



DATA-SHEET

SPECIFICATION & DATA SHEET		Chemical Analysis:	
Product Code:	MSHQD- SP167-00	Chemical Name:	Polyoxymethylene
Trade Name:	POM	CAS No.:	66455-31-0
Molecular Formula:	$-\text{[CH}_2\text{O]}_n-\text{CH}_2\text{O-}\text{[CH}_2\text{-CH}_2\text{]}_m-\text{(n>>m)}$	Molecular Weight:	--

Product Information

***Specification

Grade			025	090	130	270	350	450
Technical item	Unit	Test method						
Melt Index	g/10min	D1238	2.5	9	13	27	35	45
Gravity	g/cm ³	D792	1.41	1.41	1.41	1.41	1.41	1.41
Rockwell hardness	M scale	D785	78	80	80	80	80	80
	R scale		-	115	-	-	-	-
Bending strength	Kgf/cm ²	D790	950	950	950	950	950	950
Bending modulus		D790	26.00	26.00	26.00	26.00	26.00	26.00
Tensile Strength (Yield point)	Kgf/cm ²	D638	610	620	620	620	620	620
Elongation (Breaking point)	%	D638	75	60	55	45	40	35
Compressive Strength	1%deformation	Kgf/cm ²	D695	320	320	320	320	320
	10%deformation	Kgf/cm ²	D695	1,100	1,100	1,100	1,100	1,100
Impact strength (Concave 23 50% RH)	Kgf/cm	D256	7.6	6.5	6	5.4	5.1	4.5
Water absorption (In 23 water 24 hrs)	%	D570	0.22	0.22	0.22	0.22	0.22	0.22
Deflection temperature under load(18.6Kgf/cm ²)		D648	110	110	110	110	110	110
Shrinkage for molding	%	1.8-2.2	1.8-2.2	1.8-2.2	1.8-2.2	1.8-2.2	1.8-2.2	1.8-2.2

***Typical Properties

Mechanical characteristic
<p>POM is one of the 5 kinds general engineering plastics, the full name Polyoxymethylene or polyacetal, it is high degree of crystallinity polymer, besides the high hardness, strength and rigidity modulus, it has others excellent physical properties compare to other general plastics,</p> <ol style="list-style-type: none"> 1. High mechanical hardness; 2. Excellent fatigue resistivity; 3. High creep resistance, excellent rebound resilience; 4. High antifriction and anti-abrasion, used for high friction machine parts; 5. it can be processed among wide temperature range;



6. High dimension stability, hard to change according to the temperature
7. Its flow is good, easy to mold, surface gloss.
Chemical resistance
It has high resistance against organic reagent (alcohol, aldehyde, ester and ether), hydrocarbon (oil), drugs, hot water (80), the chemical resistance properties are excellent, affected by the high content acid and alkali.
Thermal properties
Hot deformation temperature (HDT) is one index represent plastics thermal property, it means the thermal resistance during the short time utilize as well as the critical temperature against external force. However consider the safety factor the short time utilize temperature must be about 10 lower than the HDT.POM-H melt point 175-179 , HDT 124-136 (18.6kg/cm2), our POM Melt point 165 , HDT 110 (18.6kg/cm2), our POM have the C-C line between the molecules, so it is harder to pyrolysis compare to POM-H, thus it has the good thermal stability. Our POM has lower melt point and HDT than POM-H, but has good long term thermal stability than POM-H, moreover The mold temperature is lower at least 10 , it releases little formaldehyde gas than POM-H when proess and easy to recycle.

***Recommended Applications

POM is mainly applied for household electrical appliances, electric motor, automotive, universal machine, construct.	
Universal machine	Agriculture implement and parts, knitting machine, vending machine, optical machine, clock, bicycle as well as every kinds machine parts
General part	Clothes slide fastener and button, medical appliance parts, toy parts, aerosol can, lighter, door and windows lead rail, furniture parts, gas meter, water meter, pipes and water heater parts
Electronic product and electric motor	House electrical appliance parts (fan, washing machine, refrigerator), switch, tape recorder and video recorder parts and crust
Automotive part	Rim parts, tank cup, carburetor, air bleed control valve, air-conditioner parts, lock, seatbelt parts, hand grip, clock parts, brake par.
General mold proess needs the good flowability, low injection pressure and temperature, low shrinkage and warp as well as the short cycle, when POM BS090 as the materials, the barrel temperature sets 180-200 and mould temperature sets 40-80 , materials dry 3-4hrs under the temperature 80-90 . Plastics remain about 15min in the barrel, max 10 min for staining compound. Our POM serials is crystallized plastics, the moldings product shrinkage is 1.8-2.2%, the shrinkage depends on the degrees of crystallization and the proess conditions (mould temperature, jet pressure, gate, molding cycle).	

***Handling and Storage recommendations

Store in a cool, dry, well-ventilated area, avoiding exposure of the packaged product to direct sunlight. Usually the shelf time is 24 months.

***Package

25Kg/bag	20mt per 20'GP container with palletize .
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