

Technical Overview – Hydraulic Hose Protection Fire Sleeve

This technical document provides an engineering-focused overview of the Hydraulic Hose Protection Fire Sleeve, designed to protect hydraulic hoses from high-temperature exposure, flame impingement, molten splash, abrasion, oil contact, and mechanical damage in demanding industrial environments.

Related Product Page

Hydraulic Hose Protection Fire Sleeve – Product Details & Specifications:
https://www.pkfiresleeve.com/hydraulic-hose-protection-fire-sleeve_p193.html

Product Overview

Hydraulic hoses routed near engines, exhaust systems, furnaces, or hot process equipment are vulnerable to thermal degradation and mechanical wear. The Hydraulic Hose Protection Fire Sleeve acts as a passive protective barrier that reduces heat transfer while providing abrasion, oil, and mechanical resistance, improving hose service life and overall system safety.

Key Functional Benefits

- Reduces radiant heat exposure and resists direct flame contact.
- Protects hoses from molten metal splash in metallurgical environments.
- Provides abrasion resistance under vibration and dynamic movement.
- Maintains performance in oil-rich and industrial fluid environments.
- Supports OEM customization for diameter and length.

Applications

Mining equipment, construction machinery, steel mills, foundries, industrial hydraulic power units, agricultural machinery, heavy equipment, and rail or transit systems requiring enhanced fire protection.

Certifications, Tests & Performance Validation

This fire sleeve has been evaluated using internationally recognized fire, mechanical, chemical, and thermal test standards to reflect real-world operating risks:

- MSHA flame resistance requirements
- UL 1441 fire resistance testing
- RoHS and REACH compliance
- Molten Splash Test – BS EN 373
- Abrasion Resistance – BS EN 388
- Oil Resistance – BS EN ISO 6530
- Tensile Strength – BS 2576
- Thermal Conductivity – ASTM C177
- Railway fire performance references – DIN EN 45545-2:2020

Failure Modes and Risk Control

Common hydraulic hose failure modes include thermal degradation, abrasion damage, molten splash exposure, oil-induced material aging, and mechanical stress concentration. The

Hydraulic Hose Protection Fire Sleeve mitigates these risks by reducing heat flux, shielding against mechanical wear, resisting oil exposure, and maintaining hose integrity in high-risk environments.

Manufacturing & Quality Assurance

Manufactured by Anhui Parker New Material Co., Ltd under ISO 9001 and IATF 16949 quality management systems, supporting consistent production, traceability, and OEM supply requirements.

For detailed specifications, sizing guidance, and application support, visit the product page:
[Hydraulic Hose Protection Fire Sleeve](#)