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MILITARY STANDARD
CLASSIFICATION OF DEFECTS FOR EVALUATING
QUALITY OF ALUMINIZED FIREMEN'S CLOTHING



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DEPARTMENT OF DEFENSE
WASHINGTON, D.C. 20301

CLASSIFICATION OF DEFECTS FOR EVALUATING QUALITY OF
ALUMINIZED FIREMEN'S CLOTHING

1. This Military Standard is approved for use by all Departments and Agencies of the Department of Defense.
2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Officer in Charge, Navy Clothing and Textile Research Facility, 21 Strathmore Road, Natick, MA 01760-2490 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.
3. This document supplements the military specifications listed below. It provides a standard description for defects and standardizes examination requirements.

<u>SPECIFICATION</u>	<u>TITLE</u>
MIL-H-24925	- Hood, Fireman's Aluminized, Proximity, With Lift Up Visor
MIL-C-24938	- Coats, Firemen's, Structural/Aluminized, Proximity
MIL-T-24940	- Trousers, Firemen's, Structural/Aluminized, Proximity
MIL-T-29146	- Trousers, Fireman's, Aluminized, Proximity
MIL-C-29145	- Coat, Fireman's, Aluminized, Proximity
MIL-H-29144	- Hood, Fireman's, Aluminized, Proximity and Cover, Fireman's Hood Frame, Aluminized, Proximity
MIL-C-82284	- Coveralls, Firemen's, Aluminized, Proximity
MIL-G-87077	- Gloves, Firemen's, Aluminized, Proximity

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1. SCOPE

1.1 Purpose. The purpose of this standard is to provide standardized defect descriptions for evaluating the quality of aluminized firemen's clothing.

1.2 Application. This standard shall be made applicable to contracts by reference in the appropriate aluminized firemen's clothing specification. If there are any inconsistencies between the requirements of the applicable specification and this standard, the specification shall govern.

2. REFERENCED DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards and handbooks. Unless otherwise specified, the following specifications, standards and handbooks of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation, form a part of this standard to the extent specified herein.

STANDARDS

FEDERAL

FED-STD-4 - Glossary of Fabric Imperfections

MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

MIL-STD-109 - Quality Assurance Terms and Definitions

(Copies of specifications, standards, handbooks, drawings and publications required by contractors in connection with specific procurement functions should be obtained from the contracting activity or as directed by the contracting activity)

2.2 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this standard shall take precedence. Nothing in this standard, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. DEFINITIONS

3.1 Fabric defects. Definitions of fabric defects, where applicable, shall be in accordance with FED-STD-4. Fabric defects shall be clearly visible when examined at a distance of 3 feet.

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3.2 Quality assurance terms and procedures. Definitions of quality assurance terms and procedures, where applicable, shall be in accordance with MIL-STD-105 and MIL-STD-109.

3.3 Permanent spot or stain. A spot or stain shall be considered permanent when the spot or stain cannot be removed by gently rubbing with a soft cloth and mild soapy water, isopropanol or perchlorethylene.

3.4 Raw edge. A raw edge is defined as any edge not finished as specified, including any protruding edge on the outside or inside of the garment.

3.5 Defective metal components. A metal component shall be considered as defective when it has a rough or sharp edge, burr, fracture, gouge, malformation, imbedded foreign matter, rough surface or corrosion that will affect the serviceability of the garment or may cause injury to the wearer.

3.6 Outside and inside. The terms "outside" and "inside" as used in this standard are defined as follows:

SECTION I - MATERIAL DEFECTS AND DAMAGES

- Outside (visible) - Any part that is visible when garment is completely fastened, including undersleeves.
- Outside (not visible) - Any part that is not visible when garment is completely fastened. This includes under the fly flap, collar, under the protective flap, under the pocket flap, and under the facepiece. Term "underside" used in defect I.1. A.2 defined as the integral underside of the component part.
- Inside - Any part except as classified above for outside (not visible) that is not visible when garment is completely fastened.

SECTION V - SEAMS AND STITCHING

- Outside - Any part, seam or stitching that appears on the outside of the garment. This includes under the collar (including integral undercollar), under the protective flap, under the pocket flaps, under the fly flap and under the facepiece.
- Inside - Any part, seam or stitching that does not appear on the outside of the garment.

4. SAMPLE AND INSPECTION PROVISIONS

4.1 This standard contains the provisions for end item examination, dimensional examination and the examination of packaging requirements for aluminized firemen's clothing.

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4.2 Visual examination. The end items shall be examined for defects in color, design, material, construction, assembly, workmanship and marking, and the defects classified as indicated in Table I.

