

## Flow Control – Solid Lubricants for the Iron, Steel and Refractory Industry



**MOVING YOUR WORLD**

## FUCHS LUBRICANTS GERMANY

We don't just develop lubricants. For highly complex challenges in a wide range of industries, we develop innovative lubricant solutions that enable the mobility of tomorrow. Our goal: to keep our customers' world in motion. Efficient, sustainable, reliable. Today and tomorrow.

What can we move for you?





## FUCHS LUBRICANTS GERMANY

### Facts and figures

**Company:** FUCHS LUBRICANTS GERMANY GmbH,  
a company of the FUCHS Group

**Locations:** Mannheim, Dohna, Kaiserslautern, Kiel and Wedel;  
approx. 1,400 employees

**Product range:** A full range of more than 3,000 products  
for all application areas

**Certifications i. a.:** ISO 9001, IATF 16949, ISO 14001,  
ISO 45001, ISO 50001, ISO 21469, HALAL, KOSHER  
(detailed certifications at [www.fuchs.com/de/en](http://www.fuchs.com/de/en))

**Gate-to-Gate\* CO<sub>2</sub>-compensated**

FUCHS LUBRICANTS GERMANY is a subsidiary of FUCHS SE, the world's largest independent supplier of lubricant solutions. Around 1,400 specialists at the headquarters in Mannheim and the sites in Kaiserslautern, Wedel, Kiel and Dohna work with dedication on innovative lubricant solutions that enable the mobility of tomorrow.

The high level of technical consulting expertise combined with the largest, nationwide network of its own technical contacts makes FUCHS LUBRICANTS GERMANY a reliable local partner. A comprehensive product range, supplemented by digital offerings and Smart Services, as well as many years of lubricant expertise and a high level of research competence are the foundations for the innovative FUCHS lubricant solutions. They reduce wear and energy requirements, extend the running times and service life of machines, and thus keep the world moving - from industrial motors and e-cars to wind turbines and washing machines. FUCHS LUBRICANTS GERMANY is certified to a wide range of standards and, as a technology leader and development partner, places the highest demands on quality management.

Customers in all industries benefit from this quality management: automotive suppliers and OEM, mechanical engineering, metal processing, mining and exploration, aerospace, energy, construction and transport, agriculture and forestry, as well as the paper, steel, metal, cement, forging and food industries, but also qualified lubricant dealers, car dealerships, workshops, and semiconductors as well as medical technology.

## MOVING YOUR WORLD

\*Gate-to-Gate Scope includes GHG-Protocol Scope 1, 2 and selected Scope 3 emissions (water, waste, business travel, commuting)

## SPECIALITY LUBRICANTS FOR THE IRON, STEEL AND REFRACTORY INDUSTRY

The high temperatures and pressures as well as the extreme environmental conditions in steelmaking necessitate the use of special lubricants, which are used on high-temperature and pressure-stressed joints and bearings, fastening and motion threads, roller bearings (as minimum quantity lubrication), sliding mechanisms, on the surfaces of ceramic sliding plates, as release assistance for the secondary ceramic components in slide gate systems, gas purge systems and in many other places in the production process.

We offer an extensive product range that comprehensively meets the demands placed and helps steelworks and refractory manufacturers to substantially improve the durability and performance of their products and plants, to decrease downtimes and maintenance work and thus to increase the profitability of their plants. You can rely on our expert knowledge in the fields of development, consulting and support.





## Index

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08

Product and application range of the GLEITMO SRC 900 and 700 series

09

Surface coating of ceramic sliding plates

10

Surface coating of secondary ceramic components

11

Hot-spraying on ceramic surfaces

12

Coating of continuous casting moulds

13

Release of fireproof ceramic products, casting templates and moulds





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## 14

Overview of products and applications

### ***MOLYPAUL → GLEITMO***

FUCHS is continuously working on improving the customer experience. In order to create orientation and clear product structures with a clear brand concept, we are optimizing our FUCHS brand portfolio.

