

Electro-static Dissipative Belts

Volta produces a range of Electro-static Dissipative materials that have been approved after successful installation with major electronics producers.

The materials, suited to both flat belts and round belting of various diameters, are both highly abrasion-resistant and can be obtained at defined levels of static inhibition.

According to generally accepted definitions, electrical resistivity of a material measured on its surface, can be used to gauge whether it is insulating or conductive and therefore whether it exhibits anti-static properties.

The resistivity is measured in ohms/sq for surfaces. Volta's ESD range is rated on the top surface. The term 'static-dissipative' comes to describe a material with lower anti-static properties but nevertheless not conductive.

Applications

All the Volta ESD range is ideally suited to applications where given levels of anti-static resistivity are required. Major electronics companies have found the belts superior to existing materials with benefits including the high abrasive resistance, the extra safety while conveying fragile parts afforded by the cushioning layer of thermoplastic material, the ease of service and low maintenance requirement.

Other machine producers have incorporated the belts into state of the art systems for electronic components and circuit boards where the conveying of parts on the ESD surface enables the reduction of static build up.


Applications have also been found in environments where prevailing conditions dictate the use of ESD rated material and where abrasive erosion is prevalent. Such a situation is encountered in grain silo conduits where, after verification of the required AS ratio, FRLB-4 ESD was used as a coating with many times the wear resistance of conventional materials .

The following chart gives a brief summary;

Anti-static	$10^9 \leq R \leq 10^{14}$ ohms/sq
Static Dissipative	$10^5 \leq R \leq 10^9$ ohms/sq

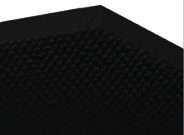
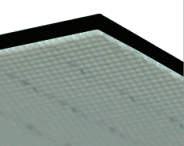
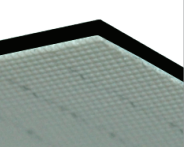
Following these guidelines, Volta offers the following;

Round Belts



	Code	Hardness	ESD ratio – top surface	Diameter		Min. Pulley	
				mm	inch	mm	inch
	RPD - 2 AS	88A/37B	$10^9 - 10^{10}$ ohms/sq	2	$\frac{5}{64}$	30	$\frac{7}{8}$
	RPD - 3 AS	88A/37B	$10^9 - 10^{10}$ ohms/sq	3	$\frac{1}{8}$	35	$1 \frac{1}{8}$
	RPD - 4 AS	88A/37B	$10^9 - 10^{10}$ ohms/sq	4	$\frac{5}{32}$	40	$1 \frac{5}{8}$
	RPD - 5 AS	88A/37B	$10^9 - 10^{10}$ ohms/sq	5	$\frac{3}{16}$	60	2
	RPD - 6 AS	88A/37B	$10^9 - 10^{10}$ ohms/sq	6	$\frac{7}{32}$	80	$2 \frac{3}{8}$
	RPD - 8 AS	88A/37B	$10^9 - 10^{10}$ ohms/sq	8	$\frac{5}{16}$	80	$2 \frac{5}{16}$

Flat Belts

	Code	Hardness	ESD ratio – top surface	Thicknesses	Welding system
	FELB AS	86A	$10^9 - 10^{10}$ ohms/sq	1.6, 2, 2.5 mm	Electrode
	FRBL AS	86A	$10^9 - 10^{10}$ ohms/sq	1.6, 2, 4, 8 mm	Electrode
	FRBL ESD	90A	$10^7 - 10^8$ ohms/sq	2, 2.5 mm	Finger splice

Warning; Volta will in any event not be held responsible for damage resulting in the use of Volta belts in any application involving munitions, explosive dust or where ATEX certification is required.

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