

1. Product Introduction

As copolymers of styrene and acrylonitrile, Kumho SAN has excellent chemical resistance, transparency, heat resistance, processability and mechanical properties.

Kumho SAN is suitable for use in electric and electronic equipments, office applications, automobile parts, electric fans, disposable lighters and various containers.

Kumho SAN has various grades of high flow, high transparency, high heat resistance, high rigidity and high chemical resistance. Grades are classified in accordance with processing scheme, such as composition and molecular weight of styrene and acrylonitrile.

2. Characteristics & Applications

Grade	Characteristics	Applications
SAN 310TR	High transparency, High Toughness	Hanger, Mixer, Pitcher

3. Handling Precautions

- Keep away from fire : Styrene-acrylonitrile copolymer is flammable.
- Wear protective gear when handling. San produces toxic fumes, such as carbon monoxide, when burned or heated.
- If spilled, replace in its container, and if skin or eye contact occurs, wash off with water.
- In case of fire, wear protective gear including a gas mask, since toxic fumes, such as carbon monoxide, are produced when SAN is burned.

4. Typical Properties

Properties / Unit	ASTM	Test Condition	SAN 310TR
Tensile Strength [kg/cm ² (psi)]	D638	23°C	660 (9,372)
Elongation [%]	D638	5mm/min	4
Flexural Strength [kg/cm ² (psi)]	D790	23°C	950 (13,490)
Flexural Modulus [kg/cm ² (psi)]	D790	23°C	34,200 (485,640)
Rockwell Hardness	D785	M scale	83
IZOD Impact Strength [kg.cm/cm (ft.lb/in)]	D256	3.2mm, Notched, 23°C (73° F)	1.5 (0.28)
Heat Distortion Temp [°C (° F)]	D648	18.6kgf/cm ² (264psi) unannealed	90 (196)
VICAT Softening Temp [°C (° F)]	D1525	1kg	107 (225)
Melt Flow Index [g/10min]	D1238	200°C, 5kg	3.2
	D1238	230°C, 3.8kg	10
Mold Shrinkage [%]	D955	-	0.2~0.6
Specific Gravity	D792	-	1.07
Water Absorption [%]	D570	24hr, Immersion in water	0.3
Flammability	UL *1)	1/16" (1.6mm)	HB
Food Sanitation		FDA *2)	Suitable

* 1) UL File No. E65424(CAS File No. LS66457)

* 2) FDA and Japan food sanitation law

Note1) These are typical property values, not specifications.

Note2) In case of colored products, the values could vary slightly by color.

Note3) Values are measured at 23°C and in RH of 50% on injection molded specimens.

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