



HYCHEM

FP1 fusion primer

USING NEW SOL-GEL TECHNOLOGY

**Zero Grinding & Zero Blasting required****Dustless preparation for a safer work environment**

DESCRIPTION

Hychem FP1 is a single component, spray on sol-gel based fusion primer that functions as an inter-coat adhesion primer or direct to substrate primer. Hychem FP1 creates a molecular bridge between a coating and the substrate, chemically fusing both substrate and topcoat. Hychem FP1 is compatible with many surfaces and many coatings, although water-based coatings are not directly compatible as topcoats. When used on concrete substrates, as long as the concrete is clean, sound and of sufficient compressive & tensile strength and free of all surface laitance, bond breakers and contaminants such as oils, greases, etc., no grinding or surface profile is needed to achieve an almost unbreakable chemical bond to the surface.

FEATURES

- ♦ Removes the need to grind, sand or profile substrates or coatings before top coating
- ♦ Helps minimize concrete dust from conventional preparation methods such as grinding & blasting
- ♦ Ideal primer for dense, burnished concrete surfaces
- ♦ Provides strong bonding to the hard to bond to or low/no profile surfaces
- ♦ Maximum 90 minute overcoat window. If the window is missed, simply run a screen over or lightly abrade the surface and re-apply
- ♦ Provides chemical bonding to the substrate and becomes one with the surface it is applied to
- ♦ Can be used on porous and non-porous substrates – concrete, stone, tile, porcelain, glass, steel, aluminum, etc.
- ♦ Single component, spray down primer using low cost pump spraying equipment
- ♦ Fast, simple & efficient application over large areas
- ♦ UV stable and virtually invisible

TYPICAL USES

- ♦ Serves as an adhesion layer between coating and substrate, or between two coatings
- ♦ Ideal for areas where concrete dust from grinding or blasting is a safety or production issue
- ♦ Can be applied on coated or uncoated concrete, rubber, plastic, fiberglass and glass, porcelain and ceramic tiles, painted or unpainted iron, aluminum, copper and many other metals, hot rolled steel, stainless steel, powder coated and galvanized surfaces
- ♦ Tested and approved as a primer for numerous Hychem coatings, toppings & membranes. Before applying Hychem water-based products over Hychem FP1 we recommend a first coat of one of our non water-based products.



COLORS

Clear to slight straw yellow liquid

PACKAGING

4 litre & 20 litre metal tins

COVERAGE

Varies depending on the porosity of the surface to be primed. Expect between 7m² to 12m² per litre.

STORAGE

Twelve months in factory delivered, unopened drums. Store on pallets and keep away from extreme heat, freezing cold and moisture. Ideally, store at temperatures between 10°C and 27°C.

MIXING

Ready to use. There is no need for mixing or diluting.

TECHNICAL DATA (All values @ 25°C)	Metric
Volatile organic compounds (ASTM D2369)	< 150 gm/ litre
Theoretical coverage – (depending on surface type and porosity)	7m ² – 12m ²
Specific Gravity of materials (ASTM D792)	0.87 kg/ litre
Shelf life @ 77°F /25°C	12 months
Flash point – pensky martin	< 25°C
Application Temperature	7–40°C
PROCESSING PROPERTIES (Under standard lab conditions)	
Touch Dry (maximum)	90 minutes
Dry Through	120 minutes
Recoat interval	5–90 minutes

Properties and values are highly dependent on equipment, spray gun, mix chamber temperature, pressure and related parameters. Values are slightly different for clear. Variations are possible and expected.

SURFACE PREPARATION

Protect all surfaces that are not intended to be coated. Ensure the surface is firm, clean, dry and in good condition without any loose or weak material. For new concrete remove all weak, dusty surface laitance first.

As per industry standards for resin coatings, the compressive strength of the surface must be a minimum of 25MPa and the surface tensile strength a minimum of 1.5MPa.

Do not apply to surfaces that are frozen, dirty, have standing water, rust, grease, oil or other contaminants.

NEW CONCRETE – Remove all dust, laitance, debris and other contaminants from the surface. If the concrete is less than 28 days old, Hychem HLT must be used prior to FP1. With Hychem HLT new concrete can be coated with Hychem FP1 or other 96 hours after pour. Refer to Hychem HLT application instructions and TDS for all installation instructions.

EXISTING CONCRETE – The intended surface must be clean, dry and structurally sound. Remove all contaminants including bond breakers, surface contaminants, grease, oil, dust and construction debris. For larger surface areas, use an auto scrubber with an appropriate cleaner to scrub clean the floor. The surface must be dry prior to application of Hychem FP1 or other Hychem products.

**HYCHEM**

INSTALLATION – Surface & Air Temperature – 7°C–40°C

EQUIPMENT – For horizontal substrates, use an acetone-proof pump sprayer with a cone tip. For vertical/upright substrates, use a HVLP (High Volume Low Pressure) spray gun.

STORAGE & HANDLING – Store in a cool, dry place at <27°C where possible. Always seal containers after dispensing. Published shelf life assumes upright storage of factory-sealed containers in a dry place at <27°C.

APPLICATION – Before use, read preparation, hazard and precautionary statements. ALWAYS TEST using the equipment and procedures prior to starting the job.

