



**MetalFlow®**

# Die casting release agents

# Our technology, your solution

Metalflow's pressure Die Casting release agents are the result of decades of experience in the field of design and development of release agents for the metal industry.

Technological lubricants and auxiliary products developed with the latest advances to improve the processes, help our clients with their waste management and allow them to comply with the most demanding environmental regulations.

**40 years of accumulated experience** in the field of design and development of release agents for the metal industry.

In METALFLOW we have developed our own technologies and incorporated them to our release agents to increase their efficiency and help our clients overcome the most demanding challenges in the die casting industry.

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## **READY TO USE TECHNOLOGY**

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Designed to reduce consumption and increase the productivity of complex parts casting and when using new alloys of Aluminum and Magnesium.

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## **NEOSIL TECHNOLOGY**

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Formulated to avoid residues in die, chillvents and filters, and to perform under heavy conditions, becoming a natural wax substitute.

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## **FREE PASS TECHNOLOGY**

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Developed to prevent nozzles and filters from clogging.

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## **BIOSHIELD TECHNOLOGY**

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Designed to ensure a long-term stability of the release agent, especially in recirculating systems.



**We evolve our formulas  
to offer the best  
solutions to our clients'  
challenges**

# Water based release agents

CASTFLOW products are dilutable water-based release agents. Its different ranges have been developed to achieve an excellent film formation in a wide temperature range, to reduce the loss of product due to over-use and to protect the die from metallization and oxidation, offering the highest cleanliness, perfect finishes and reducing cycle times.

## Highlights:

- Excellent lubrication properties to achieve an easy extraction of the part.
- High efficiency in a wide temperature range.
- Facilitate the flow of the molten metal to ensure an optimal filling
- Exclusive additives to optimize the cooling of the die.
- Compatible with recirculation and recycling system.
- Avoid pipes and nozzles from clogging.
- Extend the die life, avoiding metallization and oxidation



## WATER BASED

### CASTFLOW 1000

Description High complexity parts that require coating or painting after the casting.

Metal Al / Zk

Working Temp. °C 150 - 250

Paintability ● ● ●

Ratio dilución 1:50 - 1:100

### CASTFLOW 2000

Description High compatibility with painting and coating after the casting (heaters, etc...).

Metal Al / Zk

Working Temp. °C 150 - 280

Paintability ● ●

Ratio dilución 1:50 - 1:150

### CASTFLOW 5000

Description Medium size parts for automotive and aluminum and magnesium parts for IT.

Metal Al / Mg

Working Temp. °C 150 - 300

Paintability ●

Ratio dilución 1:50 - 1:150

### CASTFLOW 6000

Description Wide application range: automotive, electrical appliances, buildings, etc...

Metal Al

Working Temp. °C 150 - 320

Paintability ●

Ratio dilución 1:50 - 1:200

### CASTFLOW 8000

Description Heavy duty parts (big size automotive).

Metal Al

Working Temp. °C 200 - 350

Paintability ●

Ratio dilución 1:50 - 1:200

### CASTFLOW 9000

Description Highly demanding parts (structural & high complexity parts).

Metal Al / Mg

Working Temp. °C 200 - 350

Paintability ●

Ratio dilución 1:50 - 1:200

FREE PASS TECHNOLOGY

NEOSIL TECHNOLOGY

BIOSHIELD TECHNOLOGY



**MetalFlow®**

# Ready to Use release agents

Our Ready to Use Release Agents allow a direct use application increasing productivity and avoiding the dilution process. All solutions have been developed for a direct use microspray application, which reduces cycle times, avoids waste generation and help to meet clients' sustainability goals.

## Highlights:

- Less product consumption.
- No porosity defects.
- Eco-friendly: no water consumption or fumes generation.
- Minimization of die thermal shock.
- High efficiency at high temperatures.
- Drastic reduction of cycle times.



### WATER BASED Superconcentrate

#### CASTFLOW CONC 1000

Parts that require coating or painting after the casting.

Metal

Al / Zk

Working Temp. °C

100 - 300

Paintability

● ● ●

#### CASTFLOW CONC 8000

Heavy duty parts (big size automotive, etc...).

Al

200 - 350

●

#### CASTFLOW CONC 9000

Highly demanding parts (structural & high complexity parts).

Al / Mg

200 - 350

●

FREE PASS  
TECHNOLOGY

NEOSIL  
TECHNOLOGY

READY TO USE  
TECHNOLOGY



### OIL BASED

#### DESMOLDFLOW 200

Any type of part and size.

