

Automotive Tubes Specification: IS:3074-2005										
Grade	Mechanical Properties						Chemical Properties			
	UTS (MPa, Min.)	TS (MPa, Min.)	El (% , Min.)	Drift Expansion (as % of D)	Flattening Test (Distance between Plates)	Crushing Test (% of D)	C % Max.	Mn % Max.	P % Max.	S % Max.
ERW-1	310	160	20	12.5	2t	NA	0.12	0.6	0.04	0.04
ERW-2	380	240	15	10	3t		0.25	1.2	0.04	0.04
ERW-3	430	270	10	7.5	5t		0.35	1.3	0.04	0.04
CEW-1 (Normalized)	310	160	NA	NA	NA	50	0.12	0.6	0.04	0.04
CEW-1 (as drawn)	430	370				25	0.12	0.6	0.04	0.04
CEW-2 (Normalized)	430	270				50	0.25	1.2	0.04	0.04
CEW-2 (as drawn)	550	450				25	0.25	1.2	0.04	0.04

UTS	Ultimate Tensile Strength
TS	Tensile Strength
El	Elongation
t	thickness of tube
D	outer diameter of tube

Tolerance : Outside Diameter						
ERW				CDW		
Diameter Range (mm)		Tolerance Limit (± , mm)		Diameter Range (mm)		Tolerance Limit (± , mm)
Over	Upto			Over	Upto	
-	25	0.10		-	38	0.10
25	51	0.13	38	51	0.13	
51	63	0.18	51	64	0.16	
63	76	0.20	64	77	0.19	
76	88	0.25	77	90	0.22	
88	-	0.30	90	103	0.25	
			103	116	0.28	

Tolerance: Thickness					
ERW			CDW		
Thickness Range			Tolerance Limit (± , mm)	Thickness Range	
Over	Upto			Over	Upto
-	2		0.08	-	2
2	5	0.10	2	5	
5	-	0.20	5	-	

(± 8%; The height of internal fin shall not be greater than 60% of the specified wall thickness)