

STAYDRY® Z20

Moisture Getter Film

DESCRIPTION

STAYDRY Z20 is a film-based moisture absorber designed for applications requiring low outgassing and high reliability in hermetic packages. We manufacture and sell a variety of getter technologies for the semiconductor, medical and aerospace industries specifically designed for these types of devices.

STAYDRY Z20 film is a unique getter, which employs an active desiccant for water absorption, dispersed in a flexible silicone polymer matrix. The film has a low outgassing PSA (Pressure Sensitive Film) on one side that allows easier and quicker attach of the getter film to substrates during assembly. The high permeability of the polymer matrix to moisture assures a rapid uptake of the gas in one hour or less.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

- High adhesive strength to: stainless steel, titanium, Kovar, gold plated Kovar, nickel plated Kovar, polyimide, aluminum, ABS, acrylic, polystyrene, polycarbonate, polypropylene, silicone rubber & PET
- High heat resistance
- Low outgassing
- Low ionics
- RoHS & REACH compliant
- Excellent chemical resistance
- High level of environmental performance

APPLICATIONS

STAYDRY Z20 is thermally stable up to 250 °C. The material is a low outgassing electrically non-conductive silicone film and can therefore be molded or stamped to any desired shape. The excellent physical properties of the film allow the getter to remain flexible over the temperature range of -65 to 165 °C. As a result, no spalling or flaking occurs as the getter material removes moisture. The composition of the material is designed to maintain a dew point of less than -65 °C. **STAYDRY Z20** also combines a low outgassing PSA (Pressure Sensitive Adhesive) allowing attachment to various substrates.

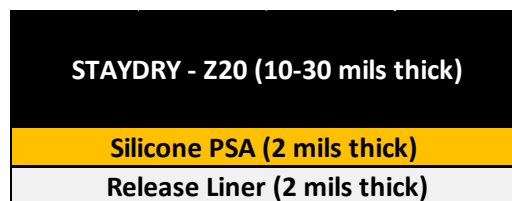
TYPICAL PROPERTIES

Property	Value
Appearance:	Black film
Storage Temperature:	25 °C
Getter Cure Temp:	N/A
Getter Activation:	Varies upon application
Shelf Life:	12 (Months)
Density:	≥1.15 g/cc
Thermal Stability @ 200 °C:	≤1.0 % loss
Moisture Absorption:	≥ 8.0 weight %
CTE:	440 μm/m °C
Ionics:	Na ⁺ = < 50 ppm K ⁺ = < 50 ppm Cl ⁻ = < 200 ppm F ⁻ = < 50 ppm

AVAILABILITY

STAYDRY Z20 film is available in standard thickness of 10 mil, 20 mil and 30 mil. PSA thickness is 2 mil/0.05mm with a PET liner which is also 2 mil/0.05mm thick.

Special thicknesses are available upon request. Standard sheets are available in many sizes up to 8" x 10". Custom preforms and laser cut preforms are also available upon request.



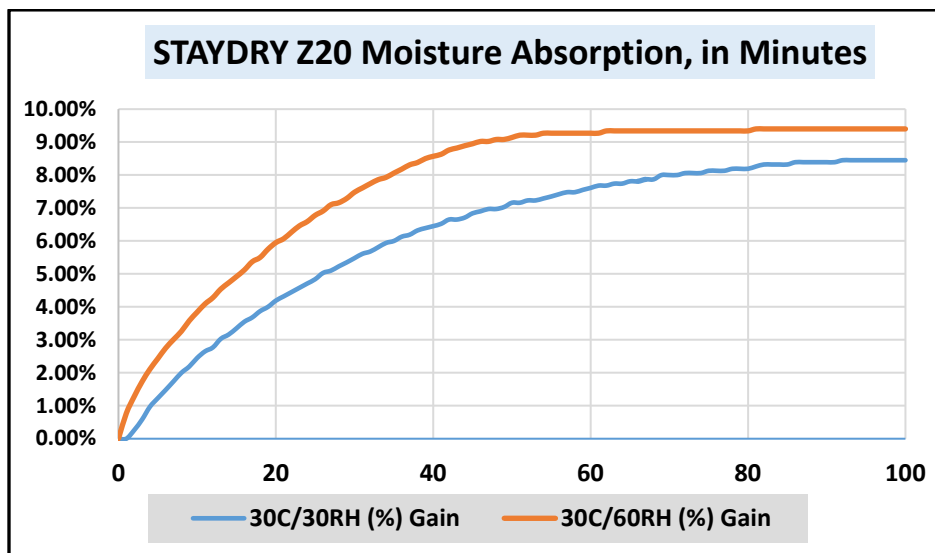
Graphic of STAYDRY- Z20 film with PSA and release liner

BONDING ATTACH PROCESS

1. Allow substrates and **STAYDRY Z20** to reach ambient temperature before bonding.
2. Thoroughly remove all oil, moisture and any residues from the surface to be bonded.
3. Remove backing liner from **STAYDRY Z20**.
4. Place **STAYDRY Z20** where required.
5. **STAYDRY Z20** uses a pressure-sensitive adhesive (PSA). Be sure to apply pressure with a roller, press, or use sufficient hand pressure for smaller preforms. Failure to do so could affect PSA properties and appearance.
6. Best adhesion is obtained when bonding from (21 to 38 °C)/(70 100 °F). Do not bond to surfaces at temperatures below (10 °C/50 °F).
7. PSA film may not bond well to uneven or distorted surfaces.
8. Avoid placing significant stress on **STAYDRY Z20** film applied to substrate for several hours after application.

PROCESSING PROFILE

Place the bonded assembly into an appropriate activation profile. See activation section for time and vacuum levels recommended. Seal the package **IMMEDIATELY** after activating. Assemble in an inert atmosphere or vacuum chamber. 90% of moisture gettering capacity is used after ~45 minutes of exposure to normal humidity at 25 °C. The **STAYDRY-Z20** can be activated/saturated/re-activated many times if needed.



STAYDRY Z20 (activated) – Absorption at 30 °C/30RH & 30 °C/60RH in minutes

ACTIVATION

STAYDRY-Z20 must be activated before final sealing of a device to attain moisture absorption properties. The following processes for activation of the **STAYDRY-Z20** film can be employed with equal effectiveness.

Temperature °C	Time (Hours)	Vacuum (mm Hg)
125	24	<250
150	16	<500
175	6	<760
200	4	None

STAYDRY Z20 – Activation Chart

SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

WASTE TREATMENT

Prior to using any recommendations or suggestions for waste treatment, the user is required to know the appropriate local/state/federal regulations for on-site or off-site treatment, which may require permits. If there is any conflict regarding our recommendations, local/state/federal regulations take precedent.

CONTACT INFORMATION

**To confirm this document is the most recent version, please contact
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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency directory assistance: Chemtrec 1 - 800 - 424 - 9300.

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