

ABR ORGANICS LIMITED

(An ISO 9001:2015 Certified Company)

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PRODUCT TRADE NAME	: ABRON – PR 100SL
PRODUCT TYPE	: PHENOLIC RESIN

ABRON - PR100 (SL) has been developed exclusively for aerospace and space application. ABRON - PR100 (SL) is solventless resol type phenol formaldehyde resin with very good wettability and high flow. Extended shelf life for ABRON - PR100 (SL) is achieved by terminating the probable chain extending species to the maximum extent. The oxidative stability of ABRON - PR 100 (SL) is superior to novolak resin, as the number of reactive hydroxyl groups in the polymer chain are less compared to the novolak resins. It is an established fact that resol type of phenol formaldehyde resins are used in space & aerospace applications.

ABRON - PR 100 (SL) offers the following distinct advantages over conventional solvent-based phenolic resins:

- It has a long shelf life of 2-3 months when stored at cooled conditions.
- The total solid content in the resin is 70-75% (w/w polymer).
- It is highly compatible with glass, silica, carbon and aramid fibres/fabric, etc.
- Void free components/composites are realised by using ABRON - PR 100 (SL)
- The cure cycle of ABRON - PR 100 (SL) is the same as that of any ordinary solvent based resol type phenolic resin.

- The unique property of ABRON - PR 100 (SL) is that graphitization occurs at temperatures 600°C and above. This graphitization helps to build up the mechanical properties of the composites/components at elevated temperatures. Hence the components/composites of ABRON - PR 100 (SL) have better properties at 600°C and above as compared to these components/composites realised from other resins.
- ABRON - PR 100 (SL) is an import substitute, used in liquid engine rocket nozzles.
- ABRON - PR 100 (SL) is characterised by high solid resin content, high char yield, good ablative properties & high gel time.

APPLICATIONS:

ABRON - PR 100 (SL) can be used as a resin matrix for fiber reinforced composites. It is also used in the manufacture of resin bonded magnesia-carbon and alumina-carbon refractory bricks. It is also useful in the manufacture of tap hole masses of blast furnaces.

SPECIFICATIONS OF ABRON – PR100 (SL)

State	: Liquid
Appearance	: Light brown or amber coloured
Specific Gravity	: 1.18 – 1.22
Viscosity (30⁰C) CPS	: 400 - 800
Point of Trouble [30⁰C at sp.gt 0.860]	: 13.5 – 15.5 ml of water
pH	: 7.2 – 7.5
Resin solids %	: 70 - 75
Free formaldehyde %	: 0.5 Max.
Free phenols %	: 18 - 22
Shelf Life (storage)	: 3 months at 4⁰ C/ 1 month at RT

The product information or recommendations offered, either in writing or verbally, is a part of service information to our customers, and these are based on test results carried out by us based on the current state of our knowledge. Customers are requested to independently evaluate the suitability of the ABROL products for each application. The information provided is for the use by persons having technical skill, at their discretion & risk and no liability can be accepted in respect of information provided and no warranties are intended as the condition of application are beyond our control.