

Silicone Foam

TSE 5000

TSE5000 is a two-component silicone foam. When (A) and (B) components are mixed, it gets foaming and curing within a couple of minutes. Cured silicone foam is highly flexible and has a high foaming ratio.

KEY FEATURES

- ◆ Cures to a sponge-like foam at room temperature in a short time
- ◆ High foaming ratio, low density
- ◆ No foaming aids such as carbon dioxide needed
- ◆ Maintains soft sponge shape for a wide range of temperature from -50°C to 180°C
- ◆ Good compression set
- ◆ Not generate harmful gas during combustion

TYPICAL APPLICATIONS

- ◆ Thermal insulation, home appliance, automotive parts and devices
- ◆ Light-weight aircraft parts or automotive parts
- ◆ Vibration absorber, sports use pad, car audio etc.,

TYPICAL PROPERTY DATA

UNCURED PROPERTIES		TSE5000 (A)	TSE5000 (B)
Appearance		Black, flowable	White, flowable
Viscosity (23°C)	Pa·s {P}	9.0 {90}	11 {110}
Specific gravity		1.1	1.1
Mixing ratio	weight part	100 : 100	
Pot life (23°C)	min	5	
Foaming time after mixing (23°C)	min	10	
Foaming ratio		3	
CURED PROPERTIES (24hours @ 23°C)		TSE5000	
Appearance		Black, rubber foam	
Density	g/cm ³	0.35	
Hardness (Type E-JIS K 6253)		13	
Tensile strength	MPa {kgf/cm ² }	0.15 {1.5}	
Elongation	%	90	
Thermal conductivity	W/(m·K)	0.072	
Oxygen index		34	
Combustion test (railway vehicles standard)*1		Frame-retardant	
Compression stress (20%)	MPa	0.03	
Compression stress (40%)	MPa	0.06	
Test of fuming and toxicity of combustion gas*2		Pass (fuming index/combustion gas toxicity)	

*1; National Traffic Safety and Environment Laboratory

*2; Based on Airbus Technical Specification No.ATS-1000.001 (ASTM E 662-83)

Typical property data values should not be used as specifications.

INSTRUCTIONS FOR USE

1. Weigh and pour (A) and (B) into a clean container and stir it rapidly until it gets uniform mixture.
2. Since foaming takes place immediately, pour the mixture into a mold within the pot life.
3. Cure it at room temperature.

ADHESION CAPABILITY

SUITABLE SUBSTRATES	SUITABLE SUBSTRATES with Primer (ME151 or XP81-A6361)	NOT SUITABLE SUBSTRATES
Glass, steel, epoxy, phenol, (Al, ABS, PBT, PET)*	Al, stainless steel, polyamide, ABS, (Cu, acrylic, PBT, PET, PPO,PPS, PC)*	Fluorocarbon resin, PE, PP, Polyacetal etc.,

PRECAUTIONS FOR USE

- ◆ Remove dirt and oil from the surface of substrate or mold with an appropriate solvent, and dry it fully.
- ◆ Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. A sample patch should always be conducted before proceeding to determine compatibility.
- ◆ Wear eye protection or protective gloves as required while handling the product.
- ◆ Since this product generates hydrogen gas during foaming and curing, work with this product in a well ventilated area and be careful against devices that may cause fire.
- ◆ The foaming ratio varies with the conditions such as mixing, stirring, temperature and the amount of contained air during the mixing.

PRECAUTION FOR STORAGE

- ◆ Avoid direct sunlight and store the product in a dark and cool place out of moisture.
- ◆ Keep out of the reach of children.