ITEM SPECIFICATION ITM CD :2111657237

ITEM CODE :- 2111657237 submit

ITM CODE	DETAILED SPECIFICATION
2111657237	PSF CE MSD 2WY 2SLDR AL 73CM DARK GREY Appendix "E" of IAFS:09149(OVERALL GROUND CREW) : 2025MAY IS : 14181 (Part 1 to 3)
40	NUMBER

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	measuring the bond strength, specified above.		
SLIDE FASTENER			
SLIDE Fastener - provided for the opening of **fore part** of the **Ground Crew Overall**	**Designation : MEDIUM SPECIAL, Code MS, Ladder i.e L-Type Textile chain, Chain width 7.0 ± 0.3 mm, Chain thickness 2.9 mm (Min.), Each side Crotchet knitted Lace width 2.20 ± 0.05 mm,** *(Refer Table-1, Fig6, Clauses 6.1, 11.4 , , Table-3 of Part 1 of* IS14181) **with the following details:-** **(a) END CLOSING *CLOSED Ends Type E* –** *i.e Top Stop:* ***Closed when top slider is pulled up (otherwise open) &*** *Bottom Stop:* ***Always closed (irrespective of whether the bottom slider is pulled down or up)*** *(Refer Type E, Fig 4 of Part 1 of IS14181)*	IS	IS14181 (Part 1 to 3) **(Designation Code MS** to be referred for **the specifications** and **test procedure)** **Note:** Best Trade quality as that of 'YKK' or 'tex' is to be used to ensure that the functioning of the slide fastener is not impaired during the usage life of the Coat Combat Note : The colour of all components of the slide fastener would be checked by the O/o CQAO at HQ MC, also, for acceptability at

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	(b) TWO way with two puller/slider assemblies as per configuration Type E of Fig 4 of IS14181 - (Part 1) . Mouth to Mouth sliders' arrangement with AUTO LOCK provision (made of spring steel) but non-reversible type pullers are to be used ***(c) Slider Puller assembly should be metallic and non-corrosive with dimensions as per Table 3 of IS14181 - (Part 1) and painted with colour same as the darker print colour of the Outer Digital print fabric of the Coat Combat*** ***(d) Interlocking elements (of chain) – Ladder i.e L-Type; with crotchet knitted layer of protective tape / lace; both having colour same as the darker***		the time of BPC as well during the Bulk Production Inspection

