

## Epolite Amine-Free

## Coating Precautions

1. Do not use the product until you have read the instructions for use provided in the catalogue.
2. Using thinner products other than those specified by our company may result in decreased workability or failure to achieve the specified performance.
3. Thoroughly degrease object surfaces before coating.
4. Use thinners as quickly as possible once they are diluted.
5. The cured coating will exhibit extremely good cutting oil resistance and chemical resistance. However, please note that surface activity will remain high before the coating is fully cured. Take care to keep the coating from reacting with acidic and alkaline components in a dry atmosphere (e.g., steel processing fluids) and becoming discolored.

## Expiration Date and Precautions on Storage

1. The expiration date following shipment from our company (before opening) is six months for the main agent, three months for the hardener, and one year for the thinner. Once opened, use the products as quickly as possible.
2. The hardener will react with moisture in air (humidity). Use as quickly as possible.
3. Avoid exposure to direct sunlight. Keep dry. Store in a cool, dark, and well-ventilated place at temperatures below 40 °C. Keep products locked (in hazardous materials storage).
4. Keep containers tightly sealed. Store in compliance with applicable regulations.
5. Keep out of reach of children.

## Precautions on Safety and Sanitation

## » Precautions on Use

1. Keep your face away from the container when opening it.
2. Handle with care. Damaged containers pose risk of contamination or fire. Keep containers upright during transportation and storage. Do not place on side or upside down.
3. Do not use near flames or sources of ignition.
4. Install local ventilation systems in places where the products are handled.
5. Take care to avoid direct contact between the product and skin during handling. Wear protective gloves, protective clothing, eye protection, and face protection.
6. In case of spillage, scatter sand or other inert materials over the spill and collect.
7. Wash hands and rinse mouth and throat thoroughly after handling.
8. Do not eat, drink, or smoke when using this product.

## » First Aid Measures

1. If on skin or in hair, immediately remove all contaminated clothing and wash with plenty of soap and water. Seek medical attention if you feel pain or notice any injuries.
2. If in eyes, rinse with plenty of water. Get immediate medical attention.
3. If inhaled and feeling unwell, remove the person to fresh air and place at rest. Get medical attention, if necessary.
4. If swallowed, get immediate medical attention.

## » Firefighting Measures

1. In case of fire, use fire extinguishing agents or dry sand to extinguish.

## » Disposal

1. Empty the containers completely before disposal.
2. Dispose of contents/containers as industrial waste in accordance with local/regional/national regulations.
3. Dispose of coating materials, coating containers, and coating tools as industrial waste.

## » Other

1. Refer to the product Safety Data Sheet (SDS) for more information.
2. The present product is designed for indoor applications. Refrain from use outdoors or in places exposed to direct sunlight for extended periods.

Note : The contents of the present catalog are subject to change without notice.

Note : The results of testing on various resistance characteristics are based on our in-house evaluations. They do not constitute a guarantee of product quality or performance.

Note : Unauthorized reproduction or use of the contents, texts, or images in the present catalog is strictly prohibited.

2-Part

Modified Epoxy Resin

Room-Temperature Curing

## Cutting Oil Resistant Primer

## Epolite Amine-Free

The strong finish coating achieved with the epoxy polyol + isocyanate combination exhibits superior resistance to cutting oils.

This product contains no amines,  
which are known to be strong skin irritants.

The total concentration of toluene, xylene, MIBK,  
and styrene has been kept below 0.1 %.

This coating offers high environmental sustainability  
and minimal environmental impact.

Please contact us (see below) for more information.

TEL: +81-493-26-0781 FAX: +81-493-26-0786 Online contact form: [www.edog.co.jp/inquiry](http://www.edog.co.jp/inquiry)



EDOGAWA GOSEI CO., LTD.

84-2 Shingo, Higashimatsuyama-shi, Saitama, 355-0071  
[www.edog.co.jp](http://www.edog.co.jp)



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## Features

### Amine-Free

The product is free of amines, known to be strong skin irritants.

### Superior cutting oil resistance achieved through careful selection of ingredients and superior blending technologies

Unparalleled cutting oil resistance achieved through selection of special modified epoxy resin as the main agent three-dimensionally cross-linked with isocyanate.

### Outstanding adhesion

The product exhibits excellent adhesion to various metal surfaces, including aluminum and stainless steel.

## Eco-friendly

### Our commitment to the environment

- The total concentration of toluene, xylene, MIBK, and styrene is kept below 0.1 %.
- The use of chemical substances designated in the PRTR Act has been reduced by more than 99 % (compared to existing products, based on results of in-house testing, as of April 2023).
- Complies with all requirements of the Ordinance on Prevention of Dangers Due to Specified Chemical Substances (amended in April 2021).
- Entirely free of ten hazardous substances\* whose use is restricted by the RoHS Directive.