4.3 Dimensional examination. The end items shall be examined for dimensional defects in accordance with the following:

- a. GENERAL - Any measurement deviating from nominal dimensions and tolerances specified shall be scored as a measurement defect.
- b. COATS AND COVERALLS - Sleeve lengths unequal by 1/2 inch or more shall be scored as a measurement defect.
- c. COVERALLS AND TROUSERS - Leg inseam lengths unequal by more than 1/2 inch shall be scored as a measurement defect.
- d. GLOVES - Any pair mismatched; left and right hand not of same size or two of same hand, shall be scored as a pairing defect.

4.3 Inspection levels and acceptable quality levels. The inspection levels and acceptable quality levels (AQL's) expressed as defects per 100 units, for visual and dimensional examination shall be as follows:

	<u>AQL's</u>	<u>INSPECTION LEVEL</u>
For visual examination in 4.2:		
Major	2.5	II
Major and Minor A	15.0	II
Total (Major, Minor A&B combined)	40.0	II
For dimensional examination in 4.3:		
One class	4.0	S-3

4.5 Examination of packaging requirements. An examination shall be made to determine that packaging, packing and marking comply with Section 5 requirements of the specification. Defects shall be scored in accordance with the list below. The sample unit shall be one shipping container fully prepared for delivery. Defects of closure listed below shall be examined on shipping containers fully prepared for delivery. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL shall be 2.5 defects per hundred units.

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EXAMINEDEFECTMarking (interior
and exterior)Omitted incorrect, illegible, of improper size
location, sequence, or method of application.

Materials

Any component missing, damaged, or not as
specified.

Workmanship

Inadequate application of components, such as:
incomplete closure of container flaps, loose
strapping, improper taping, inadequate
stapling, bulged or distorted containers.

Content

Number of items per shipping container is more
or less than required.
Size shown on one or more items not as specified
on shipping container. 1/

1/ For this defect, one item from each shipping container in the
sample shall be examined.

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat			Gloves			Hood			Trousers			Coveralls		
	Maj	Min		Maj	Min		Maj	Min		Maj	Min		Maj	Min	
		A	B		A	B		A	B		A	B		A	B
I. MATERIAL DEFECTS AND DAMAGES															
1. <u>General</u>															
A. Any size hole, cut, tear, scratch exposing base fabric, or burn:															
1. On outside (visible)															
(a) On aluminized outer fabric (except securing panels and hood bib)	X			X											
(b) On aluminized securing panels and hood bib										X					
(c) On other fabrics, (other than corduroy collar)															
(d) On corduroy collar															
2. On outside (not visible)															
(a) Under side of collar															X
(b) Underside of protective flap															X
(c) Underside of pocket flap															
(d) Underside of facepiece															
(e) On right fly piece															
3. On inside															
															X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min
B. Any ruptured fiber in line of sewing: - On outside only		X		X		X		X		X
C. Incorrect material	X		X		X		X		X	
2. <u>Aluminized coated materials</u>										
A. Any garment area that contains only one ply of aluminized fabrics:										
1. On outside, except underside of collar and right flypiece:										
(a) Delamination, blister or scrape-off	X		X		X		X		X	
(b) Cracking:										
(1) less than 1 inch		X		X		X		X		X
(2) 1 inch or more	X		X		X		X		X	
2. On inside, underside of collar and on right fly piece										
(a) Delamination, blister or scrape-off, 1/2 inch or more		X		X		X		X		X
(b) Cracking, 1 inch or more		X		X		X		X		X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
B. Any garment area that contains two or more plies of aluminized fabric on the outer ply:										
1. Delamination, blister or scrape-off										
(a) 1/2 inch up to and including 2 inches		X		X		X		X		X
(b) more than 2 inches		X						X		
2. Cracking, 1 inch or more		X		X				X		X
NOTE: Cracking of the aluminized film along any stitch line shall not be scored as a defect. Cracking of the aluminized film along a seam fold, except where LSq-2 loose welt is specified, shall not be scored as a defect.										
C. Discoloration, i.e., streaked or shaded		X				X		X		X
D. Repairing (delamination, scrape-off or cracking)										
1. Single ply:										
(a) One patch not securely bonded		X				X		X		X
(b) Two or more patches not securely bonded	X					X		X		X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls		
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min	
	A	B	A	B	A	B	A	B	A	B	
2. Two or more plies:											
(a) Two patches not securely bonded		X		X		X		X		X	
(b) Three or more patches not securely bonded	X				X		X			X	
3. Number of patches on one item:											
(a) More than two			X								
(b) More than three on a single ply	X				X		X		X		
(c) More than three on two or more plies											
(d) More than a total of six	X				X		X		X		
4. Size of patch more than 2 inches in any direction	X				X		X		X		
5. Patch extends less than 1/2 inch beyond all edges of repair area. Defective area cannot be more than 1 inch in diameter	X				X		X		X		
4. <u>Leather.</u>											
A. Loose, spongy or flanky		X	X						X		X
B. Any open vein		X	X						X		X
C. Any rupture		X							X		X
D. Not soft or pliable		X							X		X
E. Any scar, brittle or bony area, weak or thin spot, or abraded area		X							X		X
NOTE: Above leather defects shall be scored as a Minor B defect on glove strap											