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	print colour of the Outer Digital print fabric of the Coat Combat (Refer Clause Table 2 and Clause 11.4 of IS14181 - (Part 1)) ***(e) Tape – Nylon / Polyester Woven Fabric with details as per Table 2, Table 3 & Table 6 of IS14181 - (Part 1) and colour same as the darker print colour of the Outer Digital print fabric of the Coat Combat*** ***Note-1:*** ***The above mentioned slide fastener should strictly conform to all details/ specified values mentioned in IS14181 - (Part 1) inclusive of the Tables 1,2,3 4 & Table 5 against 'Designation code MS'*, and also meet the following functional test requirements :-**		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	(a) When tested as per procedure given in **Annexure-K** of IS 14181 – Part-2, **the reciprocating movement of the slider** under specified load **should remain un-impaired upto 1000 cycles (minimum).** (b) When tested as per **Annexure-N** of IS 14181 – Part-2, **no problem in re-meshability** of the slide fastener should be noticeable, **after the slider is moved 20 times** (c) When tested as per **Annexure-H** of IS 14181 – Part-2, no problem in should be noticeable when the **puller is subjected to tension**, while the **slider is rigidly supported**. (d) When tested as per **Annexure-J** of IS 14181 – Part-2, **no problem in should be noticeable**		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	in the locking mechanism (device), when the locking device is subjected to tension / load/pressure ***(i.e. when the puller is subjected to tension with slider in locked condition)*** (e) When the chain of the slide fastener (zipper) is subjected to abrasion (as per procedure defined in **Annexure-L** of IS 14181 – Part-2) for **220 cycles using abrasive emery cloth of E 80/100/120,** the **operability of the slide fastener (zipper) should remain un-impaired, when checked 20 times** *(post completion of 220 cycles of abrasion test).* (f) When the chain of the slide fastener (zipper) is subjected reciprocating movement ; at elevated temperature (160		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	degree Celcius) under load resistance (as per procedure defined in **Annexure-M** of IS 14181 – Part-2) for 250 cycles, the operability of the slide fastener should not be found impaired after completion of 250 cycles. **Note 2** *The observations noticed during all the tests mentioned in **Note 1 above** and **Note 4 below** have to be mentioned in the lab testing report.* **Note 3**: *The **length** of the slide fasteners **is to be as per the requirement** of the **front opening;** as per the various **sizes** of the garment and **as approved by the Office of CQAO** in the **BPC sample**.* **Note 4:** *Colour fastness to light and washing – both, should be better than 4. The colour of*		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	the Slide fastener tape should not bleed onto the fabric, in dry or wet condition and even during perspiration)		
STITCH DENSITY			
Stiches per inch	**Minimum 12 at ALL places** **(Note :** SPI of 11 will not be acceptable**)**		Visually by the Office of CQAO as well as Lab
BAR TACKING			
Bar tacking	**Should be carried out at all 34 places as mentioned (tabulated) in Appendix 'C' of Part-1 of this IAFS**		Visually by the Office of CQAO as well as Lab
Details of the Bar tacking	Minimum of 3 passes *(to & fro is to be taken as one pass)* of the sewing needle should be carried out during bar tacking **to ensure sufficient density of the stitches** *(i.e. the base fabric, should, in no case, should be visible; in the area covered by bar tacking).* The width of each bar tacking stitch (tack) should be 1/16 inch (i.e.		Visually by the Office of CQAO as well as Lab

ITEM SPECIFICATION ITM CD :2111657238

ITEM CODE :- 2111657238 submit

ITM CODE	DETAILED SPECIFICATION
2111657238	PSF CE MSD 2WY 2SLDR AL 75CM DARK GREY Appendix "E" of IAFS:09149(OVERALL GROUND CREW) : 2025MAY IS : 14181 (Part 1 to 3)
40	NUMBER

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	measuring the bond strength, specified above.		
SLIDE FASTENER			
SLIDE Fastener - provided for the opening of **fore part** of the **Ground Crew Overall**	**Designation : MEDIUM SPECIAL, Code MS, Ladder i.e L-Type Textile chain, Chain width 7.0 ± 0.3 mm, Chain thickness 2.9 mm (Min.), Each side Crotchet knitted Lace width 2.20 ± 0.05 mm,** *(Refer Table-1, Fig6, Clauses 6.1, 11.4 , , Table-3 of Part 1 of* IS14181) **with the following details:-** **(a) END CLOSING *CLOSED Ends Type E* –** *i.e Top Stop:* ***Closed when top slider is pulled up (otherwise open) &*** *Bottom Stop:* ***Always closed (irrespective of whether the bottom slider is pulled down or up)*** *(Refer Type E, Fig 4 of Part 1 of IS14181)*	IS	IS14181 (Part 1 to 3) **(Designation Code MS** to be referred for **the specifications** and **test procedure)** **Note:** Best Trade quality as that of 'YKK' or 'tex' is to be used to ensure that the functioning of the slide fastener is not impaired during the usage life of the Coat Combat Note : The colour of all components of the slide fastener would be checked by the O/o CQAO at HQ MC, also, for acceptability at

