

KES

Aluminium Alloy Extruded Shapes

KES B-F 002

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1. Scope of Application

This standard specifies the aluminium and aluminium alloy extruded shapes.

2. Kind and Usage

The kind and usage shall be as shown in Table 1.

Table 1

Kind	Division of alloy	Characteristics of alloy	Main usage	Remark
2017	Al-Cu series heat treated type	<ul style="list-style-type: none"> ° High strength and good cuttability ° Easy arc-resistance welding, but difficult gas welding 	<ul style="list-style-type: none"> ° Structural rods, air craft parts ° Rivet, vehicle parts ° Core rods for automobile bumper 	
6061	Al-Mg-Si series heat treated type	<ul style="list-style-type: none"> ° Very good extractability as alloy only for extruding ° In case of no-heat treating after welding lower strength 	<ul style="list-style-type: none"> ° Outside body of truck and trailer ° Container, vehicle parts ° core rods for automobile bumper 	
6063	Al-Mg-Si series heat treated type	<ul style="list-style-type: none"> ° Good extractability as alloy only for extruding In case of extrusion moulding without solution heat treatment, high strength can be obtained. ° Good corrosive-resistance and surface treatability 	<ul style="list-style-type: none"> ° Window chassis and trims (drain pipes) 	
7075	Al-Zn-Mg-Cu series heat treated type	<ul style="list-style-type: none"> ° The most high strength alloy of aluminium alloys solded. High chip-cut susceptibility Parts needing corrosive-resistance 	<ul style="list-style-type: none"> ° Aircraft body 	
7N01	Al-Zn-Mg series heat-treated type	<ul style="list-style-type: none"> ° Higher welding strength / especially yield strength, than other aluminium alloys ° Good weldability and not working 	<ul style="list-style-type: none"> ° Most suitable for vehicles for vehicles and weld structural use 	

Table 1 (Continued)

Kind	Kind of alloy	Characteristics of alloy	Main usage	Remark
7016	Al-Zn-Mg-a series heat treated type	° Good mechanical properties and surface treatability as alloy only for automobile aluminium bumper use	° Automobile bumper	
7046	Al-Zn-Mg series heat treatment			

3. Chemical Element

The chemical element shall be as shown in Table 2.

Table 2

Kind	Chemical element %										
	Cu	Si	Fe	Mn	Mg	Zn	Or	Ti	Zr	Others	Al
2017	3.5	≤ 0.8	≤ 0.7	0.40	0.20	≤ 0.25	≤ 0.10	—	—	≤ 0.15	
	4.5			-1.0	-0.8						
6061	0.15	0.40	≤ 0.7	≤ 0.25	0.8	≤ 0.25	0.04	≤ 0.15	—		
	-0.40	-0.8			-1.2		-0.35				
6063	≤ 0.10	0.20	≤ 0.35	≤ 0.10	0.45	≤ 0.10	≤ 0.10	≤ 0.10	—		
		-0.6			-0.9						
7075	1.2	≤ 0.40	≤ 0.50	≤ 0.30	2.1	5.1	0.18	≤ 0.20	—		
	-2.0				-2.9	-6.1	-0.35				
7N01	≤ 0.25	≤ 0.30	≤ 0.40	0.20	1.0	3.8	≤ 0.30	≤ 0.20	≤ 0.30		
				-0.9	-2.2	-5.0					
Jam 7016	0.6	≤ 0.10	≤ 0.10	≤ 0.03	0.8	4.0	—	≤ 0.03	—	≤ 0.10	
	-1.4				-1.4	-5.0					
Jam 7046	≤ 0.25	≤ 0.20	≤ 0.40	0.05	1.0	6.6	0.06	≤ 0.06	0.06	≤ 0.15	
				-0.30	-1.6	-7.6	-0.20		-0.18		