Against this background, our MOLYPAUL range, solid lubricants for the iron, steel and refractory industry, is being harmonized with our brand GLEITMO. The formulations of our proven products will remain identical.

## Product and application range of the GLEITMO SRC 900 and 700 series

(previously MOLYPAUL 900 and 700 series)

The GLEITMO SRC 900 and 700 product series contain lubricant variants based on synthetic and natural graphites, which are used as coating and parting lubri-

cants in the production plants of refractory manufacturers and in the “flow control” area of the iron and steel industry.

### Main fields of application

- Surface coating of ceramic sliding plates
- Cold surface coating of sealing surfaces of secondary ceramics
- Separation of ceramic wearing parts after use
- Hot-spraying on ceramic surfaces in steelworks
- Coating of casting moulds for the production of prefabricated ceramic components
- Mould release (casting templates), e.g. fireproof ceramic dry-setting mixes
- Coating of continuous casting moulds for start-up assistance and wear protection (continuous casting plants for billets and blooms, slabs and thin slabs)



Spray-coated sliding-plate surface



Surface spray coating of slab mould



Manual surface coating of ceramic sliding plates



## Surface coating of ceramic sliding plates

Coating with high-performance lubricants improves the durability of the ceramic sliding plates, increases their safety in use in the steelworks and thus contributes to a reduction in maintenance costs and possible downtime

costs. Thanks to their high resistance to oxidation and a low coefficient of friction, the products from the GLEITMO SRC 900 series make a substantial contribution to this.

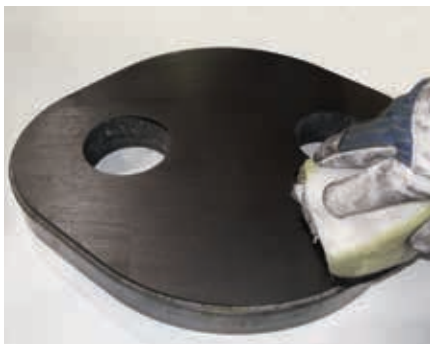


Cold coating of sealing surface of ceramic sliding ladle nozzle

### Surface coating of ceramic linear sliding plate

**GLEITMO SRC 900-50, GLEITMO SRC 900, GLEITMO SRC 919, GLEITMO SRC 942**

- Water-based, paste-like products
- Dense, oxidation-resistant wearing layer is created
- Application with a sponge, brush, spatula or fibre roller



(Manual) ceramic rotary plate coating

### Ceramic plate coating

**GLEITMO SRC 912**

- Paste-like product
- Low-friction, oil-based emulsion for use on rotary sliding valve ceramic plates
- System-related tolerance differences and surface unevenness are compensated
- Lubricant is applied directly after installation into the slide valve mechanism
- Application with a sponge, brush or fibre cloth



Surface coating (spraying) of linear sliding plate

### Surface coating of linear sliding plate

**GLEITMO SRC 930**

- Water-based, sprayable products
- High-performance, abrasion-resistant lubricating film is created
- Surface is low-friction and resistant to oxidation
- Application with a manual spray gun or an automatic or semi-automatic spraying device

## Surface coating of secondary ceramic components

The paste-like GLEITMO SRC products fulfil this task, dry out at room temperature after application and close the open pores in the ceramic surface.

The wettability is lowered and prevents the penetration of the grout into the pore structure of the component. The wearing parts and any remaining grout residues are easy to remove.



