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Properties of Chromate-Free Treated Electrogalvanized Steel Sheet for Electrical Appliances

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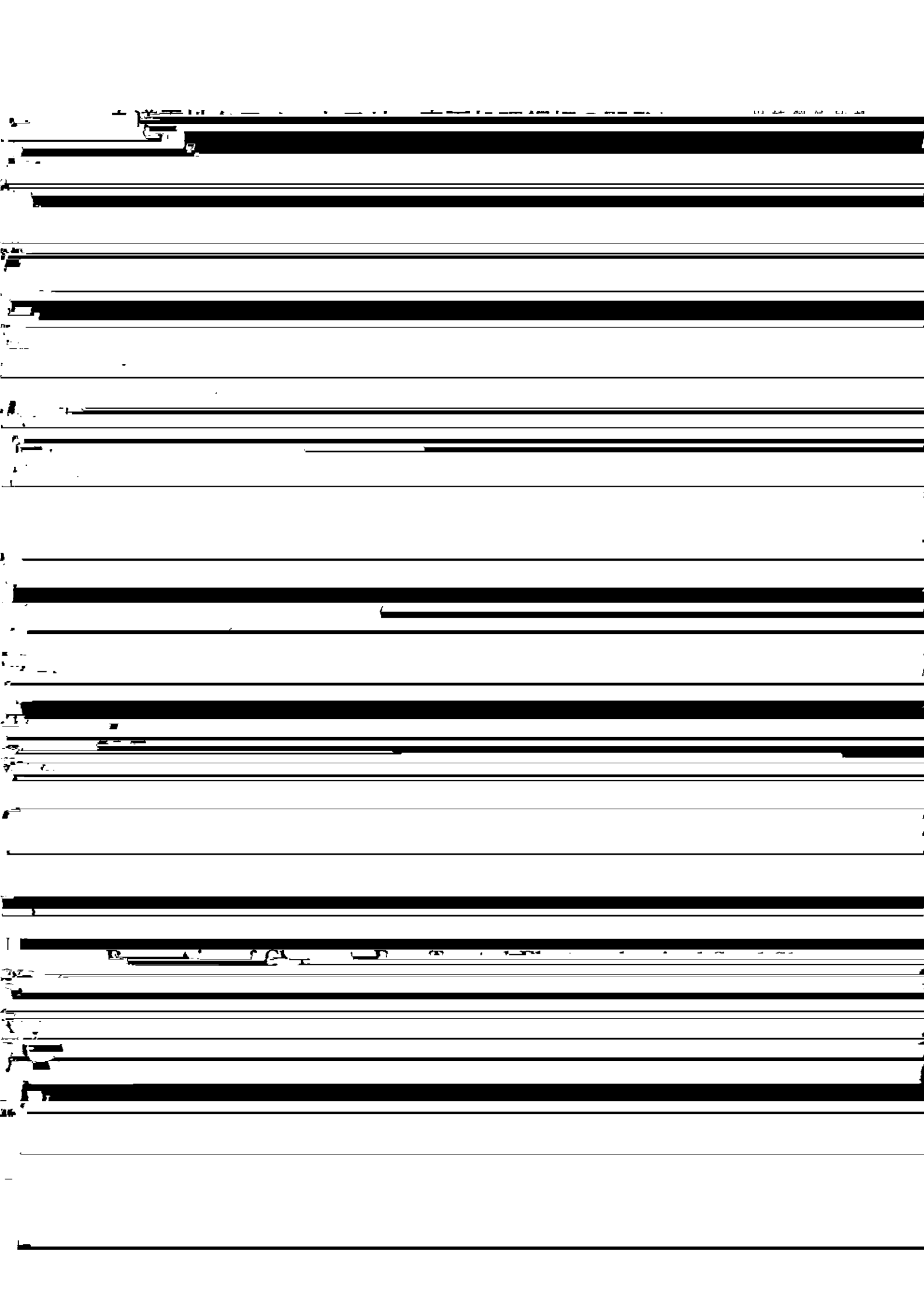
FC-X℞ˢ┬ FC-X ╓ ▪ ╥⌡℞ˢ┌˙ ┐Ł א♠ FC-E℞ˢ╓ =└→├ ≠▌o

Synopsis :

In the field of electrical appliances, a material used for the chassis needs a good electro-conductivity to accomplish a stable ground property in addition to good white rust resistance. On the other hand, in reply to the social requirement of eliminating hexavalent chromium, which is one of the environmentally un-friendly materials, chromate-free treated electrogalvanized steel sheet has been developed. "Riverzinc FC-X" has been developed in reply to those requirements. "Riverzinc FC-X" showed good white rust resistance, high electro-conductivity and anti-fingerprinting property. Furthermore, "Riverzinc FC-E" accomplished a good frictional property in addition to the performance of "Riverzinc FC-X" by applying lubricant wax. The performance of those new products has been found to be good enough for actual uses in comparison with the conventional electrogalvanized steel sheets having a chromate layer.

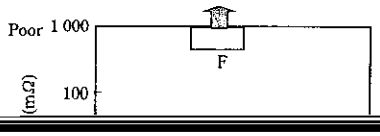


で，無機成分と有機成分からなるクロメートフリー皮膜のうち無機

供試材を 70×150 mm に切り出し，端面部と裏面をポリエステ

2.7 ポストコート塗装性

メラミンアルキッド系樹脂（日本ペイント製オルガセレクト 120



Composition of the artificial sweat	FC-X (Chromate-free coating)	FX (Dry-in-place chromate coating)
Lactic acid ($CH_3CH(OH)COOH$): 1 g/l		
Appear-		

Table 2 Properties of FC-X, FC-E and chromate coated sheets

	Corrosion resistance (h)*1	Anti-fingerprint*2	Surface electric resistance (mΩ)*3	Paint adhesion (%)*4	Lubricity*5
FC-X	≧120	0.5～0.7	<0.1	100	0.25～0.3
FC-E	≧120	0.5～0.7	<0.1	100	<0.15
Dry-in-place chromate coating (FX)	≧120	0.8～1.7	<0.1	95	0.3～0.4
Chromate + Organic fingerprint-resistant coating (F)	≧216	0.2～0.4	～10^5	100	<0.2

*1 Time to 5% white rust occurrence at salt spray test (JIS-Z2371)
*2 Color difference ΔE between before and after immersion in the artificial sweat

*5 Frictional coefficient without lubricant oil

現在，「リバージンク® EC-X」を中心に，家電・事務機メーカー　れらすべてに対応するクロメートフリー鋼板を品揃えすることで