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min
5. <u>Knitted wristlets.</u>										
A. Stretch lacking, i.e., knitting tension too tight	X								X	
B. Run or dropped stitch, two or more		X								X
C. Loosely knit		X								X
D. Mend not neatly performed	X								X	
6. <u>Webbing.</u>										
A. Not tightly woven					X					X
B. Raveled edge					X					X
7. <u>Quilted batting.</u>										
A. Any hole, cut, tear, needle chew, smash, multiple float (In any ply)	X				X				X	
B. Darn or mend (In any ply)		X				X				X
C. Exposed drill hole (In any ply)						X				
D. Broken or missing stitching:										
1. 1-1/2 inches to half the length of the stitching										X
2. More than half the length of the stitching									X	
E. Thick or thin place	X				X				X	
F. Piecing or splicing of outer covering (either ply)	X				X				X	
II COMPONENT AND ASSEMBLY										
Any component part or operation omitted, defective, not as specified (unless otherwise classified herein).	X				X				X	

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min
III CUTTING Any part not cut in accordance with directional lines indicated on patterns or not in accordance with specification requirements	X		X		X		X		X	
IV CLEANNESS (see 3.3) 1. <u>Permanent spot or stain on outside.</u> (visible with garment completely fastened): A. Up to 1 inch in longest direction B. One inch or more in longest direction	X		X		X		X		X	
NOTE: Spot or stain under a collar, flap, protective flap or protective flypiece shall not be scored. 2. Thread ends not trimmed or loose threads not removed on major portion of end item 3. Two or more adhesive size tickets not removed		X		X		X		X		X
V SEAMS AND STITCHING (see 3.6) 1. <u>Accuracy of seaming.</u> A. Part of garment caught in any unrelated stitching operation B. Seam puckered, twisted or pleated (unless otherwise classified herein)		X		X		X		X		X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
C. Any end of seam and stitching when not caught in another seam or stitching: 1. Not backstitched 2. Backstitched or overstitched less than 3/8 inch	X		X		X		X		X	
D. End of a continuous line of stitching overlapped less than 1/2 inch		X		X		X		X		X
E. Stitching anchoring both ends of thread break or skipped stitches less than 1/2 inch		X		X		X		X		X
F. Any seam restitched damaging cloth to a degree where it may tear along the row of stitching	X		X		X		X		X	
G. Restitched seam not neatly accomplished										
2. <u>Stitching margin.</u>										
A. Top or edge stitching sewn too close to edge resulting in damage to the material: 1. Affecting appearance 2. Affecting serviceability	X		X		X		X		X	
B. Margin irregular, affecting appearance		X		X		X		X		X
C. Not within range specified or varies more than 1/8 inch when no range is specified (score only when condition exists on more than 1/2 the length of the seam).		X		X		X		X		X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min
3. <u>Seam allowance.</u> Not as specified by more than 1/16 inch (Score only when condition exists on more than 1/2 the length of the seam)		X		X				X		X
4. <u>Open seam.</u> (skipped or broken stitches)										
A. Any outside seam, except hems	X		X		X		X		X	
B. Any other seam, except quilt or serge stitching				X				X		X
C. Serge stitching - 1 inch or more		X				X		X		X
NOTE: A stitch broken when crossed by other stitching shall not be scored as a defect. A seam shall be classified as open when one or more stitches are broken or when two or more continuous runoff or skipped stitches occur. Double stitched seams are considered open when one or both rows of stitching are open.										
5. <u>Runoff.</u> (on outside joining seam, score as an open seam)										
A. On outside edge, top or raised stitching, two or more stitches	X					X		X		X
B. On inside, four or more stitches		X		X				X		X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min
6. <u>Raw edge.</u> (see 3.4)										
A. On outside:										
1. More than 1/4 inch to 1/2 inch inclusive		X		X		X		X		X
2. More than 1/2 inch	X		X				X			
B. On inside - more than 3/4 inch				X		X		X		X
7. <u>Seam and stitch types.</u>										
A. Not specified seam or stitch type		X		X		X		X		X
B. Any line of stitching not beginning or not ending where specified				X		X		X		X
C. Looper (underthread) on outside when 401 stitch type is used		X		X		X		X		X