Cold coating of sealing surface of ceramic sliding ladle nozzle

### Cold coating of the sealing surface

#### GLEITMO SRC 900

- Product is applied to the sealing surface of the ceramic sliding ladle nozzle
- The high release effect enables the easy and quick exchange of the head plate, which is bonded by a grouted joint
- Adhering grout residues can be removed easily and gently; the sleeve durability is positively affected



Cold coating of the wellblock mounting cone

### Cold coating of the well block mounting cone

#### GLEITMO SRC 900

- Wettability of the ceramic surface is reduced
- After use the components (sliding nozzles, porous plug) can be removed quickly and cleanly
- Adhering mortar release can be removed easily; the nozzle brick durability is positively affected



## Hot-spraying on ceramic surfaces

After spraying, the product developed especially for this application, GLEITMO SRC 994, creates a dense, closed, dry lubrication film with a graphite structure tailored to the application. This decisively reduces the wettability of the ceramic component with respect to the grout/putty used. The efficient exchange of wearing parts is thus ensured.

Particular importance is attached to fine atomisation when spraying. The liquid content of the lubricant serves as a carrier material, which ensures the optimum distribution of the parting substances on the hot ceramic surfaces by spraying. The "Easy Spray Gun" manual spray gun is ideal for the application. No smoke or odours are generated during the application.



Hot-spraying, sealing surface ladle nozzle / sliding bottom plate



Hot-spraying, sealing surface sliding plate / exchangeable nozzle



Hot-spraying, sealing surface exchangeable nozzle / ladle-shroud

### GLEITMO SRC 994

- Water-based solid lubricant, especially for spray application to hot surfaces
- Release function of the ceramic components, which are connected via mortar joints
- Application with a low-maintenance, pneumatically operated manual spray gun (Easy Spray Gun)
- Closed, low-friction lubricating film with high release effect is created

### Spraying areas:

- Plate surfaces
- Ladle nozzle / exchangeable nozzle sealing surface
- Ladle nozzle brick holding cone /sliding sleeve and porous plug
- Tundish bottom nozzle / submerged entry nozzle

## Coating of continuous casting moulds

The GLEITMO SRC products are easy to apply without drips. A self-contained lubricating film with excellent sliding properties is formed. The lubricant application

enables the time-delayed use of the standard oil lubrication during the initial casting phase. The danger of deflagrations is minimised.

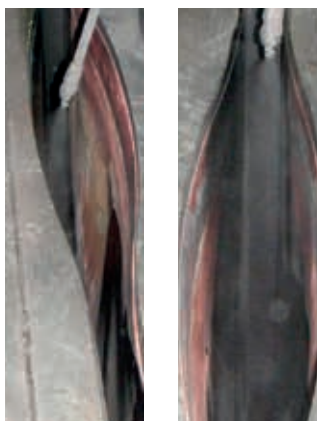


Continuous casting mould for billets:  
coating with fibre roller

### Continuous casting plant for billets and blooms

#### GLEITMO SRC 783

- Paste-like, non-dripping lubricant on a graphite basis
- Easy to apply
- A compact lubricating film with a low coefficient of friction is created under the influence of temperature
- Shell formations on the mould walls are effectively prevented
- Replaces the standard oil lubrication during initial casting, the danger of deflagrations is minimised
- Applied using fibre cushions or a fleece roller



Coating with a spray device

### Continuous casting plants for slabs and thin slabs

#### GLEITMO SRC 750

- Sprayable, ready to use and aqueous suspension
- Forms a resistant dry lubricating film on ambient-temperature with a high release effect
- Low coefficient of friction and high abrasion resistance ensure a smooth start-up of the dummy bar and protect the metal moulds against scoring and wear during insertion
- Service life of the mould is prolonged
- Applied using spraying apparatus, a fibre roller or a fibre pad



## Release of fireproof ceramic products, casting templates and moulds

The GLEITMO SRC products can be applied without drips and enable clean demoulding. The moulded article remains free of unwanted discolourations and the mould is ready for the next use without the necessity for extensive clean-

ing. Multiple use of the casting mould is possible, since a new coating often doesn't have to be applied before each use.



