



Composite & Advanced Material

## POUR A FOAM

# DPU 80

### Polyurethane Liquid Foam

#### GENERAL DESCRIPTION

DPU80 is a liquid transforming into a rigid foam and is ideal for insulation and shaping. It exhibits good compressive strength. It has a small cell structure, ideal for pouring in areas requiring structural rigidity.

### THE MOST IMPORTANT FEATURES ARE :

- High thermal conductivity
- Dimensionally stable in large temperature ranges
- Easy mixing ratio

#### MIXING

1.) Procedure for machine mixing hand pour rigid polyurethane foam . Hand pour Polyurethane foam should be mixed 1:1 by volume or 100 to 115 (B or Brown component) by weight. Use a scale to measure A and B weight before mixing. (Determine amount required) . By volume make sure heights on buckets are exactly same and use same size buckets

2.)To Determine Volume: Free rise foam weighs approximately 80gms per litre or 80kg for 1000litre or 1 m3. Determine cavity volume and multiply times foam in – place density. (Example: 1mx1mx1m will need 80kg or 37kg A and 43kg of B . Urethane foam requires a pack factor to fill enclosed cavities. ( be careful do not exceed 10% overpack)

#### 3.) TO MAKE FOAM

Prepare a small can of cleaner for rinsing mixer.

Pour predetermined weights of A and B chemicals in separate containers.

15 to 30 deg C is optimum. When ready to mix, pour one chemical into the other and mix with propeller type paint mixer.

Clean mixer with mineral spirits or acetone

Pour mixture into mould or cavity and let expand.

If moulding, demould in 12 to 15 minutes.

Notes: IF a moulded part is required – apply wax or apply barrier coat to mould. Allow wax or barrier coat to dry. Clamp mould before foaming. Be careful Expanding foam will develop pressure when moulding.

ITEMS Required Mixing containers.

Propeller type mixer and drill motor. (Paint mixer is ok)

Cleaning solvent for mixer.

Pour within 1 min to ensure maximum viscosity of mix.

Maximum properties may be achieved after 7 days

- Hand Pour



## TECHNICAL DATA:

|                                                                                             |             |
|---------------------------------------------------------------------------------------------|-------------|
| • Mixing Ratio (Parts by volume)<br>Note by mass 100:115 as B or<br>ISO is SG higher than A | 50:50       |
| • Rigidity 1kg/min                                                                          | 8 min       |
| • 1kg free rises up to:                                                                     | ± 10 litres |
| • Foaming time after mixing 1kg/min                                                         | 1.5 min     |
| • Density kg/m <sup>3</sup> (Variations +-10%)                                              | 80          |
| • Compressive strength with rise kPa                                                        | 200         |
| • Compressive strength across rise kPa                                                      | 130         |
| • Closed cell content %                                                                     | 94          |
| • Thermal Conductivity w/m deg C<br>(@ 10degC over 20 variations)                           | 0.029       |

**Storage:** Six months from date of manufacture if kept in closed opaque containers at 20 - 25 Deg C.

