

Technical Data Sheet

PLASTIC CAM LOCKS

The Cam Lock is a professional part used for producing and assembling the cold room sandwich panel. Mechatech Plastic Cam Lock is made of fresh Acrylonitrile Butadiene Styrene (ABS).

The most important mechanical properties of ABS are the impact resistance, toughness, and heat resistance. ABS polymers are resistant to aqueous acids, alkalis, concentrated hydrochloric and phosphoric acids.

Cam locks are provided in pairs, a male cam lock with steel hooks latch, and a female cam lock receptacle to tighten the cold room panels each other.

Mechatech cam locks has good performance in self-locking, strength, and service life.

To assemble a cold room, two panels can be placed side by side and with a simple turn of a cam lock key or Allen wrench. The cam lock latch grasps the opposing cam lock pin and pulls the panel in tight for secure cam lock, coupling and then the panels will be connected closely.

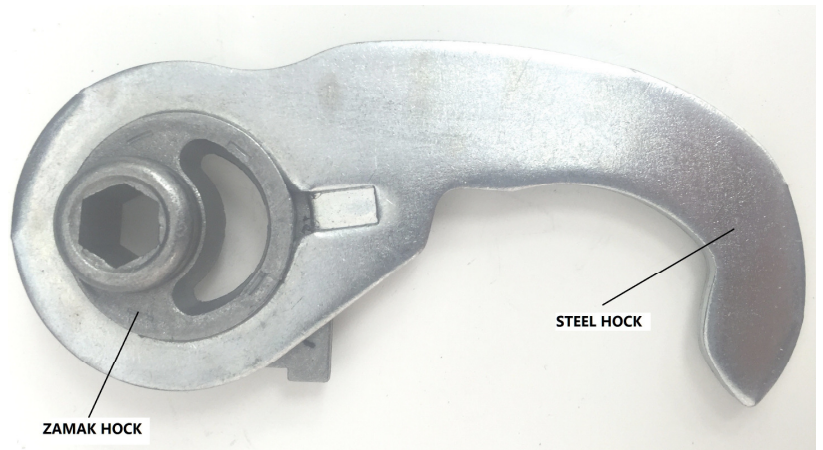
To expand or remove a cold room, you just need turn the Allen wrench reversely and then the panels will be separate.



Male Cam Locks which have the mechanical part consist of:

1-Pre-galvanized Steel Hock Thickness 3mm , Zink Coating Z 270

2- Zamak Moveable Part , ZAMAK 5 ,ZNAL4CU1,ZL5/ZL0410



Chemical Composition of Zamak Lock										Mill/Heat No.
										31427043011
AL%	Cu%	Mg %	Pb %	Fe %	Cd %	SN %	Si %	Ni%	Pb %	
3.97	0.8200	0.0400	0.0020	0.0020	0.0002	0.0010	0.0200	0.0010	95.1438	
Density		Solidification		Shrinkage%		Thermal Expansion		Electrical Conductivity		
6.7 kg/dm3		380-386 C		4-5		27.4x10 ⁻⁶ coef/c		26% IACS		

Cam Lock Specifications:

Dimensions: 172mm*75

Color: Black

Set Weight: 240g

Standard Packaging:

1 Box contain 220 PCs Male

1 Box contain 220 PCs Female

Plastic Properties of Acrylonitrile Butadiene Styrene (ABS)

Acrylonitrile Butadiene Styrene (ABS) is the polymerization of Acrylonitrile, Butadiene, and Styrene monomers. Chemically, this thermoplastic family of plastics is called "terpolymers", in that they involve the combination of three different monomers to form a single material that draws from the properties of all three. ABS possesses outstanding impact strength and high mechanical strength, which makes it so suitable for tough consumer products. Additionally, ABS has good dimensional stability and electrical insulating properties.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity			
--	1.05	1.05 g/cm ³	ASTM D792
73°F (23°C)	1.05 g/cm ³	1.05 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
200°C/5.0 kg	1.6 g/10 min	1.6 g/10 min	
220°C/10.0 kg	22 g/10 min	22 g/10 min	
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	1.34 in ³ /10min	22.0 cm ³ /10min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress			
Yield	7830 psi	54.0 MPa	ISO 527-2/50
Break	5370 psi	37.0 MPa	ISO 527-2/50
0.118 in (3.00 mm) ⁴	6540 psi	45.1 MPa	ASTM D638
Tensile Elongation			
Break, 0.118 in (3.00 mm) ⁴	25 %	25 %	ASTM D638
Break	20 %	20 %	ISO 527-2/50
Flexural Modulus			
0.236 in (6.00 mm) ⁵	384000 psi	2650 MPa	ASTM D790
-- ⁶	319000 psi	2200 MPa	ISO 178
Flexural Strength			
0.236 in (6.00 mm) ⁵	11200 psi	77.5 MPa	ASTM D790
-- ⁶	11000 psi	76.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength	9.5 ft·lb/in ²	20 kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	No Break	No Break	ISO 179
Notched Izod Impact			
73°F (23°C), 0.118 in (3.00 mm)	3.9 ft·lb/in	210 J/m	ASTM D256
73°F (23°C), 0.236 in (6.00 mm)	3.3 ft·lb/in	180 J/m	ASTM D256
--	8.6 ft·lb/in ²	18 kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength	29 ft·lb/in ²	60 kJ/m ²	ISO 180/1U

ABS Acrylonitrile Butadiene Styrene

LEGEND

A = amorphous - Cr = crystalline - C = clear - E = excellent - G = good - P = poor - O = opaque - T = translucent- R = Rockwell - S = Shore

STRUCTURE: A

SPECIFIC DENSITY: 1.05

WATER ABSORBTION RATE (%): 0.27

ELONGATION (%): 20

TENSILE STRENGTH (psi): 4300

COMPRESSION STRENGTH (psi): 9000

FLEXURAL STRENGTH (psi): 9200

FLEXURAL MODULUS (psi): 300000

IMPACT (IZOD ft. lbs/in): 6.6

HARDNESS: R110

FABRICATION

- BONDING: E
- ULTRASONIC WELDING: E
- MACHINING: G

DEFLECTION TEMPERATURE (deg. F)

- @ 66 psi: 206
- @ 264 psi: 193

UTILIZATION TEMPERATURE (deg. F)

- min: -40
- max: 194

MELTING POINT (deg. F): 221

COEFFICIENT OF EXPANSION: 0.000053

ARC RESISTANCE: 80

DIELECTRIC STRENGTH (kV/mm): 16

TRANSPARENCY: T

UV RESISTANCE: P

CHEMICAL RESISTANCE

- ACIDS: G
- ALKALIS: E
- SOLVENTS: P

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