Three (3) pcs, any size but the three (3) pcs must be of same sizes

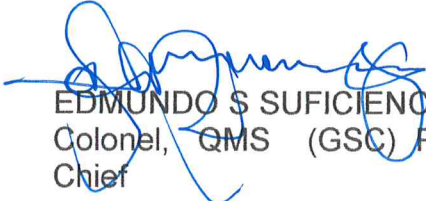
**SWATCH MATERIALS (Minimum requirement)**

**Basic Material for T-Shirt**

Front Part	-	-	- 2 m (full width)
Back Part	-	-	- 2 m (full width)
Thread, Sewing	-	-	10 m

**2. FOR ACCEPTANCE TEST**

Three (3) pcs, any size but the three (3) pcs must be of same sizes-  
Picked at random from delivery.

  
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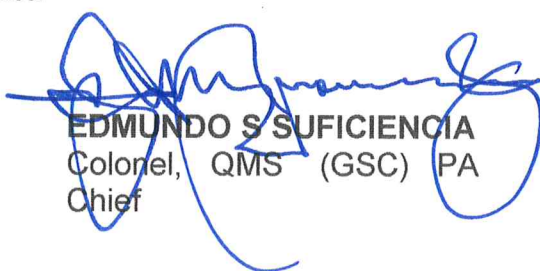
**UNDERSHIRT, RAGLAN, POLYESTER SPANDEX, ROUND NECK**

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**VISUAL INSPECTION CHECKLIST**

DESCRIPTION OF DEFECTS	CLASIFICATION OF DEFECTS
1. Packing and Packaging	
a. Each undershirt shall be placed in a transparent (cellophane) bag.	Minor
b. Each bag shall have a markings as shown in the specification printed legibly on one face at the center portion of the bag using black indelible ink	Major
c. One Hundred (100) pieces of T-Shirt of the same sizes shall be packed in a corrugated carton.	Major
d. The top cover when closed shall be sealed with a binding tape and finally secured with nylon straps.	Minor
e. Contents of carton label shall be as specified	Minor
2. Shall be a combination of Olive Drab and Olive Drab with design	Major
3. The basic material of the collaret shall be the same with the fabric of the back part	Major
4. ARMY Marking:	
a. Shall have an ARMY Marking	Major
b. Placed at the left breast part of the T-Shirt using black ink	Major
5. The undershirt shall be of the men's pull over athletic type and of a design essentially the same as the official sample of the Philippine Army	Major
6. Loose sewing/Untrimmed thread ends	Minor
7. Contractor's label and Washing Instruction	
a. Printed on the inside back portion of the T-Shirt using black paint	Major
b. Contents of the label shall be as specified	Major
8. Presence of dirt, stains and other defects:	
a. Affecting appearance	Major
b. Does not affect appearance	Minor

Note: Finished undershirts shall conform with the illustration and the Official sample of the Philippine Army. Any discrepancy shall be considered as ground for non-acceptance.

  
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UNDERSHIRT, RAGLAN, POLYESTER SPANDEX, ROUND NECK  
QM SPEC NR IC-21USRRN dated 27 May 2019

TEST CRITERIA

FOR POST-QUALIFICATION TEST:

Destructive Testing Criteria based on Logistic Letter Directive Number SC-07-04 dtd 25 October 2007 para 5f.

TOTAL MINOR TEST POINTS	NO. OF ALLOWABLE DEFECTS	
	MAJOR	MINOR
14	0	1

1. No major defect allowed.
2. Maximum allowable minor defect is nine & 9/10 percent (9.9%) of total minor test points **"CONDUCTED"**

FOR ACCEPTANCE TEST:

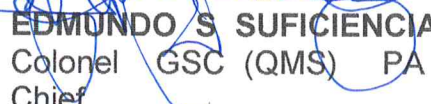
- I. Visual Inspection Criteria based on Mil Std 105E dtd 10 May 1989
  - All defects noted in 1<sup>st</sup> and 2<sup>nd</sup> sampling are cumulative.
  - In case of rejection, destructive testing will not be conducted

Classification of Defects	TABLE III-A General Inspection Level I Code Letter K Double Sampling Plan for Normal Inspection				
	Lot size 10,001 – 35,000 pcs Sample Size: 80 pcs + 80 pcs	Number of Defects			
		1 <sup>st</sup> Sampling		2 <sup>nd</sup> Sampling	
	AQL	Accept	Reject	Accept	Reject
MAJOR	6.5	7	11	18	19
MINOR	25	11	16	26	27

- II. Destructive Testing Criteria based on Logistic Letter Directive Number SC-07-04 dtd 25 October 2007 para 5f.

TOTAL MINOR TEST POINTS	NO. OF ALLOWABLE DEFECTS	
	MAJOR	MINOR
14	0	1

1. No major defect allowed.
2. Maximum allowable minor defect is nine & 9/10 percent (9.9%) of total minor test points **"CONDUCTED"**

  
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