DryPaste-G/LV

Dispensable Dryer

HIGHLIGHTS

General Features

- ☐ Handling and dispensing in air
- ☐ High moisture sorption capacity
- ☐ Thermally curable
- ☐ Resistant to air exposure also after curing
- ☐ High flexibility
- ☐ Thickness range from 10 µm to 100 µm
- ☐ Solvent-free, siloxane base

Applications

- ☐ Active Matrix OLED displays
- ☐ Passive Matrix OLED displays
- ☐ OLED lighting systems
- ☐ Organic photovoltaic devices
- ☐ Organic sensors
- ☐ OFETs
- ☐ OLETs
- ☐ Organic lasers
- ☐ Flexible organic devices

saes group

making innovation happen, together

Product Description

DryPaste®-G/LV is a high capacity, solventless, thermally curable, dispensable dryer, designed for use in OLEDs and organic electronics applications. Due to its viscosity it can be applied by screen printing, blading or syringe.
DryPaste-G/LV films work as irreversible moisture getter.

DryPaste-G/LV Moisture Sorption

Calculation example

Typical Sorption capacity in air: 12.8 % of dry weight
1cm x 1cm x 50 µm = 0.005 cc x 1.3 g/cc = 0.0065 g = 6.5 mg
Moisture capacity = 6.5 mg x 12.8 % = 0.832 mg

Material Property	Typical value	
	Paste	Cured Film
Appearance	White paste	White film
Viscosity at 25 °C (cP) (*)	~ 16,000	NA
Density (g/cm^3)	1.3	1.3
Weight loss at 100 °C	NA	< 0.1 %
Moisture capacity (wt %)	> 9	> 9
Storage temperature (°C)	2 to 5	-30 to 170
Shelf life (months)	6	NA
Storage atmosphere	Dry if bag is opened	Dry

(*) at a shear rate of 45 s^{-1}

Processing

Bring DryPaste-G/LV to room temperature before use.

Deposition

Apply via screen printing, blading or dispense by syringe on the desired surface.
No mixing is required.
Dispensing can take place in air, considering that during the film air exposure a sorption capacity reduction is induced.

Compatible surfaces are:

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

Suggested syringe dispensing parameters are:

- Needle size 600 micron; Pressure 6 bar; Speed 20 mm/s

DryPaste-G/LV
Dispensable Dryer

Thermal Curing

- Suggested curing conditions are 160°C for 1h or 120°C for 3h.
- Inert flowing gas or vacuum is recommended.
- Curing in air is possible, but with reduced performances.
- No solvent is evolved during curing.
- Z-axis shrinkage about 5%.

Moisture Sorpion

DryPaste-G/LV moisture capacity specification is > 9 wt% at 25°C, 55% RH.
Typical weight gain at 25°C, 55% RH on film cured at 160°C for 1h is > 9 wt%.

Sorption Properties (typical)

Thickness (µm)	Sorption Capacity (mg cm^{-2})
20	0.33
40	0.67
60	1.00

Typical sorption speed for a 50 µm thick film cured at 160 °C for 1h in N_2 at 25 °C and 55% RH is:

6.0 x10^{-4} mg cm^{-2} min^{-1} (for a period of 30 min)

Cleaning

Typical solvent used for cleaning is Hexamethyldisiloxane (HMDS).
Acetone also can be used.

Shipping and Storage

Shelf life of DryPaste-G/LV is 6 months if properly stored (keeping the barrier bag sealed or the container in glove box).
DryPaste-G/LV recommended temperature storage condition is between 2 and 5°C. Long periods of time can be tolerated also at RT.

Handling and Air Exposure

Once the syringe is removed from the barrier bag, DryPaste-G/LV must be deposited within 8 hours when exposed to ambient air.

Cured films can be exposed to air loosing part of their capacity.
Typical values:

- curing at 160 °C x 1h: capacity loss about 6% in the first 3 hours (@25 °C / 55% RH)

Ordering Information

Code: 5X0537 Description: DRYPASTE-G/LV/SMT50 (Musashi syringe – 50cc)
Code: 5X0539 Description: DRYPASTE-G/LV/B250 (bottle – 250cc)
Other configurations available.

The SAES Group manufacturing companies are ISO9001 certified, the Asian and Italian companies are also ISO14001 certified. Full information about our certifications for each company of the Group are available on our website at: www.saesgroup.com

D.OE.140.0.15

saes group

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