D. Any required line of stitching omitted (unless otherwise classified herein)							X		X	
E. Any seam not facing the direction specified	X			X		X		X		X
8. <u>Stitch tension</u>										
A. Loose tension resulting in loosely exposed loops of lower or top thread (score only when condition exists on more than 1/2 the length of the seam)		X		X		X		X		X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
B. Tight tension (stitches break when normal strain is applied in the direction of the seam or stitching):										
1. On the outside	X		X		X		X		X	
2. On the inside:										
(a) Quilt or serge stitching		X	X			X		X		X
(b) Glove										
(c) Any other seam, except quilt or serge stitching		X				X		X		X
9. <u>Stitches per inch.</u> (score only when condition exists on more than 1/2 the length of the seam):										
A. One stitch per inch less than the minimum or any number in excess of the maximum specified		X		X		X		X		X
B. Two or more stitches less than the minimum specified	X		X		X		X		X	
10. <u>Overedge stitching.</u>										
When required, omitted for 2 or more inches on one or more seams		X				X		X		X
11. <u>Bartack or backtrack.</u> (One or more)										
A. Missing, insecure, misplaced or not serving intended purpose		X		X		X		X		X
B. Loose stitch tension, not specified length or type		X		X		X		X		X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
VI QUILTED LINING AND INTERLINING ASSEMBLY (Hood only)										
1. Construction of component not as specified						X				
2. Quilted lining or interlining twisted, tight or short, causing a noticeable bulge on outside.					X					
VII METAL COMPONENTS (eyelets, snap fasteners, dee rings, rivets, buckles, nuts, bolts, washers, strikes, latches, blocks, buttons, and slide sockets (see 3.5))										
1. <u>General.</u>										
A. Not specified type, size, color or finish	X		X		X				X	
B. Any specified hardware or component missing, broken or defective	X		X		X				X	
C. Any part inadequately set, i.e., to a degree where it would most likely become detached from garment in a short time during use										X
D. Any part not properly set or attached but will adequately be retained on garment and will function as intended										X
E. Not reinforced as specified, when applicable		X				X				X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
2. Eyelets, rivets, and snap fastener assemblies										
A. One or more clinched too tightly cutting material										
1. Affecting appearance		X		X		X		X		X
2. Affecting serviceability				X		X		X		
3. Slide socket and buckle (gloves only)	X									
(a) Slide socket buckle not threaded on leather adjustment strap										
(b) Slide socket buckle omitted										
NOTE: Snaps, dee rings, studs, sockets and latches shall be checked for proper function and secure clinching by opening and closing several times.			X							
VIII FRONT CLOSURE (Coats and coveralls only)										
1. Uneven in length at bottom by 1 inch or more when fastened (coat only)		X								
2. Uneven in length at neck when fastened by more than 3/8 inch										X
3. Snaps and dee rings out of alignment causing a noticeable gap or pull on front closure when fastened		X								X
4. Dee rings not positioned as specified by template and measurements by 1/2 inch or more		X								X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
IX PROTECTIVE FLAP (Coat MIL-C-29145 and Coveralls only)										
1. Puckered or pleated excessively, affecting appearance		X								X
2. Inner edge joined with only one row of stitching	X								X	
X SECURING PANEL (Coat MIL-C-24938 only)										
1. Puckered or pleated noticeably, affecting serviceability		X								
2. Panels reversed, i.e. right panel on left side or left panel on right side	X									
3. Folded edge of right panel not parallel with front edge by more than 1/2 inch when measured from top to bottom										X
XI SLEEVES (Coat and coveralls only)										
1. Reversed, i.e., left sleeve in right armhole or right sleeve in left armhole	X								X	
2. Tight at armhole, causing puckers or pleats on front and back		X								X
3. Bottom of sleeve not leather bound		X								X
4. Leather binding on sleeve bottom overlapped less than 1 inch or more than 1-1/2 inch										
5. Sleeve tabs on inside not positioned as specified										
6. Width of sleeve tab more or less than specified		X								