*Coverage rates will vary based on substrate porosity and application method.

HORIZONTAL SURFACES with or without existing coatings – Ensure the surface is free of any dust, debris and other contaminants. To test for cleanliness, solvent wipe prior to application of FP1. If the solvent wipe pad appears black or very dirty, the surface is not sufficiently clean and should be cleaned with an auto scrubber using a suitable detergent or degreaser. Once the surface is clean and dry, Hychem FP1 application may begin. Use an acetone proof pump sprayer, ex. Swissmex, with a cone tip. Keep the spray tip 45cm off the ground and apply product slowly in a circular motion similar to how a stain is sprayed on concrete. On porous broom finished, troweled, ground or non-polished concrete, spray at least two coats wet on wet. Apply with a 50% overlap, keeping a wet edge while applying. Observe how the concrete absorbs the first coat for at least 5 minutes. If the surface still looks the same as before the Hychem FP1 application and not wet/saturated, additional coats are required in the dry, non-enhanced areas. Concrete must be saturated for Hychem FP1 to work properly.

APPLICATION

Once the concrete is saturated, wait at least 15 minutes for the Hychem FP1 to become tacky. Once tacky, Hychem FP1 may be over coated with most non-water based coatings. Do not apply any subsequent coatings until Hychem FP1 is tacky. Failure to wait until FP1 is tacky will result in fisheyes, over coat shrinking away from coating perimeter and poor finish of the topcoat. Once Hychem FP1 is tacky, you have up to 90 minutes to apply the next coat. If the overcoat window is missed, screen abrade the surface and reapply Hychem FP1.

VERTICAL SURFACES – Ensure the surface is free of any dust, debris and other contaminants. Once the surface is clean and dry, Hychem FP1 application may begin. Use a HVLP spray gun set to 25 PSI, with a 2.5cm by 20cm elongated, vertical spray pattern. On porous broom finished, troweled, or non-polished concrete, spray at least two coats wet on wet, each at least 3 minutes apart to observe how concrete absorbs Hychem FP1. Apply with a 50% overlap and keeping a wet edge while applying. Observe how the concrete absorbs the first coat. If the surface still looks the same as before the Hychem FP1 application and not wet/saturated, additional coats are required in the dry, non-enhanced areas. Concrete must be saturated and feel tacky after Hychem FP1 application for Hychem FP1 to work properly.

RETURN TO SERVICE TIME

Refer to over coat manufacturer's return to service/dry times. Wait at least 2 days before exposing to vehicular traffic.

CONFIRMATION OF PERFORMANCE

Hychem recommend applying a trial sample on site to evaluate and confirm the adhesion of the Hychem FP1 and subsequent top-coats.

Please refer to Hychem warranties & disclaimers at the bottom of this TDS.

**HYCHEM**

HAZARD STATEMENTS

IN CASE OF FIRE: Use dry chemical, alcohol foam or carbon dioxide extinguisher. Water spray may be used to cool, dilute or disperse vapors. Do not release run-off to drains or waterways. Vapors can flow along surfaces to distant ignition source and flash back. Contact with strong oxidizers may cause fire. Closed containers may explode when exposed to extreme heat. This material may produce a floating fire hazards sensitive to static discharge.

ACCIDENTAL RELEASE MEASURES: Bund the area to prevent spreading. Ventilate area of leak or spill. Remove all sources of ignition. Collect liquid in an appropriate container or inert absorbent material. Do not flush to sewer. Dispose of chemical waste in accordance with current local, state and federal regulations.

OTHER PRECAUTIONS: Store in cool (below 38°C) ventilated area, away from children, food stuffs, strong oxidizers, heat sparks, flames and all sources of ignition. Keep container tightly sealed when not in use. Do not apply heat, cut, drill, and grind or weld on or near this container. Use respiratory protection when misting or spraying. Avoid contact with skin and eyes. Avoid breathing vapor and spray mist. Provide ventilation with positive fresh air exhaust in work area. OSHA 1910.134 and ANSI Z88.2. Avoid skin contact. Wear butyl rubber gloves and impervious protective clothing. Do not wear contact lenses. Chemical safety goggles or splash shields recommended. Do not eat or drink when using this product. Wash hands thoroughly after handling. Dispose of in accordance with local, state, federal and international regulations.

EQUIPMENT CLEAN UP

CLEAN UP – Clean tools and flush out spray equipment with acetone within 15 minutes after application. Once product cures, it cannot be removed from spray equipment. After one flush out, repeat for 2 total flushes.

LIMITATIONS

As treated and untreated surfaces look similar, finish work on an obvious point such as a corner or mark where you have stopped. When you start work again you can apply over the dry edge without sanding.

PRODUCTION & DISTRIBUTION – (Australia & New Zealand)

Hychem International Pty. Ltd. have the sole & exclusive rights to promote, manufacture and distribute the Premera range of products within Australia & New Zealand as per our licensing agreement.

WARRANTIES AND DISCLAIMERS

Hychem warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper use and application of the product by the applicator. Hychem has no role in the application of the finished polymer other than to manufacture and supply its components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of spray equipment and application of sol-gel materials. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by Hychem and executed under seal by a company officer.