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	(b) TWO way with two puller/slider assemblies as per configuration Type E of Fig 4 of IS14181 - (Part 1) . Mouth to Mouth sliders' arrangement with AUTO LOCK provision (made of spring steel) but non-reversible type pullers are to be used ***(c) Slider Puller assembly should be metallic and non-corrosive with dimensions as per Table 3 of IS14181 - (Part 1) and painted with colour same as the darker print colour of the Outer Digital print fabric of the Coat Combat*** ***(d) Interlocking elements (of chain) – Ladder i.e L-Type; with crotchet knitted layer of protective tape / lace; both having colour same as the darker***		the time of BPC as well during the Bulk Production Inspection

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	print colour of the Outer Digital print fabric of the Coat Combat (Refer Clause Table 2 and Clause 11.4 of IS14181 - (Part 1)) ***(e) Tape – Nylon / Polyester Woven Fabric with details as per Table 2, Table 3 & Table 6 of IS14181 - (Part 1) and colour same as the darker print colour of the Outer Digital print fabric of the Coat Combat*** ***Note-1:*** ***The above mentioned slide fastener should strictly conform to all details/ specified values mentioned in IS14181 - (Part 1) inclusive of the Tables 1,2,3 4 & Table 5 against 'Designation code MS'*, and also meet the following functional test requirements :-**		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	(a) When tested as per procedure given in **Annexure-K** of IS 14181 – Part-2, **the reciprocating movement of the slider** under specified load **should remain un-impaired upto 1000 cycles (minimum).** (b) When tested as per **Annexure-N** of IS 14181 – Part-2, **no problem in re-meshability** of the slide fastener should be noticeable, **after the slider is moved 20 times** (c) When tested as per **Annexure-H** of IS 14181 – Part-2, no problem in should be noticeable when the **puller is subjected to tension**, while the **slider is rigidly supported**. (d) When tested as per **Annexure-J** of IS 14181 – Part-2, **no problem in should be noticeable**		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	in the locking mechanism (device), when the locking device is subjected to tension / load/pressure ***(i.e. when the puller is subjected to tension with slider in locked condition)*** (e) When the chain of the slide fastener (zipper) is subjected to abrasion (as per procedure defined in **Annexure-L** of IS 14181 – Part-2) for **220 cycles using abrasive emery cloth of E 80/100/120,** the **operability of the slide fastener (zipper) should remain un-impaired, when checked 20 times** *(post completion of 220 cycles of abrasion test).* (f) When the chain of the slide fastener (zipper) is subjected reciprocating movement ; at elevated temperature (160		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	degree Celcius) under load resistance (as per procedure defined in **Annexure-M** of IS 14181 – Part-2) for 250 cycles, the operability of the slide fastener should not be found impaired after completion of 250 cycles. **Note 2** *The observations noticed during all the tests mentioned in **Note 1 above** and **Note 4 below** have to be mentioned in the lab testing report.* **Note 3**: *The **length** of the slide fasteners **is to be as per the requirement** of the **front opening;** as per the various **sizes** of the garment and **as approved by the Office of CQAO** in the **BPC sample**.* **Note 4:** *Colour fastness to light and washing – both, should be better than 4. The colour of*		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	the Slide fastener tape should not bleed onto the fabric, in dry or wet condition and even during perspiration)		
STITCH DENSITY			
Stiches per inch	**Minimum 12 at ALL places** **(Note :** SPI of 11 will not be acceptable**)**		Visually by the Office of CQAO as well as Lab
BAR TACKING			
Bar tacking	**Should be carried out at all 34 places as mentioned (tabulated) in Appendix 'C' of Part-1 of this IAFS**		Visually by the Office of CQAO as well as Lab
Details of the Bar tacking	Minimum of 3 passes *(to & fro is to be taken as one pass)* of the sewing needle should be carried out during bar tacking **to ensure sufficient density of the stitches** *(i.e. the base fabric, should, in no case, should be visible; in the area covered by bar tacking).* The width of each bar tacking stitch (tack) should be 1/16 inch (i.e.		Visually by the Office of CQAO as well as Lab