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TABLE I - CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls		
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min	
7. Center of socket positioned on sleeve tab less than 5/8 inch or more than 3/4 inch from end											
8. Stitched end of buckle strap less than 5-1/4 inches or more than 5-3/4 inches from inseam		X									
9. Stitched end of adjustment strap less than 3-3/4 inches or more than 4-1/4 inches from inseam		X									
10. Bottom edge of buckle or adjustment strap less than 1-1/4 inches or more than 1-3/4 inches from folded edge of sleeve bottom		X									
11. Snap fastener socket missing from sleeve tabs		X									
12. Bottom edge of knitted wristlets exposed beyond leather bound edge of sleeve (Applicable to MIL-C-82284 only)	X										
13. Sleeve puckered or pleated by stitching joining knitted wristlet (Applicable to MIL-C-82284 only)											X
14. Finished buckle portion of strap less than 1-3/4 inches or more than 2-1/4 inches in length											X
15. Finished adjustment portion of strap less than 9-1/2 inches or more than 10-1/2 inches in length											
16. Leather adjustment strap spliced											
17. Adjustable leather strap less than 7/16 inch or more than 1/2 inch wide	X										X

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
XII KNITTED WRISTLET (Coat MIL-C-24938 and coverall only)										
1. Omitted, incomplete, insecurely attached or other than type or size specified	X								X	
2. Positioned in other than specified manner or place	X								X	
3. Paired wristlets not of same color		X								X
4. Wristlets finish less than 3-3/4 inches or more than 4-1/4 inches (Applicable to coat MIL-C-24938 only)		X								
XIII LEATHER BINDING STRIP (When applicable)										
1. Missing	X						X			
2. Not joined as specified										X
3. Ends not overlapped as specified										X
4. Joined with more than one splice (when applicable)										X
XIV COLLAR (Coat only)										
1. Topcollar tight or twisted		X								
2. Topcollar excessively full		X								
3. Collar short, causing excessive pleats or puckering at neck joining seam		X								
4. Excessive fullness or twists on collar stand		X								
5. Collar edge uneven or not properly forced out		X								
6. Collar points uneven by more than 1/4 inch		X								
7. Collar ends overlapping or causing an opening of more than 1-1/2 inches between ends when snaps and dee rings are fastened		X								

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
8. Collar off center by more than 1/2 inch		X								
9. Finished collar measurements outside of specified tolerances		X								
XV POCKETS AND FLAPS										
1. Pockets or flaps out of vertical alignment with front edge by more than 3/4 inch (Applicable to MIL-C-29145 and MIL-C-24938 only)		X								
2. Pockets or flaps out of horizontal alignment by more than 3/4 inch	X							X		
3. Pocket or flaps poorly shaped, or not of uniform shape	X							X		
4. Pocket or flap set on crookedly, affecting appearance									X	
5. Pocket or flap measurements outside of specified tolerances									X	
6. Excessive fullness or twist on outside of flap									X	
7. Finished pocket hem measures outside of specified tolerances									X	
8. Pocket eyelets position measures outside of specified tolerances									X	
9. Bellows top edge of pocket caught during pocket attachment (Applicable to MIL-C-24938 and MIL-T-24940 only)	X									X
10. Second row of stitching omitted on side or bottom edges of pocket or top edge of flap (Applicable to MIL-C-29145 only)	X									X
11. Back edge of pocket flap caught in side closing seam (applicable to coat MIL-C-24938 only)	X									X

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
XVI SIDE AND UNDERARM SEAMS (Coats only)										
1. Outer shell and quilted lining										
A. Staggered at junction by more than 5/8 inch		X								
XVII BINDING (Coat and trouser only)										
1. Binding not securely caught, pulls away from quilted lining or facing easily		X					X			
2. Binding noticeably puckered or pleated		X					X			
3. Binding tight will not lie flat		X					X			
4. Binding ends overlapped other than specified				X				X		
6. Width of binding other than specified				X					X	
7. Other than bias-cut or specified material				X						X
XVIII FACING										
1. Short, tight, or twisted, causing noticeable twists or fullness on outside of the end item						X				X
2. Side or bottom facing contains more than one splicing		X						X		
XIX SLIDE FASTENER (Coveralls only)										
1. Tapes stitched too loose or too tight causing bulge, twist, or fullness on closed opening										X
2. Stitched too close to metal chain, not permitting slider to pass freely									X	
3. Tapes stitched to fabric with only one row of stitching									X	

