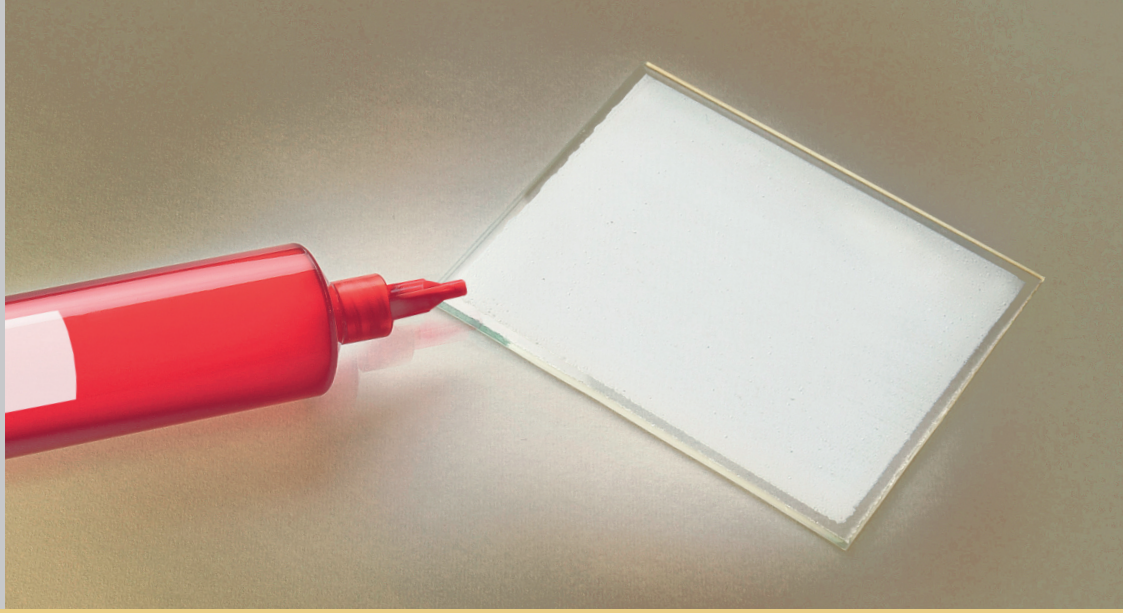
eDry™/V

Dispensable Dryer



HIGHLIGHTS

General Features

- ☐ Handling and dispensing in air
- ☐ High moisture sorption capacity
- ☐ Resistant to air exposure
- ☐ Rigid film after curing
- ☐ High flexibility
- ☐ Thickness range from 10 µm to 1000 µm
- ☐ Solvent-free, epoxy base
- ☐ Extremely low outgassing
- ☐ No loose particles

Applications

- ☐ Semi-hermetic packaging
- ☐ Microelectronic devices
- ☐ Optoelectronic devices
- ☐ Quartz crystal oscillators
- ☐ Implantable medical devices
- ☐ Organic lasers
- ☐ Flexible organic devices

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Product Description

eDry™/V is a high capacity, solventless, thermally curable, dispensable dryer, designed for use in semiconductor, medical, microelectronic and opto-electronic packaging applications and other sophisticated applications. Due to its viscosity it can be applied by syringe or blading.
eDry/V films work as irreversible moisture getter.

Material Property	Paste	Paste 1h air exposure	Cured film 16h air exposure
Appearance	Light grey	Light grey	Light grey
Viscosity at 20 - 50 s^{-1} (cP) (*)	140,000 - 90,000	90,000 - 140,000	NA
Density (g/cm^3)	1.3	1.3	1.3
Moisture capacity (wt %)	> 17	> 16	> 13
Weight loss up to 200 °C (% wt)	< 1	< 1	< 1
Thermal Stability, max T(°C)	NA	300	300
Max. particle size (µm)	< 50	< 50	NA
Storage temperature (°C)	- 18	-30 to +170	-30 to +170
Shelf life (months)	6	NA	NA
Storage atmosphere	Dry if bag is opened	Dry	Dry

(*) at 25 °C

Processing

Bring eDry/V to room temperature before use.

Deposition

Apply via blading or dispense by syringe on the desired surface.

Compatible surfaces are:

- Glass
- Stainless Steel and other metals
- Plastics (PET, PEN, engineered films)

Example of syringe dispensing parameters are:

- Needle size 250 µm
- Pressure 3 bar
- Speed 8 mm/s

Thermal curing

- Curing conditions are 170 °C for 30’ or 150 °C for 1h
- Curing can take place in air
- No solvent is evolved during curing.

eDry/V is a solid film after curing.

Moisture Sorption

eDry/V nominal sorption capacity is > 17 wt% at 25 °C, 55 %RH.
A negligible loss of capacity is caused by exposing eDry/V to air for 1 h before curing.

Sorption Properties (typical)

Thickness (µm)	Sorption Capacity (mg cm^{-2})
50	1.2
100	2.4
200	4.8

Cleaning

Typical solvent used for cleaning is acetone.
Ethanol can also be used.

Shipping and Storage

Short term storage: eDry/V exposure at room temperature (20-25 °C) over 72 h is not recommended.
Long term storage: shelf life of eDry/V is 6 months if properly stored (keeping the barrier bag sealed at -18°C).

Handling

Once the syringe is removed from the barrier bag, eDry/V must be deposited within 8 hours when exposed to ambient air.
After being cured, eDry/V films can be exposed to air (up to 16 h) without losing significant sorption capacity.

Ordering information

Code: 5X0814 Description: EDRY/V/SMT10 (Musashi syringe - 10cc)
Code: 5X0819 Description: EDRY/V/SMT3 (Musashi syringe - 3 cc)
Code: 5X0816 Description: EDRY/V/SEU3 (EFD/Nordson syringe - 3cc)

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SAES Group
www.saesgroup.com
functional_chemicals@saes-group.com