

Solvent-free / Water-based Adhesives

▶ Application

- Adhesives for food packaging films
- Adhesives for flexible packaging films

▶ Characteristics

WA series (water-based PUD adhesives)

- A self-emulsifying polyurethane dispersion (PUD); excellent in stability, heat-resistance and hot water resistance; without using any surfactant for dispersion
- Two-component reaction-curable adhesives (or three-component according to application)
- Applicable to plastic films / foaming materials (except for aluminum foils)

X series (100% solid adhesives)

- Two-component reaction-curable adhesives, developed for lamination process
- Free from drying process
- Conforming to Food Sanitation Act in Japan, also including our three-component reaction-curable adhesives
- Excellent in surface wettability on plastic film, and applicable to roll coating for thin film
- Requiring exclusive laminating machine (e.g. solventless laminator) and supplying machine capable of mixing according to specified compounding ratios, due to the high viscosity (or solid) at room temperature

- ◆We would like to emphasize that both WA series and X series require the compatibility with laminating machines as mentioned above. Please contact us, if you have any inquiries about custom-made products compatible with your machines.

▶ Representative Products

Water-based adhesives

Main component

Product name	Non-volatile component (%)	Viscosity (mPa·s/25°C)	Recommended hardener	Compounding ratio (specific gravity ratio), main component : hardener	Application and characteristics
			C-96	18 : 1	For industrial use
WA-377-2	40	5~200	C-24	18 : 1 : 1	For industrial use
			C-96	18 : 18	
WA-568	40	10~1,000	C-24	100 : 5	For industrial use, High crystallinity
WA-470-2	50	100~6,000	C-24	100 : 5.5	VOC-free , Flexible

Hardener

Product name	Non-volatile component (%)	Viscosity (mPa·s/25°C)	Application and characteristics
C-24	100	2,000~3,000	Isocyanate
C-96	100	400~1,000	Non-isocyanate

Solvent-free adhesives

Main component (NCO)	Viscosity (mPa·s)	Hardener (OH)	Viscosity (mPa·s)	Compounding ratio (specific gravity ratio), main component : hardener	Application and characteristics
XC-235	700-1,400(80°C)	XA-129	100-300(40°C)	10 : 4	For flexible packaging materials, General-purpose, High sealing strength
XC-238	500-1,500(80°C)	XA-128	50-200(60°C)	10 : 4	For flexible packaging materials, General-purpose, Applicable to transparent vapor deposition film

*The values shown above are typical values, not standard values.

