

ALKO PLUS TECHNOSAFE PRIVATE LIMITED

Plot No. 69-70, Sector-17, HSIIDC Industrial Estate,
Bahadurgarh, Haryana-124507 (India).

Contact : 00 91 - 9811096021

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TECHNICAL DATA SHEET



PRODUCT : SAFETY HELMET WITH MANUAL ADJUSTMENT

REF. NO. : APS 51

APPROVAL : IS 2925 : 1984

1	PHYSICAL PARAMETERS	General	Protection Shock Absorption Wearer Comfort & Ergonomics	<p>1. The Corrugation on the shell provides greater toughness, thereby offering stronger protection.</p> <p>2. The anchoring points of the cradle are extra thick to ensure that there is no failure of the cradle in case of an impact.</p> <p>3. The walls of the Anchor points in the shell where the cradle is anchored are extra thick to prevent any damages to the anchor points upon impact.</p> <p>The function of a helmet is not only to provide protection to the users' head from a falling object but its capacity to reduce the impact which is defined as shock absorption capacity. The choice of material bearing a high degree of elasticity & softness for the molding of Cradle also enhances the Shock Absorption Capacity of APS 51.</p> <p>APS 51's lightweight, large shell & aerodynamics design enhances ergonomics. There are two main areas of the headband that directly</p>
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2	VITAL TEST COMPLIANCE	Climate Condition Test	User Friendliness & Ease of Usage	<p>come in contact with the skin of the user viz: the forehead part of the headband & the chinstrap.</p> <p>APS 51 is the helmet that contains a soft moulded head band which is non-irritant.</p> <p>The chinstrap is also made of soft webbing to provide user comfort of highest degree & the material used is non-skin irritant. APS 51 is the only product, which contains a nape strap design in such a way that it covers the lower part of the back head slightly above the back of the neck. This is because this is the only part of the back head which is soft & fleshy & thus no way tightens on the back part of the hard skull of user.</p> <p>The Nape Strap of APS 51 has a very simple design consisting of locking holes in a row along with moulded locking heads for a very easy adjustment of the headband. The workforce, generally illiterate, does not have any problem adjusting the nape strap to its head size.</p>
			Color Preference	<p>APS 51 is the Safety Helmet that offers you different options of Colors. At present, APS 51 comes in nine colors viz. White, Yellow, Blue, Sky Blue, Red, Green, Orange, Grey & Violet.</p>
			Weight	<p>310 ± 5 grams</p>
			Material of Construction	<p>High Density Polyethylene</p>
			Very Hot climate	<p>A temperature of 50 ± 5° C for 4 hours in an oven.</p>
			Very Cold climate	<p>A temperature of -10 ± 2° C for 4 hours in a refrigerator.</p>
			Heavy Rainfall	<p>Water flowing all over the surface at 1 ltr/mm for 4 hours.</p>

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			<p>Shock Absorption Test</p>	<p>A rectangular block having a horizontal striking surface of 180mm x 180mm weighing 3 kgs is allowed to fall freely over the helmet from a height of 1.5 ± 5 mtr. It is ensured that the force transmitted is not greater than 5KN i.e. 510 kgf.</p>
			<p>Penetration Test</p>	<p>The IS specification IS 2925:1984 says that if a striker of mass 500 gm with a conical steel point having an included angle of 36° and a spherical point radius is dropped on the helmet, mounted on the head foam from a clear height of 3.0 ms, the helmet shell should not be pierced enough to allow the point to touch the head foam, the depth of penetration should not exceed 10mm. APS 51 complies with both the specifications listed above. When APS 51 was tested as per IS 2925:1984, only a small point mark was obtained on the shell.</p>
			<p>Flame Resistance Test</p>	<p>IS 2925:1984 have framed certain specification for flame resistance. A blue flame is generated by a burner with temperature same as that of melting point of copper. This flame is exposed to the surface of the helmet at 45° angle for a period of 10 seconds and then the helmet is removed. It is ensured that the helmet does not catch fire within 5 seconds of removal of the flame. APS 51 complies with the above specification completely.</p>
			<p>Electrical Insulation Test</p>	<p>As per IS 2925:1984 standards, an inverted helmet is placed into a container containing a solution chloride in water (6 gms/ltr.). The same solution is filled in the inside of the helmet as well. The helmet is allowed to stand for a period of 18-24 hours at room temperature. An A/C voltage of 2000 V is generated between two electrodes, and an ammeter connected in series. It is to be ensured that no current flows and there is no deflection in the ammeter. APS 51 complies to this specification as well.</p>

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			Water Absorption Resistance Test	As per IS 2925:1984, a helmet immersed in water at a temperature of 25° C & 35° C for 24 hours should not gain mass of more than 5%. APS 51 does not gain any mass upon applying this test.
			Heat Resistance Test	IS 2925:1984 ensures a baseline conformity to heat resistance. The shell is placed in an oven for 15 minutes maintained at a constant temperature of 93 ± 5° C. Upon removal from the oven, the shell should not separate, distort or soften. APS 51 successfully complies with this test.