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls		
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	
4. Chain length not within following tolerances: A. Medium size - less than 25-1/4 inches or more than 25-3/4 inches B. Large/X-large size - less than 26-1/4 inches or more than 26-3/4 inches										X	
5. Thong omitted or other than specified											X
6. Staple not securely clinched at bottom of chain											X
7. Chain exposed when slide fastener is closed											X
8. Does not function properly, e.g., binds or sticks at any point											X
9. Any required component missing											X
10. Wrong type or style											X
11. Metal component malformed, affecting closure											X
XX FRONT CROTCH (Coveralls only)											
1. Fullness or twisting on outside between rows of stitching											X
2. Tape not properly stitched to crotch seam allowance, i.e., too tight causing puckering on the outside											X
XXI NECK OPENING (Coveralls only)											
1. Facing twisted or fullness on facing											X
2. Facing tight or short resulting in excessive puckering											X

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
XXII BACK (Coveralls only)										
1. Bellows piece too full, causing a noticeable bulge on back, or too short, not permitting back to lie smoothly										X
2. Stitching across top and bottom ends of bellows piece omitted or insecure										X
XXIII INSEAMS, OUTSEAMS, ARMHOLES SEAMS, AND CROTCH SEAMS (Coveralls only)										
1. Joined in other than one continuous operation										X
2. Front and back seam staggered at crotch junction by more than 5/8 inch										X
3. Armhole seam staggered at side seam junction by more than 5/8 inch										X
4. Strips for seams joined with more than two splices (when applicable)										X
5. Joining seams of spliced strips finishing at base of armhole or crotch junctions										X
6. Finished width of formed tape less than 3/8 inch or more than 5/8 inch from folded line to line of stitching										X
7. Not constructed as specified									X	
XXIV HEMS										
1. Outside of garment puckered or twisted by stitching forming hem										X
2. Irregular in width by more than 1/4 inch										X
3. Width not within tolerance specified										X

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min
XXV LINING (Gloves only)										
1. Knit cotton side not facing towards hand when worn			X							
2. Lining assembly not firmly or not properly affixed, causing discomfort to wearer, e.g., lining wrinkled or excessive bulge in crotch of fingers			X							
3. Pleated, affecting smoothness on outside of gloves				X						
4. Lining twisted, short or tight, causing a twist or distortion of the fingers on the outside										
5. Fingertips of the lining not tacked to the outershell as specified			X							
XXVI LEATHER ADJUSTMENT STRAP (Gloves only)										
1. Missing			X							
2. Not attached to outer shell gauntlet as specified by marker template										
A. But serving intended purpose										
B. Not serving intended purpose										
3. Finished length of strap less than 5-1/4 inches or more than 6 inches										
4. Width of strap less than 7/16 inch or more than 9/16 inch										
5. Strap attached so that loose end lays in incorrect position			X							
6. Not attached with box-criss-cross stitch			X							
7. Loose end not turned and stitched										

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
XXVII STUDSNAP FASTENER (Gloves only)			X							
1. Missing			X							
2. Not positioned correctly on palm side of gauntlet:										
A. But serving intended purpose				X						
B. Not serving intended purpose				X						
XXVIII FINISHING (Gloves only)										
1. Not laid off on heated form			X							
2. Any pair mismatched; left and right hand are not same size or are of the same hand			X							
XXIX TOP EDGE (Trousers only)										
1. Excessive puckering or twist at joining to waist facing							X			
2. Waist facing exposed beyond top edge of trousers (score only when condition exists along more than 1/2 the length of the top edge)								X		
XXX REMOVABLE QUILTED LINER ASSEMBLY (Coat and trousers only) (When applicable)										
1. Studs and sockets not in position or out of alignment causing a noticeable bulge or twist on outside of garment or on liner		X						X		
2. Aramid cloth not finishing on outside of liner									X	

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min
	A	B	A	B	A	B	A	B	A	B
XXXXI INSEAMS (Trousers only)										
1. Outershell and quilted lining										
-Staggered at crotch by more than 5/8 inch							X			
XXXXII SUSPENDERS (Trousers only)										
1. Straps crossed at a distance more or less than specified when measured from finished top edge of waist along center of straps to center of diamond stitch							X			
2. Any strap misplaced, attached in other than specified manner, or insecurely attached								X		
3. Straps not crossed at a 40 to 50° angle								X		
4. Finished lengths of straps more or less than specified								X		
5. Front attachment strap finishes more or less than specified over top of waistband								X		
XXXXIII FLY CONSTRUCTION AND CLOSURE (Trousers only)										
1. Sockets and studs out of alignment causing a noticeable bulge or twist on front fly when fastened									X	
2. Fly base noticeably twisted or puckered								X		
3. Waist edges not even by more than 3/8 inch when fly is fastened								X		
4. Corner of fly not completely forced out										X
5. Bottom ply exposed along outer edge of left edge fly for a distance of 1 inch or more								X		