ITEM SPECIFICATION ITM CD :2111657236

ITEM CODE :- 2111657236 submit

ITM CODE	DETAILED SPECIFICATION
2111657236	PSF CE MSD 2WY 2SLDR AL 71CM DARK GREY Appendix "E" of IAFS:09149(OVERALL GROUND CREW) : 2025MAY IS : 14181 (Part 1 to 3)
40	NUMBER

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	measuring the bond strength, specified above.		
SLIDE FASTENER			
SLIDE Fastener - provided for the opening of **fore part** of the **Ground Crew Overall**	**Designation : MEDIUM SPECIAL, Code MS, Ladder i.e L-Type Textile chain, Chain width 7.0 ± 0.3 mm, Chain thickness 2.9 mm (Min.), Each side Crotchet knitted Lace width 2.20 ± 0.05 mm,** *(Refer Table-1, Fig6, Clauses 6.1, 11.4 , , Table-3 of Part 1 of* IS14181) **with the following details:-** **(a) END CLOSING *CLOSED Ends Type E* –** *i.e Top Stop:* ***Closed when top slider is pulled up (otherwise open) &*** *Bottom Stop:* ***Always closed (irrespective of whether the bottom slider is pulled down or up)*** *(Refer Type E, Fig 4 of Part 1 of IS14181)*	IS	IS14181 (Part 1 to 3) **(Designation Code MS** to be referred for **the specifications** and **test procedure)** **Note:** Best Trade quality as that of 'YKK' or 'tex' is to be used to ensure that the functioning of the slide fastener is not impaired during the usage life of the Coat Combat Note : The colour of all components of the slide fastener would be checked by the O/o CQAO at HQ MC, also, for acceptability at

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	(b) TWO way with two puller/slider assemblies as per configuration Type E of Fig 4 of IS14181 - (Part 1) . Mouth to Mouth sliders' arrangement with AUTO LOCK provision (made of spring steel) but non-reversible type pullers are to be used ***(c) Slider Puller assembly should be metallic and non-corrosive with dimensions as per Table 3 of IS14181 - (Part 1) and painted with colour same as the darker print colour of the Outer Digital print fabric of the Coat Combat*** ***(d) Interlocking elements (of chain) – Ladder i.e L-Type; with crotchet knitted layer of protective tape / lace; both having colour same as the darker***		the time of BPC as well during the Bulk Production Inspection