Casting mould for the production of cast ceramic components

### Release of fireproof ceramic casting products

#### GLEITMO SRC 959

- Cream-coloured liquid emulsion
- Non-hardening, non-dripping release layer forms
- No discolourations are formed on the ceramic moulded articles
- Usable on all mould materials
- Application with artist's brush, fibre roller or spray gun



Spray-coating of a mould

### Release of casting templates

#### CEPLATTYN TL

- Sprayable, silver-coloured suspension of an oil emulsion with metallic solid lubricants with a high release effect
- Coating, for example of tundish templates, which are used in connection with ceramic dry setting mixes
- Applied using spraying apparatus with a high spraying performance

## Overview of products and applications

Product name	Description	Features	Application by means of
<b>GLEITMO SRC 900-50</b>	Paste-like, water-based lubricant on a graphite basis for the surface coating of ceramic sliding plates	<ul style="list-style-type: none"> <li>Ready-to-use</li> <li>Oxidation-resistant</li> </ul>	<ul style="list-style-type: none"> <li>Fibre roller</li> <li>Sponge</li> <li>Fibre cloth</li> <li>Brush</li> </ul>
<b>GLEITMO SRC 900</b>	Paste-like, water-based lubricant on a graphite basis for the surface coating of ceramic sliding plates, release of ceramic components; application to cold surfaces	<ul style="list-style-type: none"> <li>Ready-to-use</li> <li>Low-friction</li> <li>Oxidation-resistant</li> </ul>	<ul style="list-style-type: none"> <li>Fibre roller</li> <li>Sponge</li> <li>Fibre cloth</li> <li>Brush</li> </ul>
<b>GLEITMO SRC 912</b>	High-viscosity, oil-based lubricant on graphite basis, for the surface coating of ceramic rotary sliding plates	<ul style="list-style-type: none"> <li>Ready-to-use</li> <li>Low-friction</li> <li>Oxidation-resistant</li> <li>Compensation of unevenness</li> </ul>	<ul style="list-style-type: none"> <li>Fibre roller</li> <li>Sponge</li> <li>Fibre cloth</li> <li>Brush</li> </ul>
<b>GLEITMO SRC 919</b>	Paste-like, water-based lubricant on a graphite basis for the surface coating of ceramic sliding plates	<ul style="list-style-type: none"> <li>Ready-to-use</li> <li>Low-friction</li> <li>Oxidation-resistant</li> <li>Abrasion-resistant</li> </ul>	<ul style="list-style-type: none"> <li>Fibre roller</li> <li>Sponge</li> <li>Fibre cloth</li> <li>Brush</li> </ul>
<b>GLEITMO SRC 930</b>	Aqueous dispersion, based on a special combination of solid lubricants and a tuned additive package for the surface coating of ceramic sliding plates and as a mould release agent in foundries	<ul style="list-style-type: none"> <li>Sprayable</li> <li>Low-friction</li> <li>High surface adhesion</li> <li>Oxidation-resistant</li> <li>Abrasion-resistant</li> </ul>	<ul style="list-style-type: none"> <li>Fibre roller</li> <li>Sponge</li> <li>Spraying device</li> </ul>
<b>GLEITMO SRC 942</b>	High-viscosity, water-based compensating lubricant paste on a graphite basis for the surface priming of ceramic sliding plates and as a basic lubricant in connection with a multiple coating	<ul style="list-style-type: none"> <li>Low shrinkage effect</li> <li>Closes open surface pores</li> <li>High adhesion</li> </ul>	<ul style="list-style-type: none"> <li>Spatula</li> </ul>
<b>GLEITMO SRC 994</b>	Aqueous dispersion on a graphite basis for the separation of ceramic products; hot-spray application	<ul style="list-style-type: none"> <li>Sprayable</li> <li>High releasing effect</li> <li>Low-friction</li> <li>Closed graphite veil</li> </ul>	<ul style="list-style-type: none"> <li>Manual spray gun</li> </ul>
<b>GLEITMO SRC 783</b>	Soft, paste-like lubricant on a graphite basis, suitable for the coating of all mould types and materials	<ul style="list-style-type: none"> <li>Ready-to-use</li> <li>High releasing effect</li> <li>Low consumption</li> <li>Abrasion-resistant</li> <li>Inhibits infiltration</li> <li>Low-friction</li> </ul>	<ul style="list-style-type: none"> <li>Fibre roller</li> </ul>
<b>GLEITMO SRC 749</b>	Stable dispersion of high-purity graphite in an alcohol-based solvent	<ul style="list-style-type: none"> <li>Fast drying</li> <li>High releasing effect</li> <li>Good adhesion on metals</li> </ul>	<ul style="list-style-type: none"> <li>Brush</li> <li>Fibre roller</li> </ul>
<b>GLEITMO SRC 750</b>	Aqueous dispersion on a graphite basis for the coating of continuous casting moulds (slab, thin slab)	<ul style="list-style-type: none"> <li>Sprayable</li> <li>High releasing effect</li> <li>Abrasion-resistant</li> <li>Adhesion to metallic surfaces</li> <li>Low-friction</li> </ul>	<ul style="list-style-type: none"> <li>Fibre roller</li> <li>Spraying device</li> <li>Fibre pad</li> </ul>
<b>GLEITMO SRC 959</b>	Graphite-free, non-hardening, cream-coloured liquid emulsion for the separation of casting moulds for the manufacture of prefabricated ceramic components	<ul style="list-style-type: none"> <li>High releasing effect</li> <li>Non-dripping</li> <li>No colouring</li> <li>Biodegradable</li> <li>Suitable for all types of mould</li> </ul>	<ul style="list-style-type: none"> <li>Sponge</li> <li>Brush</li> <li>Manual spray gun</li> </ul>
<b>CEPLATTYN TL</b>	Graphitic silvery suspension of an oil emulsion with metallic solid lubricants for the separation e.g. of tundish templates (dry setting mixes)	<ul style="list-style-type: none"> <li>Sprayable</li> <li>High releasing effect</li> </ul>	<ul style="list-style-type: none"> <li>Spraying device</li> </ul>
<b>EASY SPRAY GUN</b>	Compressed air operated, hand held gun made of hard plastic with metallic extension tube for spraying aqueous GLEITMO products	<ul style="list-style-type: none"> <li>Sturdy construction</li> <li>Spraying amount adjustable</li> </ul>	<ul style="list-style-type: none"> <li>Compressed air</li> </ul>