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
XXXIV LEG TABS (Trousers only when applicable)										
1. Missing							X			
2. Not attached or positioned as specified							X			
3. Width more or less than specified								X		
4. Length more or less than specified								X		
XXXV FACEPIECE SUPPORT/VISOR AND FACEPIECE/GOLD COATED FACESHIELD (Hoods only, as applicable)										
1. Not formed to proper radius or curvature			X							
2. Edges not smooth or not rounded							X			
3. Gold coating or overcoating missing incomplete or non-adherent in the face opening/visor area			X							
4. Inserted incorrectly over the facepiece support/visor, i.e., the coated side of the facepiece/gold coated faceshield is next to the facepiece support/visor								X		
5. Any permanent spot, stain, or foreign matter affecting visibility			X							
6. Any spot, stain, or foreign matter which can be removed by a cleaning agent								X		
7. Any scratch in the gold coating:										
A. Affecting visibility			X							
B. Not affecting visibility									X	
8. The word "OUTSIDE" not on the coated side of facepiece/gold coated faceshield			X							
9. Any cracks, chips, holes or tears			X							
10. Not proper dimension			X							

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
XXXVI FACEPIECE COVER (Hood MIL-H-29144 only)										
1. Inscription omitted, illegible, incomplete or not as specified						X				
2. One or more holes not aligned with stud fasteners, flap will not fasten properly						X				
3. Color of plastic film not as specified						X				
4. Finished size of cover not as specified						X				
XXXVII FACE OPENING (Hood and cover MIL-H-29144 only)										
1. Snap fasteners not properly aligned causing a noticeable bulge or twist on face opening when fastened							X			
2. One or both flaps twisted, distorted, or set at an angle when fastened							X			
3. Stiffening or reinforcement piece omitted							X			
XXXVIII DOME DARTS (Hood and cover only)										
1. One or more omitted							X			
2. Ends of darts not properly tapered causing an unsightly bulge									X	
XXXIX APRON (Type II of hoods MIL-H-29144 only)										
Length less than 24 or more than 26 inches									X	

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
XL ELASTIC TAKE-UP STRAP (Hood and cover only)										
1. Omitted			X							
2. Positioned in other than specified manner or place					X	X				
3. Not securely attached					X	X				
XLI MOLDED HELMET AND FRAME (Hoods only)										
1. Any hole, soft spot, evidence of delamination, or crack			X							
2. Any air pocket, void, pitting, chipping or blister			X							
3. Not type specified					X					
XLII HELMET HEADBAND, CROWN STRAPS, AND LACES (Hoods only)										
1. Any missing			X							
2. Any rip, hole, cut, tear, or otherwise defective					X	X				
3. Finished length of straps not as specified										
4. Pile fastener tape finishes not facing the chin (applicable to MIL-H-24925 only)									X	X
5. Hook fastener tape finishes facing the chin									X	X
6. Not attached properly to frame assembly			X							

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min
XLIII FINISHED HOOD ASSEMBLY (Applicable to MIL-H-24925 only)										
1. Frame cover does not cover inner frame on sides and bottom					X					
2. Visor not sealed around face opening when hood is latched:										
a. Latches improperly adjusted					X					
b. Seal cannot be effected										
3. Bib does not attach properly to Hood Cover										
4. Instruction manual and repair kit not positioned properly										
5. Contents of repair kit not as specified										
6. Latch and strike do not engage/disengage properly										
7. Location of snaps on bib, visor and hood cover not as specified, i.e. difficulty in mating										
8. Screws not tightened:										
a. No force required to unscrew any screw										
b. Minimal force required to unscrew:										
1. Fewer than 3 screws										
2. 3 screws or more but fewer than half										
3. More than half										
9. Visor when attached to frame will not swivel										
10. Visor when attached to frame cannot be held firmly at the desired angle when tilted upwards										

