

## 2. Technical Specification of Hard Toe Steel Shank Boots

S/No	Specification	
1.	<b>General</b>	Hard Toe steel shank boot shall be complied with BIS standard (If available)/ CE 0321 and EN ISO 20345.
2.	<b>Boot</b>	<ul style="list-style-type: none"> <li>i. Boot should provide safety and comfort to the rescuers during hostile working environment of CSSR operation.</li> <li>ii. It must have loops for assisting in wearing of boots.</li> <li>iii. The size of the boot shall be provided at the time of supply order.</li> </ul>
3.	<b>Upper Rubber and sole type</b>	Should be Vulcanized Rubber for upper and sole type of construction.
4.	<b>Upper construction</b>	<ul style="list-style-type: none"> <li>i. It should have extra comfort with woven cotton canvas lining material.</li> <li>ii. Upper construction should consist of: -                             <ul style="list-style-type: none"> <li>a) Flame retardant upper with heat insulation.</li> <li>b) Waterproofing</li> <li>c) Reinforced rubber High visibility through black and yellow contrast</li> </ul> </li> </ul>
5.	<b>Sole/Heal</b>	Sole and Heel should consist of: - <ul style="list-style-type: none"> <li>i. Flame retardant rubber outside</li> <li>ii. Fuel oil resistant sole suitable for inimical environment.</li> <li>iii. Slip resistant vulcanized rubber outsole.</li> <li>iv. Excellent abrasion resistant for extra durability.</li> <li>v. Capable of withstanding 18 KV of live current at dry condition.</li> <li>vi. Heel energy absorption design to minimize heel impact.</li> </ul>
6.	<b>Sole/Toe cap</b>	Sole/Toe cap should consist of: - <ul style="list-style-type: none"> <li>i. Epoxy coated toe caps for anti-corrosion.</li> <li>ii. Metal toe-cap should provide reliable protection in cold &amp; hot environments.</li> </ul>
7.	<b>Sole Toe Cap Standardization</b>	Should meet EN ISO 20345 impact and compression tests <b>and to EN 345 Standards or BS 1870.</b>
8.	<b>Resistance</b>	Sole & upper should have resistance towards strong acids and alkali, Meeting (EN 13832) and NFPA Standards
9.	<b>Weather protection</b>	It should have finishing consist of lacquer coating for all weather protection
10.	<b>Steel Midsole</b>	Steel midsole should consist of: - <ul style="list-style-type: none"> <li>i. Non corrosive stainless steel</li> <li>ii. Withstands pin &amp; sharp objects</li> </ul>
11.	<b>Certification</b>	Boot shall meet the requirements of the standard specified and certificate to this effect from an NABL accredited/ independent laboratory/test house of international reputation shall be furnished along with the technical offer.
12.	<b>Maximum weight</b>	Not more than 2.5 kgs for a pair of shoes
13.	<b>Guarantee/warranty/ Service support</b>	<ul style="list-style-type: none"> <li>i. As it is a part of PPE, so the bidder should provide hassle free replacement warranty for a period of 5 yrs.</li> <li>ii. Bidder /OEM to provide an undertaking for the same.</li> </ul>

14.	<b>Manual and literatures</b>	The following should be provided with the equipment. i. User Manual ii. Maintenance manual, Inspection iii. Standards be provided with the equipment
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