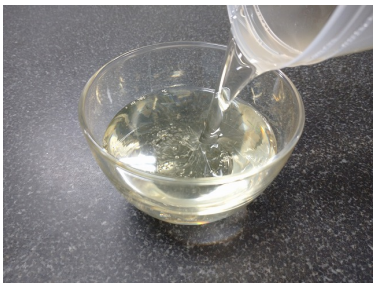
Material Data Sheet

IM-RSN-2024-03-

SHIMTEQ™ RSN ACS01

Modified Acrylate Resin



Contact

SHINDO IM Division
Post Cord 919-0602
60-8-1 Sugano, Awara City
Fukui, Japan

im-company@shindo.com

www.shindo.com/jp/material

I

SUMMARY

SHIMTEQ™ RSN ACS01 is a very low viscosity and a one-part curable thermosetting resin. It can be stored at room temperature and cured when heated as it is. SHIMTEQ™ RSN ACS01 is a one-part curable type, eliminating the need for mixing process and allowing storage at room temperature. It contributes to simplified material storage management in the manufacturing process and stable quality of cured products. Even if high-fiber-volume- composites, difficult to impregnate with resins, low-viscosity SHIMTEQ™ RSN ACS01 can be easily impregnated in both the in-plane and out-of-plane directions. The cured SHIMTEQ™ RSN ACS01 composite properties showed high toughness while maintaining an elastic modulus equivalent to that of epoxy resins.

RESIN PROPERTIES

Test Items	Test Resalts	Test Method
Viscosity（25℃）	50mPa・s	JIS Z8803
External Condition	Light Yellow Liquid	JIS K0071-1
Specific Gravity	1.07	JIS K0061
Weight loss rate after curing	6%	N/A
T_g	64℃	JIS K7121
Shore D Hardness	56	JIS K7215

CURING CONDITIONS AND CHARACTERISTIC VARIATIONS

Curing Conditions	T_g
150℃ × 3hours	64℃
160℃ × 2hours	64℃
170℃ × 2hours	64℃
180℃ × 1hour	64℃

T_g Unchanged Under the above conditions.

SHINDO

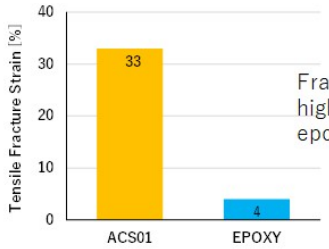
APPLICATION EXAMPES

Light-weight and/or high mechanical-/physical-strength-demanding fields molded by RTM, Infusion, hand lay-up.

UNIQUE PROPERTIES

Tensile fracture strain of neat resin

Test Method：JIS K7161-2

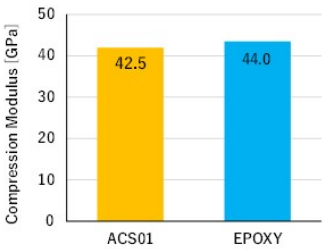


Fracture strain 8 times higher than two-part epoxies

Compressive modulus of composites with U600G

Test Method：ASTM D6641

Reinforcing Fabric：SHIMTEQ™ U600G (Glass fiber)



Compressive modulus equivalent to two-part-epoxy composites

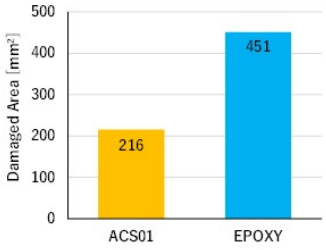
Vf≒56%

Impact Damage of composites with U600G

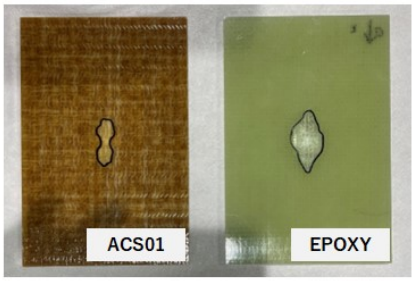
Test Method：Drop Impact Testing

Reinforcing Fabric：SHIMTEQ™ U600G (Glass fiber)

Impact Energy：30.6J



52% impact-damage area reduction, comparing with two-part-epoxy composites



MOLDING PROCESS (EXAMPLE OF RTM MOLDING)

1. Reinforcing materials are charged in a release-treated mold die.
2. After the mold die is closed and impregnated with resin, heat at 170±5°C for 2 hours.
3. Mold die is cooled to <50°C while maintaining the pressure.

ATTENTION

・Store the resin in a cool, dark place.

・Direct contact with skin may cause allergic dermatitis. Always wear protective gloves, eye protection, etc. when handling the product.

・Refer to the SDS for other precautions.

SHINDO