

NICHIGO-UV SHIKOH UT-4619 (Trial Grade)

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The Nippon Synthetic Chemical Industry Co., Ltd.
Central Research Laboratory Specialty Creative Center

SHIKOH UT-4619 is UV-curable metal adhesion coating based on urethane acrylate oligomer, which has features as follows.

[Features]

- Excellent adhesion to Al substrate
- Good moisture resistance
- Good boiling water resistance
- Relatively good balance of hardness and flexibility

[General properties]

Measurement item	UT-4619
Appearance	Light yellow liquid
Resin content (%)	60
Solvent content (%)	40
Solvent (Wt ratio)	Toluene/AcOBt = 71/29
Viscosity at 20 (mPa·s)	1,000 ~ 3,000
Remaining NCO (%)	0.2

* Data of Lot. 0901K01

[Characteristics]

Measurement item	UT-4619
<u>Pencil hardness</u>	
On Al substrate	H
<u>Adhesive test</u>	
On Al substrate	
Before boiling water test	100/100
After boiling water test	100/100
On SUS304/SUS304BA substrate	
Before boiling water test	100/100
After boiling water test	100/100
<u>Flexibility</u>	
On Al substrate	
Bending (90 degrees)	Good

Tested Formulation

Contents	Parts by weight	Note
UT-4619	66.7	
Solvents	33.3	AcOBt
Irgacure 184	1.6	Ciba Specialty Chemicals Inc.

Coated with bar-coater No.24 on Al/SUS plate (Film thickness: 10 μ m)
Al substrate: A1050P, JISH4000, 0.3 \times 70 \times 150mm
Drying condition: 90 \times 3min
UV irradiating condition: 80W/cm(High Voltage Mercury Lamp) 18cmH \times 5.1m/min \times 2pass under air
(450mJ/cm²)
Pencil hardness: Compiled with JIS K5600-5-4 (load: 750g)
Adhesive test: 1mm-Cross cut (Method of tape peel, Compiled with JIS K5600-5-6)
Boiling water test: Put in boiling water for 1 hour
Flexibility: Bent at 90 degrees

The data herein is the typical value according to our measurements, does not mean standard.

[Precautions]

Caution should be taken to avoid contact with skin and eyes and clothes by wearing protective equipments.
In case of contact with skin, immediately wash with soap and water.

[Storage Information]

SHIKOH Urethane acrylate oligomers should be stored at temperatures below 35 $^{\circ}$ C, and should be kept away from direct sunlight or fire and other conditions such as polymerization reaction is caused by.

Storage should be in epoxy coating steel containers. Head space should be present in storage cans to support the oxygen requirements of the inhibitors which have been added to enhance storage life.

These products should be used within 6 months after received for optimum results.