\* Cadmium, lead, mercury, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers, bis(2-ethylhexyl) phthalate, dibutyl phthalate, benzyl butyl phthalate, diisobutyl phthalate

## Intended Use

Metal products that require oil resistance and chemical resistance, such as machine tools and industrial machines

## Color

### 301Gray/802 Black/901 White

For custom colors, please contact our sales representative.

## Volume

Epolite Amine-Free main agent: 16 kg

Epolite Amine-Free hardener: 4 kg

## Specialized thinners

Thinner 4200 S (for summer)/SW (for spring and fall)/W (for winter): 16 L

## Instructions for Use

### 1. Pretreatment

Thoroughly degrease the surface before applying the epoxy resin.

### 2. Agitation

Agitate the coating material thoroughly before dilution.

### 3. Dilution and Mixing

The mixing ratio is main agent : hardener : thinner = 4 : 1 : 1–2.

Use Thinner 4200. Measure precisely to adjust the mixing ratio by weight.

Adjust viscosity in an Iwata NK-2 viscosity cup for 15–25 seconds (liquid temperature: 25 °C).

### 4. Application (spray coating)

Air pressure	0.3–0.5 MPa	Nozzle diameter	1.2–1.5 mm	Standard coat thickness	35–45 μm	Coverage	Approx. 200 g/m <sup>2</sup>
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Note : The product is a two-part curing agent and has a specific pot life (duration of use after mixing). Use the product within five hours after mixing at 25 °C. Discard mixture after its pot life has elapsed.

### 5. Drying and Curing

Room temperature (25 °C)	Dry to the touch	15 min.
	Hardened and cured	6–8 hours
Forced curing (60 °C –120 °C)		30 min.

Note : For topcoats, allow a setting time of 10–15 minutes after application at room temperature.

Note : The coat must be allowed to cure for at least seven days before the indicated resistance.

## Coat Performance

### Results of Coat Performance Tests (Epolite Amine-Free 301 Gray)

Test Items	Results	Test Conditions	Materials	
Adhesion	100/100	Cross-cut test with adhesive tape	SPCC-SD steel plate Bonderized steel plate Mill scale steel sheet (SS400) Zinc phosphate coated steel plate ZAM steel plate Pentite steel plate Aluminum (A1050) Aluminum (A1100) Aluminum (A2017) Aluminum (A5052) Aluminum (A6061) Aluminum (A7075) Stainless steel (SUS304) Stainless steel (SUS316) Stainless steel (SUS430)	
Topcoat compatibility	100/100	Cross-cut test with adhesive tape NX two-part acrylic urethane resin coating After application, cure the topcoat at 80 °C for 30 minutes. Total coat thickness is 80 μm (undercoat: 40 μm; topcoat: 40 μm).	SPCC-SD steel plate	
Erichsen value	No abnormality	Erichsen tester (φ20 mm × 5 mm extrusion)		
Bending resistance		Coating bending tester (φ4 mm × 180°/s)		
Impact resistance		DuPont impact tester (φ1/2 inch × 500 g × 50 cm)		
Water resistance		Distilled water (immersed for 48 hours at 40 °C; allowed to stand at room temperature for 24 hours before visual inspection)		
Acid resistance		5 % HCl (immersed for 200 hours at 25 °C and allowed to stand at room temperature for 24 hours before visual inspection)		
Alkali resistance		5 % NaOH (immersed for 200 hours at 25 °C and allowed to stand at room temperature for 24 hours before visual inspection)		
Solvent resistance		No material exposed		Lacquer thinner rubbing (with load of 500 g, number of rubbing cycles ≤30)
Saltwater resistance		No abnormality		Salt spray tester (5 % NaCl aqueous solution at 35 °C and 95 % relative humidity for 168 hours)
Boiling water resistance		No abnormality		Immersion for one hour at 100 °C, then left to stand at room temperature for 24 hours before visual inspection

Note : Curing condition for test sheets: left to cure at room temperature for 14 days after application

### Results of Cutting Oil Resistance Test (Epolite Amine-Free 301 Gray)

Tested Cutting Oils	Type	Solution concentration	Results	Test Conditions	Material
Syntilo 9954 <sup>*1</sup>	Water-soluble, synthetic	10%	No abnormality	Immersed for 50 hours at 95 °C and left at room temperature for 24 hours before visual inspection.	SPCC-SD steel plate
Synergy 735 <sup>*2</sup>	Water-soluble, synthetic	10%			
Synergy 915 <sup>*2</sup>	Water-soluble, synthetic	10%			
B-Cool 755 <sup>*2</sup>	Water-soluble, soluble	10%			
B-Cool MC 610 <sup>*2</sup>	Water-soluble, emulsion	10%			
Blasocut BC 25MD <sup>*2</sup>	Water-soluble, emulsion	10%			

Note : Curing conditions for test sheets: left to cure at room temperature for 14 days after application

\*1: Product of BP Japan K. K. \*2: Product of Blaser Swisslube Japan Co., Ltd.