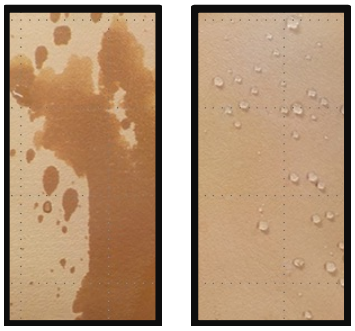
NOF CORPORATION

Fluorine-free Water and Oil repellent
MODIPER® WR series (Newly developed)

Features and uses of MODIPER® WR

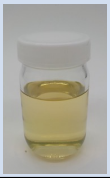
- PFAS free and Silicone free acrylic polymer
- Providing water and oil repellency
- Coatings for Textile, Leather, Paper, etc.



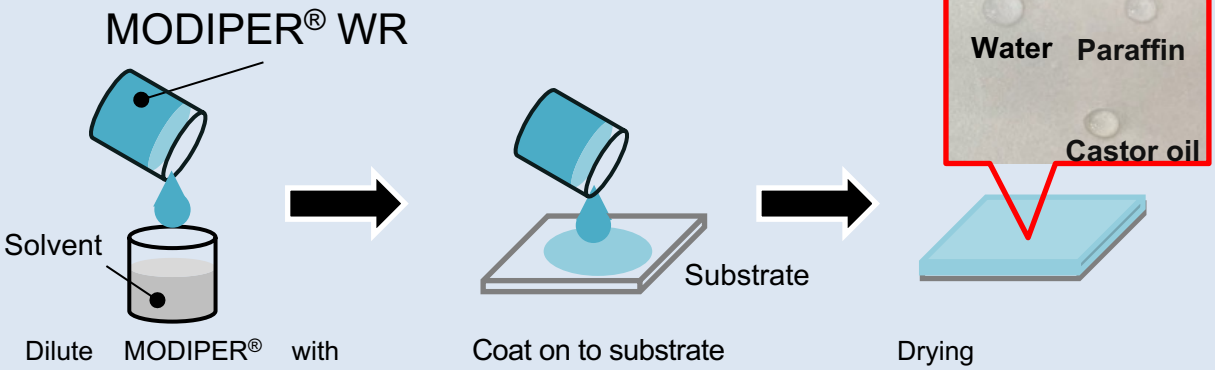
Control Coated with WR100

Water shower test on leather

Product Lineup

Grade	Appearance		Solid Content (%)	Solvent	Feature
WR100	Pale yellow Transparent		20	Methylcyclo hexane/IPA	Water resistance
WR300	Transparent		20	Methylcyclo hexane/IPA	Water-slidable Oil repellency

How to Use



Dilute MODIPER® with solvent(s) to 1-10wt%

Coat on to substrate with Spray, Dipping, etc

Drying (Room Temp. or Heating)

Chemical Inventory

Please contact and ask our sales representative since chemical inventory status depend on countries.

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Water and Oil repellent test results

Grade	Water repellency			Oil Repellency			
	Contact Angle (°)	Sliding angle (°)	Shower test	Contact angle (°)	KIT value	AATCC	
						Paper	Textile
WR100	96	N.A.	4	36	4	1	0
WR300	107	36	3	42	6	4	1

<Contact angle> Preparation : Coat 10wt% solution on glass substrate by a bar coater. Test liquid : Water, Hexadecane
<Sliding angle> Preparation : Coat 10wt% solution on glass substrate by a bar coater.
Test method : Put 30μl water droplet on the substrate, and measure an angle that a droplet rolls down.
<Shower test> Test method : According to JIS L 1092 5.2. Test material : Natural leather.
Criteria : 5 grades (5=No wetness on the surface ⇔ 1=Wetness on the entire surface)
<KIT Value> Test method : According to JAPAN TAPPI No. 41, Evaluate repellency of Caster oil/Toluene/Heptane mixture.
Preparation : Coat 10wt% solution on filter paper.
Criteria : 12 grades (12:Caster oil/Toluene/Heptane=0/90/110⇔ 1:Caster oil/Toluene/Heptane=200/0/0)
<AATCC> Test method : According to AATCC 118-1997. Test material : Paper=filter paper, Textile=Polyester/cotton=65/35
Criteria : 9 grades (0:None(fails Liquid Paraffin) ⇔ 8:n-Heptane)

Solubility

Solvent	WR100	WR300
n-heptane	○	○
n-hexane	○	○
Cyclohexane	○	○
Acetone	×	×
Methyl ethyl ketone	○	○
Ethyl acetate	○	○
Propylene glycol monomethyl ether	○	×
Propylene glycol monomethyl ether acetate	○	○
Methanol	×	×
Isopropyl alcohol	○	×
Water	×	×

*Solid content=10wt% ○:dissolve、×:insoluble

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