Technical Data Sheet

DOWSIL™ 3441 Two-Part Fast Cure Workshop Silicone Sealant

Features & Benefits

- When used correctly, fast gluing and short storage times will be achieved due to the fast development of high strength
- Outstanding adhesion to a wide range of substrates including PVC-U, aluminum and glass
- Excellent resistance to UV radiation
- Excellent temperature stability: -30°C (-22°F) to +120°C (+248°F)
- High levels of mechanical properties
- Low water absorption
- Odorless and non-corrosive cure system
- Resistant to ozone

Applications

- This product is suitable for framing and glazing applications to ensure a good seal between glass and frame. It is formulated to develop an excellent primerless adhesion and fast gluing properties to various substrates like aluminum, wood and especially PVC-U. The high performance features incorporated into this product make it especially suitable for the following applications:
    - Glass-sash backbedding application
    - Gluing to increase rigidity of construction parts
    - Fast curing deep sealant joints.

Not suitable for "Structural Glazing" applications. For "Structural Glazing" applications, DOWSIL™ 993 Structural Glazing Base and Catalyst should be used.

Typical Properties

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

Property	Unit	Result
Base: as supplied		
Color and consistency		Viscous white paste
Specific gravity	g/ml	1.36
Viscosity ($100s^{-1}$)	mPa.s	160,000

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Typical Properties (Cont.)

Property	Unit	Result
Curing agent: as supplied		
Color and consistency		Black paste
Specific gravity	g/ml	0.98
Viscosity ($100s^{-1}$)	mPa.s	15,000
As catalized		
Mixing ratio by weight (base/curing agent)		10:1 w/w
Color and consistency		Black non-slumping paste
Working time (25°C/77°F, 50% R.H.)	minutes	20 to 40
Tack-free time (25°C/77°F, 50% R.H.)	minutes	90 to 240
Specific gravity	g/ml	1.35
After 3 days cure		
Hardness	Shore A	35
12 x 12 x 50 mm^3 size T.A. joint (ISO 8339)[1]		
Young modulus	MPa	1.8
100% modulus	MPa	1
Tensile strength	MPa	1.1
[1]Lot matching of base and curing agent not necessary Manufactured under ISO 9000 series		

1. ISO: International Standardisation Organisation.

Description

DOWSIL™ 3441 Two-Part Fast Cure Workshop Silicone Sealant is a two-component neutral curing silicone sealant specifically developed for the bonding of insulated glass units into pvc-u profiles to increase the frame rigidity.

The improved stability of DOWSIL™ 3441 Two-Part Fast Cure Workshop Silicone Sealant at elevated temperatures, UV and humidity as well as its higher young modulus will ensure long lasting performance. Neutral alkoxy; cures at room temperature giving off a small amount of alcohol.

Water pick-up (%): 0.5 after 60 days water immersion at 60°C (140°F).

How to Use

Mixing and Dispensing Instructions

DOWSIL™ 3441 Two-Part Fast Cure Workshop Silicone Sealant should be mixed in a ratio of 10:1 base to curing agent by weight, or equivalent 7.9:1 by volume for optimal properties. At this mix ratio, the sealant typically exhibits a working time of 20 minutes and allows the assembly to be handled within four hours. Slight variations in mixing ratio can be tolerated, but these should not exceed 11:1 to 9:1 by weight to ensure minimum properties are obtained. The sealant is compatible with most of DOWSIL™ neutral curing construction sealants. Please contact our technical services department for more information.

How to Use

Mixing and Dispensing Instructions (Cont.)
To obtain the ultimate physical properties from DOWSIL™ 3441 Two-Part Fast Cure Workshop Silicone Sealant it is recommended that the base and curing agent are thoroughly mixed using an airless mixing system found on most existing commercially available two-part silicone dispensing machines. In case of smaller applications only special two-part hand-mixing cartridge systems (Semco/CAS) should be used to avoid incorporation of air into the material.

DOWSIL™ 3441 Curing Agent will react with atmospheric moisture and therefore should not be exposed to air for prolonged periods of time.

Curing Agent
The curing agent is a semi-viscous paste and is suitable for meter mix equipment that uses a follower plate transfer pump system for the catalyst.

Curing agent will react with atmospheric moisture and therefore should not be exposed to air for prolonged periods of time. It is strongly recommended that the curing agent be agitated before use to ensure homogeneity of all components.

Equipment cleaning when not being used it is recommended that the dispensing equipment be purged either with the uncatalyzed base, or flushed with a suitable solvent such as DOWSIL™ 3522 Concentrated Cleaning Solvent. If cured sealant has built up inside the equipment, it is recommended to flush the equipment for the appropriate time with DOWSIL™ 3522 Concentrated Cleaning Solvent using a solvent recirculation system. This solvent dissolves cured silicone sealant and provides optimum cleaning performance.

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.

Usable Life and Storage

When stored between 5°C (41°F) and 25°C (77°F) in the original unopened containers, DOWSIL™ 3441 Curing Agent has a usable life of 12 months from the date of production.

When stored at or below 25°C (77°F) in the original unopened containers, DOWSIL™ 3441 Base has a usable life of 12 months from the date of production.

Packaging Information

DOWSIL™ 3441 Base is available in 250 kg drums. DOWSIL™ 3441 Catalyst is available in 25 kg pails.

Limitations

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

The sealant cannot be used for structural glazing of glass units to a metal frame, or as a sealant for insulating glass units.

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.

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