

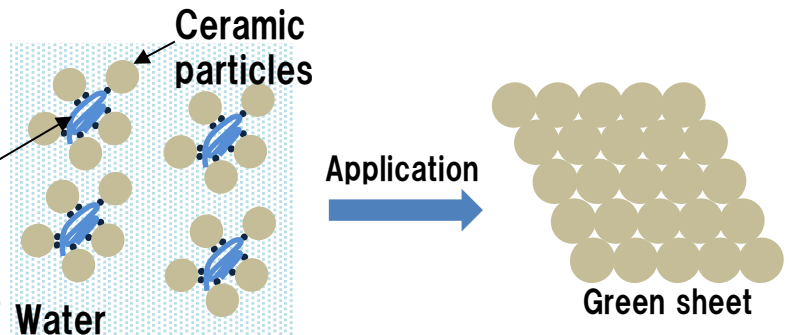
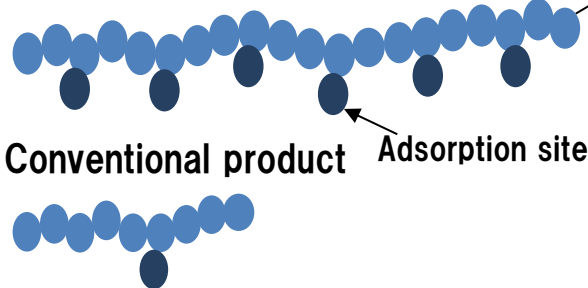
# Acrylic binders for sintering MARPROOF™ AE-002 (developed product)

## Characteristics

- Good thermal decomposability
- The emulsion maintains its stability even if stored at a high temperature
- Enables aqueous molding of very strong green sheets
- Supports environmentally friendly, aqueous molding of sheets


## Structural image

Marproof™ AE-002  
(Developed product)



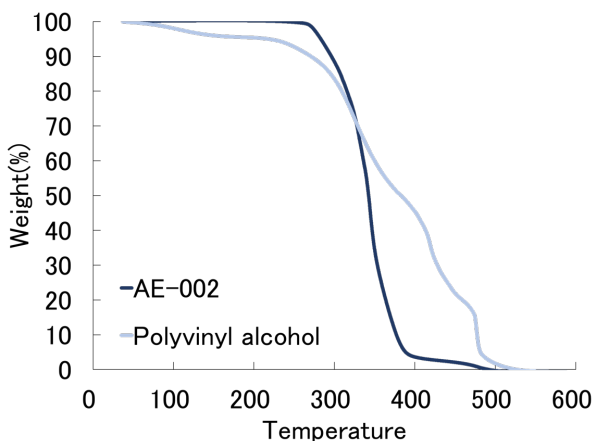
Examples of applications: usable in heat dissipating substrates, MLCC, LTCC, etc.

Marproof™ AE-002 gives higher strength to green sheet since its molecular weight is higher than that of conventional binder, which enables to adhere to ceramic particle at more points.

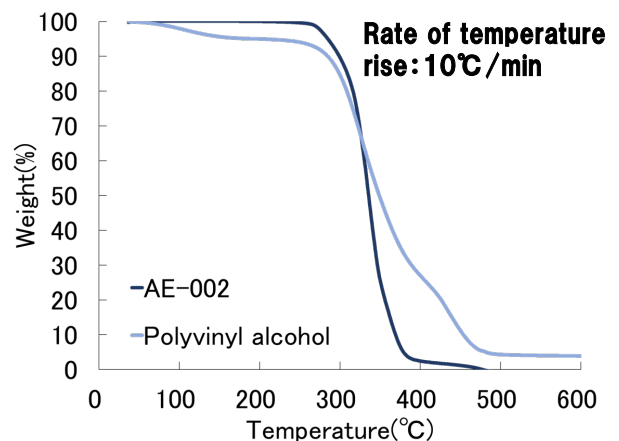
Property	MARPROOF® AE-002
Appearance	 (Emulsion)
Solid content	Approximately 50 (%)
pH	4~6
Viscosity	15~30 (mPa·s)

## Thermal decomposability

○ Under nitrogen atmosphere



○ under air



**Completely decomposes at low temperatures of 500°C or below under both nitrogen and air atmosphere**

Experimental  
condition


After formulating the slurry by mixing MARPROOF™ AE-002 with the materials shown in the following table, green sheet was formed on the substrate and its physical property was evaluated

Slurry formulation

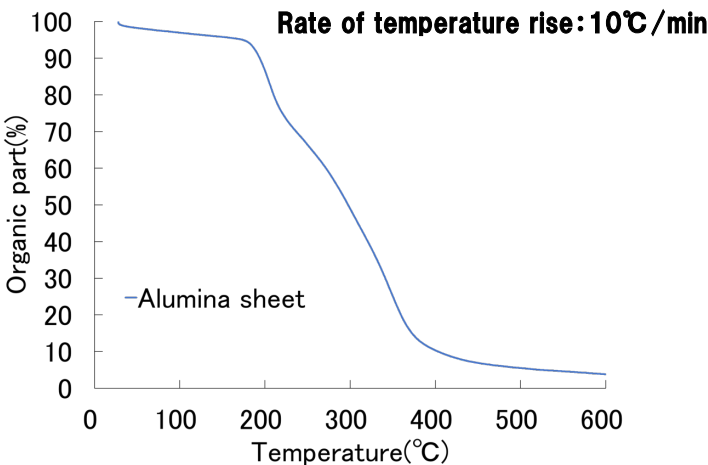
Materials		Composition (wt ratio)
Base material	Alumina*	70.0
Dispersant	MALIALIM® AKM-0531	0.7
Binder	MARPROOF™ AE-002	11.2
Plasticizer	SOFBAR™ P-0803N	1.1
Solvent	Ion-exchanged water	17.0

\*Alumina: AES 11C, Sumitomo Chemical Co., Ltd.

Tensile characteristics  
(green sheet)

	AE-002
Tensile strength (MPa)	1.8
Stretching rate (%)	38
Sheet appearance	

Thermal decomposability for green sheet



Good thermal decomposability for green sheets

Substrate material: PET film, Drying conditions: at room temperature for 12 hours,  
Dry film thickness: approximately 100 μm

- Cracks and streaks do not appear on the green sheet
- Strong, elastic sheets was formed even at small dosage

Regulatory registration status

Japan	Taiwan	China	South Korea	USA
Registered	Registered	Registered	Registered	Registered

Customization is also available upon request, so contact us for more details.

This catalog was produced based on our best-effort investigations, but the stated data and evaluation results are not necessarily guaranteed. All chemical substances present unknown hazards, so they must be handled with great care. Establish safe usage conditions based on the responsibility of each user.

In addition, for special handling, implement new safety measures suitable for the purpose and usage before use.

\*If these or any other points are unclear, please contact one of our sales representatives.

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