Product Code: SYLSH

TECHNICAL DATA SHEET

SYLSHIELD

PIPE & WELD PROTECTION WRAP

Low Hazard
LH
<0.1%
Diisocyanate

Description

SylShield is a water-activated, composite fibreglass repair wrap with extreme thickness. It has been formulated for the protection of pipelines and weld joints which are subjected to intense installation processes or operate in highly abrasive environments.

The fibreglass bandage used in SylShield is three times as thick as a standard SylWrap HD Pipe Repair Bandage. The extra thickness allows layers of protection to be built more quickly around pipes and structures, with less wrapping required.

SylShield cures to provide a robust, toughened, protective outer shell capable of withstanding most forms of trenchless installation. Wrapping a pipeline with SylShield before it undergoes such processes protects outer surfaces, welds and joints from damage and scarring.

This avoids the need to make pipeline repairs after pull back.SylShield can be used in conjunction with anti-corrosion coatings, epoxies, shrink sleeves and other composite wraps to enhance protection.

In abrasive and harsh environments such as mines, quarries, and onshore and offshore pipelines, SylShield protects systems and structures against corrosion, chemical attack and impact damage. It increase pressure resistance and hoop strength,

Applying SylShield is easy. The user dips the wrap in water to activate the resin before wrapping around the pipe or structure requiring protection. Further water is used to smooth down SylShield. A compression film can be applied to improve lamination to the pipe whilst SylShield cures. If compression film is used, it should be perforated after application to allow SylShield to degas during curing.

SylShield has a work time of 2-5 minutes and a functional cure is achieved in 30-45 minutes. It is temperature resistant to 120°C and effective on pipes of all sizes made of steel, stainless steel, copper, malleable iron, GRP, ceramic, most plastics, clay, concrete, rubber, and lead.

Unlike other moistured cured pipe weld and protection wraps, SylShield contains <0.1% diisocyanate, making it a safer product for end-users with no long term respiratory health effects. This low diisocyanate content means SylWrap CR is not covered by the REACH 2023 legislation governing the safe use of diisocyanates. No mandatory safety training is required before use.

Applications

Pipe protection:	Protect pipes and welds undergoing trenchless installation processes, including horizontal directional drilling, auger boring, impact moling and microtunnelling.
Pipe reinforcement:	Reinforcement of offshore and onshore pipelines. Enhances protection provided by anti-corrosion coatings, epoxies, shrink sleeves and other composite wraps.
Wear protection:	Protects pipes and metal parts against abrasive wear in gravel and sand plants, quarries, sugar mills, oil refineries, grain hoppers, coal chutes, etc.

Product Code: SYLSH

TECHNICAL DATA SHEET

Technical Data

Working time .....2-5 minutes depending upon temperature
Cured material life .....10-20 years depending upon repair quality, repair thickness, condition of pipe, environmental conditions, pipe temperature, etc. Consult Sylmasta for further information and design life for specific applications
Initial cure time .....7-10 minutes
Functional cure .....30-45 minutes
Full cure (maximum properties) .....24 hours
Service conditions
Max service temperature .....120°C / 250°F
Pipe reinforcement.....For pipe reinforcement, pressure resistance can be designed to the requirements of ASME PCC-2 - Repair of Pressure Equipment and Piping. Consult Sylmasta for further information
Chemical resistance .....Acetone, ammonia, sulphuric acid (30%), ethyl alcohol, mineral spirits, gasoline, MEK, toluene, diesel, hydrochloric acid, Varsol, ethylene glycol, crude oil, hydraulic oil (test period of 40 days)

Storage

SylShield should be stored unopened in its original foil packaging in cool, dry conditions. Piercing or damaging the pouch will cause SylShield to cure prematurely. Under such conditions, it has a shelf life of 24 months from date of manufacture.

Health & Safety

Plastic gloves should be worn when handling SylShield. For health and safety information, please refer to the relevant Safety Data Sheet.

Case Studies

Protection of Natural Gas Pipeline Before Trenchless Installation
A natural gas pipeline in the south Czech Republic was being rerouted to improve energy security. Part of the new route ran underneath a river and a road, meaning horizontal directional drilling was used to install the pipeline for the purposes of causing minimal surface disruption.

A borehole was dug below the river and road, through which the pipeline would be pulled after being welded together above ground. An epoxy coating, a 3mm fibreglass composite and heat shrink sleeves were applied over the pipe to protect against abrasion and impact damage as it was dragged through the hole.

SylShield was then wrapped around the welded joints, enhancing the protection offered by the other measures. The pipeline subsequently suffered no damage during the installation process, avoiding the repairs following pull back often required after horizontal directional digging.

Tel: +44 (0)1444 831459 **www.sylwrap.com** **Email: sales@sylmasta.com**
Sylmasta Ltd, Halland House, Dales Yard, Lewes Road, Scaynes Hill, ENGLAND, RH17 7PG