



RESINS

TECHNICAL DATA SHEET

Silicate resin Type S1 Standard - summer quality

DESCRIPTION

S1 Standard is a low to medium viscosity, impregnating resin based on two part silicate/isocyanate composition. The system is designed to form a rigid, chemically and oil resistant coating and will cure in a damp or wet environment and extreme outdoor temperature and conditions.

FEATURES

High rigidity

Non-toxic

medium to low viscosity

High adhesion

High chemical resistance

High temperature resistance

Conditions to be avoided:

Temperature: > 90°C

Thermal decomposition: > 230°C

Incompatibilities: Acids, alcohols, amines, water, bases.

Dangerous reactions: On contact with water, gaseous decomposition products (CO₂) are formed, causing overpressure in tightly closed containers. Risk of bursting. Reactions with substances containing active hydrogen.

Hazardous decomposition products: No hazardous decomposition products when stored and handled correctly.

SPECIFICATION

Property	Resin	Hardener	Mixed
Color	brown	transparent	light brown
Density g/ml	1,248	1,553	1,326
Viscosity m.Pa.s at 20degC	360	631	390
mix ratio by weight	2:1		
mix ratio by volume			

CURE SCHEDULE

Temperature	Pot life	Minimum cure	Full cure
10 deg C	36-42 min	160-280 min	3 days
20 deg C	28-32 min	120-210 min	36 hours
30 deg C	14-16 min	75-100 min	24 hours

TYPICAL PROPERTIES

Tensile strength	>15 N/mm ²
Compressive strength	>88 N/mm ²
Shrinkage	0.24%
Operating temperature range	-50 - +150 deg C

HANDLING AND STORAGE

a. Handling:

Provide proper ventilation at the processing machines. Proper fresh air supply and exhaust air ventilation in storage and working rooms. Avoid spray creation. When working with heated material, apply vapor ventilation and inhalation protection. Inhalation protection when spilling. Cracking hazard for gas proof packaging. Protect against humidity. Fresh products made of isocyanates may still contain non reacted isocyanates and other hazardous substances.

b. Storage:

Keep away from water. Separate from foods, semi-luxury foods and animal foods. Separate from acids and bases. Suitable materials for containers: high density polyethylene (HDPE), low density Polyethylene (LDPE), steel. Not suitable materials for containers: paper, cardboard. Further instructions for the storage conditions: Keep containers tightly closed. Store in cool, dry and well ventilated room. Protect against humidity. Development of CO₂ overpressure is possible. Cracking hazard for gas proof packaging. within this conditions will have a shelf life of at least 24 Months.

c. Disposals

Provided the resin and hardener have been properly mixed, as per instructions, the resultants material will be chemically inert and therefore able to be land filled subject to local government regulations.

PERSONAL PROTECTION

General protection and hygienic measures:

Not to respire vapor and spray. For fresh products made of isocyanates body protection and chemical protection gloves are proposed. Additional to the measures for personal protection, wearing of closed clothing is necessary. No eating, drinking, smoking and snuff during work. Remove polluted working clothes immediately. Before breaks and end of work washing hands and/or face. After work provide skin cleaning and skin care.

TRANSPORT INFORMATION

No hazardous good in the definition of transport regulations (ADR RID ADNR IMDG/ GGVSee ICAO/IATA).