## This image shows a blank sheet of white paper designed for writing. It features ten horizontal blue lines spaced evenly down the page. On the left side, there are four vertical red lines that serve as margins, creating three distinct columns of varying widths. The topmost column is the widest, followed by a narrower middle column, and then two more narrow columns at the far left edge. The entire page is otherwise empty, with no text or markings.

The information contained in this brochure is based on the experience and know-how of FUCHS LUBRICANTS GERMANY GmbH in the development and manufacture of lubricants and represents the current state-of-the-art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pre-treatment, possible external contamination, etc. For this reason, universally-valid statements about the function of our products are not possible.

The information given in this brochure represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application. We therefore recommend that you consult a FUCHS LUBRICANTS GERMANY GmbH application engineer to discuss application conditions and the performance criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care. Our products undergo continuous improvement. We therefore retain the right to change our product program, the products and their manufacturing processes as well as all details of our product information sheets at any time and without prior notification, unless otherwise provided for customer-specific agreements. With the publication of this brochure, all previous editions cease to be valid. Any form of reproduction requires express prior written permission from FUCHS LUBRICANTS GERMANY GmbH.

**FUCHS LUBRICANTS GERMANY**

## **Innovative lubricants need Experienced application engineers**

Every lubricant change should be preceded by expert consultation on the application in question. Only then can the best lubricant system be selected. Experienced FUCHS engineers will be happy to advise on products for the application in question and also on our full range of lubricants.

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