

# HYCHEM

## PS1000



### Hychem PS1000 Two Part Polysulphide Joint Sealant

#### FUNCTION

Hychem PS1000 Two Part Polysulphide is a high grade synthetic rubber sealant possessing outstanding resistance to deterioration due to weathering, ozone, ultra-violet light and chemical attack by chemicals present in industrial atmospheres. It has the ability to withstand repeated cycles of compression and expansion over a wide temperature range, and has excellent adhesion properties to all materials commonly employed in building and construction work.

Hychem PS1000 Two Part Polysulphide can be supplied in pouring and gun grade for sealing horizontal and vertical joints where movement is expected, or where the performance specification is too rigorous for most common mastics and joint sealers. It is ideal for uses in expansion joints in reinforced concrete structures such as bridges, reservoirs, water treatment works, sea walls and roads, etc, it can also be used in floors subject to heavy usage where a high resistance to damage is required. Colour- Grey, White, Black and other upon request.

#### STANDARDS COMPLIANCE

Hychem PS1000 two part polysulphide sealant conforms to BS4254 : 1983, US Federal Specification TT-S-00227E 11/1969 A116.1, JIS A5758.

#### PROPERTIES

Appearance	: polysulphide rubber
Colour	: grey, brown, amber, black or white
Solid content %	: 100
Viscosity	: thixotropic paste
Specific gravity	: approximately 1.6
Shelf life	: at least 18 months stored at 5 - 35°C
Mixing ratio	: 1 part to 10 parts of base by weight
Pot life	: 3 - 8 hours at 20°C
Tack free at 20°C	: 24 hours
Staining	: none
Slump	: 0 mm
Bleeding	: 0 mm
Extrudability	: 12 seconds
Resistance to ozone	: non-crack
Hardness shore A	: 35 ± 5

#### JOINT SIZE

Joint size may range from a minimum of 5mm to a maximum of 50mm wide. Joints with cyclic movements should have a width: depth ratio of 2 : 1 and designed so as total movement does not exceed the 25% MAF related to the joint width.

Sealant depth shall not exceed joint width.

Minimum sealant depth recommended

- 5mm for metals, glass and other impervious surfaces,
- 10mm for all porous surfaces,
- 20mm for joints exposed to traffic and hydrostatic pressures.
- 5mm below flush for joints exposed to traffic.

#### JOINT PREPARATION

SURFACE	TREATMENT
Concrete & Masonry	Surfaces must be clean and dry. Wire brush thoroughly and remove dust and all contaminants.
Metals	Remove any corrosion or millscale by grit or shot blast, wire brush, grinder or chemical remover. Degrease the surfaces with clean cloths soaked in oil-free cleansing solvent.
Wood (bare)	Wood surfaces must be clean and dry. Cut back or abrade where necessary to sound timber.
Glass and Glazed Materials	Thoroughly clean the surfaces with clean cloths soaked in oil-free cleansing solvent.
Coated Surfaces	Where feasible, coatings should be removed and the surfaces treated as above.

- Where required, masking tape and Bond Breaker should be applied before priming.

#### PRIMING

- The correct primer must always be used.

SURFACE/APPLICATION	PRIMER 70
Porous surfaces (such as concrete & masonry)	X
Non-porous surfaces (such as metals, glass and glazed surfaces)	X
Oil-resistant applications	X

- Application of primer should not be carried out below 4°C (40°F).
- A single coat of primer should be applied by brush in accordance with the instructions on the primer tins. The primer must be allowed to dry for a minimum period of one hour before applying PS1000.
- PS1000 should be applied within 24 hours of priming, otherwise repriming will be necessary.

## APPLICATION TEMPERATURES

- PS1000 should only be applied when the ambient temperature is between 4°C (40°F) and 50°C (122°F).
- When the temperature is below 10°C (50°F) storage at 21°C (70°F) for several hours will ease mixing and application.

## MIXING PS1000

- Mix and use one complete unit at a time - do not sub-divide
- PS1000 is supplied in two part, in separate tins with the curing agent contained in a smaller tube.
- Mix for 5-10 minutes using a paddle fitted to a 500 r.p.m. electric drill, moving the paddle completely through the mass of the material. The sides and base of the container should be periodically scraped down with a palette knife to ensure all of the curing agent is completely blended with the base compound.
- Failure to completely disperse curing agent throughout the base compound will result in uncured sealant. PS1000 should be used immediately once mixed.

## APPLICATION

- PS1000 is designed to be applied using a sealant gun, but can be applied by trowel if required.
- Sealant guns are fitted with conical nozzles which can be cut to suit the joint width.
- The sealant should be gunned into the joint using an even trigger pressure, cleaning the nozzle occasionally to avoid contamination. Deep joints should be filled in two or more runs, to prevent air entrapment.
- Once the sealant has been applied, a small timber spatula, soaked in a soapy water, should be used to compact the sealant into the joints and to tool off to achieve a smooth polished finish. Any masking tape which has been applied should be removed before the sealant cure.
- Mixing and application equipment should be cleaned immediately using tool cleaner, using rubber gloves to prevent tool cleaner coming into contact with skin.

## WORKING LIFE/CURING PERIOD

The working life of PS1000 may be less than one hour depending on storage, application temperature and humidity.

## OPERATING TEMPERATURE

-30°C TO 90°C

## RECOMMENDED MOVEMENT

Transverse ± 25%

Shear ± 50%

## COVERAGE

Hychem Primer 70 - approximately 100m run at 15mm deep per 250ml

Hychem PS1000 Two Part Polysulphide - length of joint, in metres, filled per 1 litre of material.

DEPTH OF JOINT mm	WIDTH OF JOINT -mm				
	10	15	20	25	30
10	10	6.7	5	4	3.33
15		4.45	3.33	2.67	2.23
20			2.5	2	1.67
25				1.6	1.33

## STORAGE

The storage life is approximately 18 months, but the material should be used before the date stamped on the container. Storage temperature range is 5°C to 35°C. Store in dry conditions.

## PRECAUTIONS

### HEALTH & SAFETY

The components and mixed sealant should not be left in skin for prolong period. Gloves should be worn and use of creams is strongly recommended. Solvents is not recommended for cleaning the hands, used an industrial cleaner and wash with soap and water.

Note: The above information is for general information only. The stated properties and performance characteristics are approximate values. Actual field results may vary, due to temperature fluctuations etc.

**HYCHEM USA, INC.**