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	print colour of the Outer Digital print fabric of the Coat Combat (Refer Clause Table 2 and Clause 11.4 of IS14181 - (Part 1)) ***(e) Tape – Nylon / Polyester Woven Fabric with details as per Table 2, Table 3 & Table 6 of IS14181 - (Part 1) and colour same as the darker print colour of the Outer Digital print fabric of the Coat Combat*** ***Note-1:*** ***The above mentioned slide fastener should strictly conform to all details/ specified values mentioned in IS14181 - (Part 1) inclusive of the Tables 1,2,3 4 & Table 5 against 'Designation code MS'*, and also meet the following functional test requirements :-**		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	(a) When tested as per procedure given in **Annexure-K** of IS 14181 – Part-2, **the reciprocating movement of the slider** under specified load **should remain un-impaired upto 1000 cycles (minimum).** (b) When tested as per **Annexure-N** of IS 14181 – Part-2, **no problem in re-meshability** of the slide fastener should be noticeable, **after the slider is moved 20 times** (c) When tested as per **Annexure-H** of IS 14181 – Part-2, no problem in should be noticeable when the **puller is subjected to tension**, while the **slider is rigidly supported**. (d) When tested as per **Annexure-J** of IS 14181 – Part-2, **no problem in should be noticeable**		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	in the locking mechanism (device), when the locking device is subjected to tension / load/pressure ***(i.e. when the puller is subjected to tension with slider in locked condition)*** (e) When the chain of the slide fastener (zipper) is subjected to abrasion (as per procedure defined in **Annexure-L** of IS 14181 – Part-2) for **220 cycles using abrasive emery cloth of E 80/100/120,** the **operability of the slide fastener (zipper) should remain un-impaired, when checked 20 times** *(post completion of 220 cycles of abrasion test).* (f) When the chain of the slide fastener (zipper) is subjected reciprocating movement ; at elevated temperature (160		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	degree Celcius) under load resistance (as per procedure defined in **Annexure-M** of IS 14181 – Part-2) for 250 cycles, the operability of the slide fastener should not be found impaired after completion of 250 cycles. **Note 2** *The observations noticed during all the tests mentioned in **Note 1 above** and **Note 4 below** have to be mentioned in the lab testing report.* **Note 3**: *The **length** of the slide fasteners **is to be as per the requirement** of the **front opening;** as per the various **sizes** of the garment and **as approved by the Office of CQAO** in the **BPC sample**.* **Note 4:** *Colour fastness to light and washing – both, should be better than 4. The colour of*		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	the Slide fastener tape should not bleed onto the fabric, in dry or wet condition and even during perspiration)		
STITCH DENSITY			
Stiches per inch	**Minimum 12 at ALL places** **(Note :** SPI of 11 will not be acceptable**)**		Visually by the Office of CQAO as well as Lab
BAR TACKING			
Bar tacking	**Should be carried out at all 34 places as mentioned (tabulated) in Appendix 'C' of Part-1 of this IAFS**		Visually by the Office of CQAO as well as Lab
Details of the Bar tacking	Minimum of 3 passes *(to & fro is to be taken as one pass)* of the sewing needle should be carried out during bar tacking **to ensure sufficient density of the stitches** *(i.e. the base fabric, should, in no case, should be visible; in the area covered by bar tacking).* The width of each bar tacking stitch (tack) should be 1/16 inch (i.e.		Visually by the Office of CQAO as well as Lab

ITEM SPECIFICATION ITM CD :2111657234

ITEM CODE :- 2111657234 submit

ITM CODE	DETAILED SPECIFICATION
2111657234	PSF CE MSD 2WY 2SLDR AL 69CM DARK GREY Appendix "E" of IAFS:09149(OVERALL GROUND CREW) : 2025MAY IS : 14181 (Part 1 to 3)
40	NUMBER

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	measuring the bond strength, specified above.		
SLIDE FASTENER			
SLIDE Fastener - provided for the opening of **fore part** of the **Ground Crew Overall**	**Designation : MEDIUM SPECIAL, Code MS, Ladder i.e L-Type Textile chain, Chain width 7.0 ± 0.3 mm, Chain thickness 2.9 mm (Min.), Each side Crotchet knitted Lace width 2.20 ± 0.05 mm,** *(Refer Table-1, Fig6, Clauses 6.1, 11.4 , , Table-3 of Part 1 of* IS14181) **with the following details:-** **(a) END CLOSING *CLOSED Ends Type E* –** *i.e Top Stop:* ***Closed when top slider is pulled up (otherwise open) &*** *Bottom Stop:* ***Always closed (irrespective of whether the bottom slider is pulled down or up)*** *(Refer Type E, Fig 4 of Part 1 of IS14181)*	IS	IS14181 (Part 1 to 3) **(Designation Code MS** to be referred for **the specifications** and **test procedure)** **Note:** Best Trade quality as that of 'YKK' or 'tex' is to be used to ensure that the functioning of the slide fastener is not impaired during the usage life of the Coat Combat Note : The colour of all components of the slide fastener would be checked by the O/o CQAO at HQ MC, also, for acceptability at

