

Technical Data Sheet # 1 : Some Alloys and Their Applications

Sl. No	Alloy Designation		Spec Reference	Chemical Composition (wt%)																		Remarks	Applications	
	IS	AA		Cu		Mn		Si		Mg		Fe		Zn		Ti		Cr		Others				Al
				min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max			
1	19000	1100	IS	-	0.10	-	0.10	-	0.50	-	-	-	0.60	-	-	-	-	-	-	-	-	99%	Ti+V = 0.07 Panelling & moulding, refrigeration tubing, equipment for chemical, food and brewing industrial packaging, cooking utensils, architectural and builder's hardware, deep drawn parts, welding wire, cladding, electrical applications.	
			AA	0.05	0.20	-	0.05	Si + Fe together 0.95 max						-	0.10	-	-	-	-	-	-	99%		
2	19500	1050	IS	-	0.05	-	0.05	-	0.30	-	-	-	0.40	-	-	-	-	-	-	-	-	99.50%	Corrosion resistant cladding on stronger alloys impact extruded containers; food, brewing and processing equipment; tanks & pipes, marine fittings, reflectors, presses and anodized utility items	
			AA	-	0.05	-	0.05	-	0.25	-	0.05	-	0.40	-	0.05	-	0.03	-	-	0.03	-	99.50%		
3	19501	1350	IS	-	0.04	-	0.02	-	0.15	-	-	-	0.35	-	0.02	-	-	-	0.02	0.03	0.10	99.50%	Electrical application	
			AA	-	0.05	-	0.01	-	0.10	-	-	-	0.40	-	0.05	-	-	-	0.01	0.03	0.10	99.50%		
4	24345	2014	IS	3.80	5.00	0.30	1.20	0.50	1.20	0.20	0.80	-	0.70	-	0.20	-	0.30	-	0.30	0.05	0.15	Rem	Ti + V = 0.02 The total content of grain refining element does not exceeded 0.30%	Heavy duty forging, structures with high mechanical properties, aircraft application of clad sheets, extrusions and armaments
4	31000	3003	IS	-	0.10	0.80	1.50	-	0.60	-	0.10	-	0.70	-	0.20	-	0.20	-	0.20	0.03	0.10	Rem	Ti + Cr = 0.20	Moderate strength applications for chemical equipment, irrigation tubing, heat exchangers, furnitures, condenser, air-conditioning, ducting, pressure vessels, detonator caps, vehicle panelling & etc
			AA	0.05	0.20	1.00	1.50	-	0.60	-	-	-	0.70	-	0.10	-	-	-	-	0.05	0.15	Rem	Ti + Cr = 0.50	
5	52000	5052	IS	-	0.10	-	0.50	-	0.60	1.70	2.60	-	0.50	-	0.20	-	0.20	-	0.25	0.03	0.10	Rem	Cr + Mn = 0.50	Panelling & structures, sheet metal work and domestic appliances, marine application like sheathing/lining of boat bottom & etc
			AA	-	0.10	-	0.10	-	0.25	2.20	2.80	-	0.40	-	0.10	-	-	0.15	0.35	0.05	0.15	Rem		
6	63400	6063	IS	-	0.10	-	0.30	0.30	0.70	0.40	0.90	-	0.60	-	0.20	-	0.20	-	0.10	0.03	0.10	Rem	Architectural uses and other similar applications where surface finish is important and medium strength would suffice.	
			AA	-	0.10	-	0.10	0.20	0.60	0.45	0.90	-	0.35	-	0.10	-	0.10	-	0.10	0.05	0.15	Rem		
7	64430	6351	IS	-	0.10	0.40	1.00	0.60	1.30	0.40	1.20	-	0.60	-	0.10	-	0.20	-	0.25	0.03	0.10	Rem	Structural applications such as road and rail transport vehicles, bridges, cranes, roof trusses, rivets & etc, cargo containers, milk containers, deep-drawn containers and flooring.	
			AA	-	0.10	0.40	0.80	0.70	1.30	0.40	0.80	-	0.50	-	0.20	-	0.20	-	-	0.05	0.15	Rem		
8	65032	6061	IS	0.15	0.40	0.20	0.80	0.40	0.80	0.70	1.20	-	0.70	-	0.20	-	0.20	0.15	0.35	0.03	0.10	Rem	Either Mn or Cr shall be present Structural applications such as road and rail transport vehicles, bridges, cranes, roof trusses, rivets & etc, cargo containers, milk containers, deep-drawn containers and flooring.	
			AA	0.15	0.40	-	0.15	0.40	0.80	0.80	1.20	-	0.70	-	0.25	-	0.15	0.04	0.35	0.05	0.15	Rem		
9	63401	6101	IS	-	0.05	-	0.03	0.30	0.70	0.40	0.90	-	0.50	-	0.10	-	0.10	-	0.03	0.03	0.10	Rem	Bus bar application	
			AA	-	0.10	-	0.03	0.30	0.70	0.35	0.80	-	0.50	-	0.10	-	-	-	0.03	0.03	0.10	Rem		

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