Technical Data Sheet

DOWSIL™ 20 Release Coating

Release coating for plastics, adhesives, and elastomeric products

Features & Benefits

- Easy to use
- Does not discolor molded parts
- Solvent dilutable
- In most cases, a single application provides release through numerous molding cycles
- Provides heat stable, non-carbonizing, non-oily parting film
- Minimum build-up on molds and dies

Composition

- Polydimethylsiloxane and high molecular weight silicone resin in solvent

Applications

- In fabricating plastic parts, provides durable parting film for epoxies, melamimes, methacrylates, phenolics, polyesters, and polyurethanes.
- Releases silicone glass laminates and tubes and parts made from silicone molding compounds.
- Provides release for wood forming operations, metal making, and rubber gaskets.

Typical Properties

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

Test[1]	Property	Unit	Result
0005	Color		Colorless/ light straw
0208	Active material content	% w/w	50
0001A	Specific gravity @ 77°F (25°C)	g/ml	0.93
0004	Viscosity	cSt	11.0
0021A	Flash point – closed cup	°C	32
	Solvent		Stoddard and xylene
	Suitable solvents		Aliphatic and aromatic hydrocarbons

1. CTM: Corporate Test Method, copies of CTMs are available on request.

Description

DOWSIL™ 20 Release Coating provides a durable parting film which effectively releases plastics, adhesives, and other elastomeric products that are sometimes difficult to release from mold surfaces, even with other silicones.

Form No. 26-070-01-0720 S2D

How to Use

Dilution

For easier application and finer control of the amount applied to mold surfaces, DOWSIL™ 20 Release Coating should be diluted to one part coating to 5–10 parts solvent. If wetting is a problem, blend 10 parts DOWSIL™ 20 Release Coating with 80 parts isopropanol (99%) and 10 parts toluene, rather than the previously mentioned solvents. Whenever using solvents, always provide adequate ventilation and follow the precautions on the manufacturer's label.

To break in molds with porous surfaces, a more concentrated solution – equal parts solvent and DOWSIL™ 20 Release Coating – may be used. Once the mold has been broken in, a more dilute solution may be used.

Frequency of application and proper concentration for optimum release should be established by small-scale trial runs under actual operating conditions before use in operation.

After dilution, DOWSIL™ 20 Release Coating can be applied by spraying, brushing, or wiping. Mold surfaces should be cleaned prior to application. Best parting characteristics are obtained when this product is applied in a very thin film.

Avoid excess.

Thick films do not give good release and may even cause sticking. Difficult release may also result from uneven dispersion or failure to wet surfaces completely. This may be corrected by rubbing out the release material until a thin, dry film is obtained.

After application, allow the mold surface to dry until completely free of diluent. Because the solvents used to dilute DOWSIL™ 20 Release Coating may be flammable, special care must be taken when applying the dilution to hot surfaces.

Cure

Although not essential, a heat cure produces better release and increased durability of the parting film. Heating the molds for 5–10 minutes at 93–204°C (200–400°F) is suggested.

Finishing Molded Parts

The silicone release film formed by DOWSIL™ 20 Release Coating may, in some cases, interfere with the painting and bonding of molded parts. If a finish coat or bonding is involved, the effect of a silicone release agent should be thoroughly tested before use.

Should painting or bonding of molded parts be an issue, Dow offers release agents that are compatible with many organic coatings and adhesive systems. These alternative release products provide good release and offer the advantage that residual film transferred to the molded part can be removed from the molded part without requiring extraordinary cleaning procedures prior to painting or bonding. Information about these Dow release materials is available upon request.

Handling Precautions

DOWSIL™ 20 Release Coating is supplied in a flammable solvent. Avoid heat, sparks, and open flame. Always provide adequate ventilation.

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.

Usable Life and Storage

When stored at or below 30°C (86°F) in the original unopened containers, this product has a usable life of 24 months from the date of production. This product is classed as a flammable, with a flash point of 32°C (89.6°F). Handle and store with appropriate precautions.

Packaging Information

This product is available in 20 kg and 170 kg containers, net weight.

Samples are available in 500 ml containers, net weight.

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 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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