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TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
XLIV HOOD SUPPORT ASSEMBLY (applicable to hood MIL-H-24925 only) <ol style="list-style-type: none"> 1. Frame not conforming to specified dimensions 2. Hardware not assembled as specified, will not serve intended purpose 3. Rubber seal on frame not securely attached: <ol style="list-style-type: none"> a. Gaps in application of adhesive or unadhered portions of seal b. Adhesive or seal peeling from aluminum frame 					X					
XLV HELMET CHIN REST (applicable to hood MIL-H-29144 only) <ol style="list-style-type: none"> 1. Not properly positioned, i.e., will not serve intended purpose 2. Not adjustable 3. Malformed, causing discomfort to wearer 					X					
XLVI HOOD, FRAME, AND HELMET ASSEMBLY (applicable to MIL-H-29144 only) <ol style="list-style-type: none"> 1. Frame, when attached to helmet, will not swivel 2. Frame does not project beyond face to permit clearance of nose and eyeglasses (when worn) 3. Frame, when attached to helmet, cannot be tilted upwards out of line of vision to an angle of at least 30° above the horizontal 					X					

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min
	A	B	A	B	A	B	A	B	A	B
4. Frame, when attached to helmet, cannot be held firmly at the desired angle when tilted upwards						X				
5. Hood facepiece not centered over frame opening, restricting vision seriously					X					
6. Frame has insufficient strength to support attachment of hood and helmet and maintain proper curvature of facepiece support					X					
7. Snap fasteners not properly aligned i.e., difficulty in mating					X					
8. Any sharp edge that may affect serviceability or cause injury to the wearer					X					
9. Not one piece mold type										
XLVII HELMET CHIN (TAKE UP) AND HOOD HARNESS ADJUSTMENT STRAP ASSEMBLY (applicable to hood MIL-H-29144 only)										
1. Reversed assembly, i.e., buckle not on right side of helmet (as worn)										X
2. One or both straps incorrectly threaded through buckle or dee rings									X	
3. One or both straps seamed or positioned in other than specified manner									X	
4. Finished length of strap not as specified										X
5. Finished hem or turn under of one or both straps not conforming to dimensions or tolerances specified										X

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
XLVIII HANGER LOOP (When applicable)		X		X		X				X
1. Omitted										
2. Positioned in other than specified manner or place		X				X				X
3. Not securely caught		X				X				X
4. Length or width not as specified		X				X				X
XLIX LABEL										
1. Missing, incomplete, incorrect, or illegible										
2. Insecure, i.e., not stitched on all four sides, when required		X		X		X		X		X
3. Position not as specified		X		X		X		X		X
L REFLECTIVE TAPE (When applicable)										
1. On section missing										
2. More than one section missing										
3. Edge of tape not parallel with bottom edge of coat or trousers by more than 1/2 inch	X						X			
LI HOOK AND PILE FASTENER TAPE										
1. Any required section missing										
A. When seriously affecting serviceability or appearance	X								X	
B. When affecting serviceability or appearance but not seriously		X								X

MIL-STD-1666B

TABLE I- CLASSIFICATION OF DEFECTS

Defects	Coat		Gloves		Hood		Trousers		Coveralls	
	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B	Maj	Min A B
2. Any section incorrect component, i.e. hook portion instead of pile portion or pile portion instead of hook portion		X							X	
3. Not securely edge stitched along all edges when required		X								X
LII LEATHER KNEE PATCHES (When applicable)										
1. Leather knee patch missing (one or both)								X		
2. Leather knee patch misplaced or not attached as specified								X		
LIII LEATHER REINFORCEMENT (Applicable to structural coat of MIL-C-24938 only)										
1. Shoulder piece missing	X									
2. Shoulder piece misplaced or not attached as specified										X
3. Buttonhole reinforcement missing	X									
4. Buttonhole reinforcement not attached as specified										X
5. Buttonhole reinforcement piece not slit										X
6. Triangular pocket reinforcement piece missing										X
LIV LEG PROTECTORS (Aluminized outershell of trouser MIL-T-24940 only)										
1. Leg protector missing								X		
2. Leg protector misplaced or not attached as specified									X	
3. Elastic tubing caught in stitching										X

MIL-STD-1666B

5. INFORMATION FOR GUIDANCE ONLY

5.1 Intended use. The clothing covered by this standard are intended for use by fire fighting personnel of the Department of Defense.

5.2 Subject term (key word) listing.

Cloth, Para-aramid/PBI
Cloth, aluminized
Clothing, protective
Coat, combination
Coat, proximity
Coat, structural
Trousers, combination
Trousers, proximity
Trousers, structural
Glove, proximity
Hood, proximity
Coverall, proximity

Custodians:

Navy - NU
Army - GL
Air Force - 99

Preparing activity:

Navy - NU

Project No. 8415-0295

Review activities:

Navy - MC
Army - MD
Air Force - 50, 82
DLA - CT

User activities:

Navy - SH, CG
Air Force - 45

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