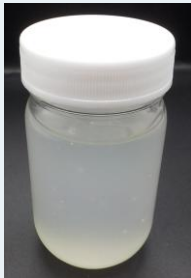
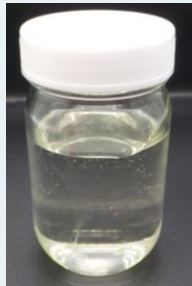


Epoxy Group-Containing Hydrophilic Polymer **MARPROOF™ GP-012024** (Newly developed)

Features

- Acrylic polymer with reactive epoxy groups
- Water-compatible acrylic polymer
- Suitable for resin modification, a reactive emulsifier, and a water-soluble binder

Typical Properties

Appearance	25°C	40°C
	 Milky white, viscous liquid	 Light yellowish, transparent, viscous liquid
Solid content (%)	99 ¹	
Molecular weight (Mw)	10,000 ¹	
Kinematic viscosity at 40°C (mm/s ²)	Approx. 5,000 ¹	
Epoxy equivalent (g/eq)	730 ¹	
Tg (°C)	-40 ²	

1. Typical value 2. Calculated value

Chemical Inventory Status

Japan ENCS	EU REACH	USA TSCA	China IECSC	Korea ECL	Taiwan CSNN
Registered	Registered ³	Not Registered ⁴	Not Registered ⁴	Not Registered ⁴	Not Registered ⁴

3. All constituent monomers are registered. 4. Please contact our sales representative

Application Example

-Reactive Emulsifier for Epoxy Resins-

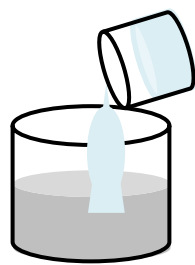
- Enables preparation of epoxy resin emulsions and can be diluted to the desired concentration.
- Crosslinking with epoxy resins improves water resistance and reduces film whitening.

Formulation and Process

Epoxy resin: jER828 (Mitsubishi Chemical Corporation)

Amount of **MARPROOF™ GP-012024**: 10 wt% relative to the epoxy resin.

MARPROOF™ GP-012024



Epoxy resin

Mixing and
Addition of water

50°C

Mix using a
homomixer

50°C

Cooling

Solid Content 50%



Epoxy emulsion

Typical Properties of Epoxy Emulsion ⁵

Solid content (%)	Particle size ⁶ (nm)	Viscosity at 25°C (mPa·s)	Stability ⁷
50	500	10.7	Redispersible after storage for 3 months

5. Typical values

6. Measured by dynamic light scattering after dilution to 1% solid content.

7. Redispersibility confirmed by shaking the screw-cap tube.

Solubility

Water	Methanol	Ethanol	IPA	DMF	Acetone	Toluene	Ethyl acetate	PM
Dispersible	Soluble	Dispersible	Dispersible	Soluble	Soluble	Soluble	Soluble	Soluble

Test concentration: 10% relative to solvent.

IPA(Isopropanol), DMF(Dimethylformamide), PM(Propylene glycol monomethyl ether)

The values listed are representative and are not guaranteed.

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