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	(b) TWO way with two puller/slider assemblies as per configuration Type E of Fig 4 of IS14181 - (Part 1) . Mouth to Mouth sliders' arrangement with AUTO LOCK provision (made of spring steel) but non-reversible type pullers are to be used ***(c) Slider Puller assembly should be metallic and non-corrosive with dimensions as per Table 3 of IS14181 - (Part 1) and painted with colour same as the darker print colour of the Outer Digital print fabric of the Coat Combat*** ***(d) Interlocking elements (of chain) – Ladder i.e L-Type; with crotchet knitted layer of protective tape / lace; both having colour same as the darker***		the time of BPC as well during the Bulk Production Inspection

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	print colour of the Outer Digital print fabric of the Coat Combat (Refer Clause Table 2 and Clause 11.4 of IS14181 - (Part 1)) ***(e) Tape – Nylon / Polyester Woven Fabric with details as per Table 2, Table 3 & Table 6 of IS14181 - (Part 1) and colour same as the darker print colour of the Outer Digital print fabric of the Coat Combat*** ***Note-1:*** ***The above mentioned slide fastener should strictly conform to all details/ specified values mentioned in IS14181 - (Part 1) inclusive of the Tables 1,2,3 4 & Table 5 against 'Designation code MS'*, and also meet the following functional test requirements :-**		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	(a) When tested as per procedure given in **Annexure-K** of IS 14181 – Part-2, **the reciprocating movement of the slider** under specified load **should remain un-impaired upto 1000 cycles (minimum).** (b) When tested as per **Annexure-N** of IS 14181 – Part-2, **no problem in re-meshability** of the slide fastener should be noticeable, **after the slider is moved 20 times** (c) When tested as per **Annexure-H** of IS 14181 – Part-2, no problem in should be noticeable when the **puller is subjected to tension**, while the **slider is rigidly supported**. (d) When tested as per **Annexure-J** of IS 14181 – Part-2, **no problem in should be noticeable**		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	in the locking mechanism (device), when the locking device is subjected to tension / load/pressure ***(i.e. when the puller is subjected to tension with slider in locked condition)*** (e) When the chain of the slide fastener (zipper) is subjected to abrasion (as per procedure defined in **Annexure-L** of IS 14181 – Part-2) for **220 cycles using abrasive emery cloth of E 80/100/120,** the **operability of the slide fastener (zipper) should remain un-impaired, when checked 20 times** *(post completion of 220 cycles of abrasion test).* (f) When the chain of the slide fastener (zipper) is subjected reciprocating movement ; at elevated temperature (160		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	degree Celcius) under load resistance (as per procedure defined in **Annexure-M** of IS 14181 – Part-2) for 250 cycles, the operability of the slide fastener should not be found impaired after completion of 250 cycles. **Note 2** *The observations noticed during all the tests mentioned in **Note 1 above** and **Note 4 below** have to be mentioned in the lab testing report.* **Note 3**: *The **length** of the slide fasteners **is to be as per the requirement** of the **front opening;** as per the various **sizes** of the garment and **as approved by the Office of CQAO** in the **BPC sample**.* **Note 4:** *Colour fastness to light and washing – both, should be better than 4. The colour of*		

PROPERTY	REQUIRED VALUE	TEST METHOD	
		STD	STD NO
	the Slide fastener tape should not bleed onto the fabric, in dry or wet condition and even during perspiration)		
STITCH DENSITY			
Stiches per inch	**Minimum 12 at ALL places** **(Note :** SPI of 11 will not be acceptable**)**		Visually by the Office of CQAO as well as Lab
BAR TACKING			
Bar tacking	**Should be carried out at all 34 places as mentioned (tabulated) in Appendix 'C' of Part-1 of this IAFS**		Visually by the Office of CQAO as well as Lab
Details of the Bar tacking	Minimum of 3 passes *(to & fro is to be taken as one pass)* of the sewing needle should be carried out during bar tacking **to ensure sufficient density of the stitches** *(i.e. the base fabric, should, in no case, should be visible; in the area covered by bar tacking).* The width of each bar tacking stitch (tack) should be 1/16 inch (i.e.		Visually by the Office of CQAO as well as Lab