



## DOWSIL™ 2405 Resin

A reactive alkoxy-siloxane resin used as binder that provides heat resistance and improves the physical performance of paints and coatings for high temperature resistance applications. The material can be moisture-cured at room temperature without the presence of tin catalyst.

### Features & Benefits

- Solventless, liquid resin
- Moisture curing alkoxy siloxane
- High reactivity
- Can be cured without tin
- Methyl functionality
- Cured to form films
- Allows low solvent content formulations
- Atmospheric moisture curing
- Room temperature cure
- Improves mechanical properties
- Withstands high temperatures
- Low weight loss at high temperatures of cured films

### Composition

- Solventless liquid methyl siloxane (no phenyl)
- Methoxy functional

### Applications

- Protection of metal, wood and glass. Can be formulated as protective clearcoat, and with pigments.

### Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Appearance		Clear
Viscosity at 25°C (77°F)	mPa.s	130–300
Specific gravity at 25°C (77°F)		1.1
Silicone content <sup>1</sup>	ww%	~80
Methoxy content	ww%	~28
Silicone resin content <sup>2</sup>	ww%	~72

1. Measured by TGA.
2. Considering the alcohol release after reaction.

**Description**

DOWSIL™ 2405 Resin is a solvent-less methoxy functional, liquid siloxane. DOWSIL™ 2405 Resin can be used as a sole binder or in combination with other siloxanes such as DOWSIL™ US-CF-2403 Resin, in both clear and pigmented formulations. Limited compatibility with organic binders.

Compatible with or soluble in classical solvents (butyl acetate or xylene).

**How to Use**

DOWSIL™ 2405 Resin cures rapidly at room temperature, with appropriate catalyst.

**Application Data**

Due to its chemical structure, DOWSIL™ 2405 Resin presents a good flexibility, and does improve the shock resistance of rigid Si-based coatings.

Water contact angle was evaluated on a coated metal panel with clearcoat and a value of 95.5° was measured.

When formulated with temperature stable pigments (i.e. silver aluminum flakes), the resin can be used in heat resistant coatings (temperatures up to 950°C).

Guide formulations and more detailed application data on request.

**Caution**

DOWSIL™ 2405 Resin reacts in the presence of water, water vapor or alcohols to form methanol. Use with adequate ventilation.

**Toxicological Information**

Precautions should be taken to avoid skin and eye contact. In case of skin contact, flush skin with plenty of water. In case of eye contact, prompt flushing of the contaminated eye with water may reduce or prevent irritation from developing.

**Handling Precautions**

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

ATTENTION: This container will have vapor and/or product residues when emptied. Observe all hazard precautions on the label when handling an emptied container. DO NOT CUT OR WELD THE CONTAINER. DO NOT REUSE THE CONTAINER.

**Usable Life and Storage**

When stored in original, unopened container at or below 25°C (77°F), DOWSIL™ 2405 Resin has usable life of 24 months from date of manufacture. Opened containers should be tightly closed after use to prevent contaminants and water vapor from entering the product.

**Limitations**

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

**Health and Environmental Information**

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, [dow.com](http://dow.com) or consult your local Dow representative.

## **Disposal Considerations**

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

## **Product Stewardship**

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## **Customer Notice**

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

dow.com

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