Al / Mg / Zk

150 - 400

● ●

#### DESMOLDFLOW 700

Microspray application.

Al / Mg / Zk

150 - 400

●

NEOSIL  
TECHNOLOGY

READY TO USE  
TECHNOLOGY



### POWDER BASED

#### POWDERFLOW 1000

Zamak parts.

Zk

100 - 300

● ● ●

#### POWDERFLOW 5000

Medium size parts.

Al / Mg

150 - 350

● ●

#### POWDERFLOW 8000

Heavy duty parts.

Al / Mg

150 - 400

●

READY TO USE  
TECHNOLOGY

# Plunger Lubricants

In Metalflow we have developed two lines of plunger lubricants that ensure a high performance, deliver an optimum lubrication between the plunger and the injection chamber, facilitating the metal flow neither leaving residues nor inclusions in the part.


## PISTONFLOW

Oil or water based products, with or without graphite or solid lubrication (boron nitride)

|              | Base          | Flashpoint |
|--------------|---------------|------------|
| LIQUIDS      |               |            |
| PISTONFLOW M | Mineral Oil   | > 260°C    |
| PISTONFLOW S | Synthetic Oil | > 260°C    |
| PISTONFLOW W | Water         | n / a      |

## PISTONWAX

Solid products (spherical beads) based on high molecular weight polymers, with or without graphite or solid lubrication

|              | Base                  | Flashpoint |  Diameter |
|--------------|-----------------------|------------|--|
| SOLIDS       |                       |            |  |
| PISTONWAX NX | Graphited polymer     | > 300°C    | 1 – 1,5 mm   |
| PISTONWAX BX | Non-graphited polymer | > 300°C    | 1 - 2 mm   |

# Technical Auxiliary Products

Formulations designed for the protection and treatment of the surfaces related to the die casting process. All the products have been formulated to extend the lifetime of the surfaces or parts where they are applied, as well as to prevent premature wear, oxidation, corrosion and to facilitate its maintenance, cleaning, manipulation and replacement.

- (P) CRISOLFLOW**  
Ladle and channel protector developed to avoid metallization, extend the tool's life-time and to improve the flow of the molten metal.
  - (P) ALUFLOW**  
Aluminized paste for start-up and hot spots lubrication.
  - (P) ALUFLOW IK**  
Graphited paste for start-up and hot spots lubrication.
  - (L) DESMOLDFLOW 100**  
Oil for start-up use and hot spots lubrication.
  - (L) METALFORM V 106**  
Release agent for trimming operations.
  - (L) QUENCHFLOW**  
Drying improvement of the casted part. Provides corrosion protection and lubrication during the trimming process.
  - (P) METALPROT COPPER**  
Copper grease for an optimum protection and lubrication of threads and screws. Developed to achieve an easy unscrewing.
  - (P) METALPROT 9016**  
Aluminized grease for an optimum protection and lubrication of threads and screws. Developed to achieve an easy unscrewing.
  - (P) METALPROT 9020**  
High temperature grease with refractory pigments for an optimum protection and lubrication of the back side of the die to ensure an easy disassembling when being necessary.
  - (L) METALCLEAN 6130**  
Daily cleaner to remove excessive greases from the die surface.
  - (L) METALPROT 9045**  
Protection of the dies from corrosion while they are stored.
  - (L) METALCLEAN 6000**  
Cleaning and disinfection of tanks and circuits.
- P = Paste    L = Liquid**

## Industrial Auxiliary Products

|                       | Description  | Base          | Viscosity<br>ISO VG | Viscosity<br>Index |
|-----------------------|--|---------------|---------------------|--------------------|
| <b>HYDROFLOW HFC</b>  | Flame retardant hydraulic fluid with anti-wear properties for any application.   | Water-glycol  | 32 - 68             | > 200              |
| <b>HYDROFLOW HFDU</b> | Self-extinguishing hydraulic oil with anti-wear properties for any application.  | Synthetic Oil | 32 - 68             | > 180              |
| <b>HYDROFLOW HM</b>   | Highly refined hydraulic oil for general applications (machine tools, valves, robotics, etc.).                         | Mineral Oil   | 22 - 100            | > 95               |
| <b>SLIDEFLOW</b>      | Sliding and slipping slideways oil. Antirust capacity and low coefficient of friction.                                 | Mineral Oil   | 32 - 220            | > 95               |
| <b>THERMICFLOW</b>    | Heat transfer oil for any requirement and industry (chemical, metallurgical, textile, paper, wood, Building, etc ...). | Mineral Oil   | 30 - 60             | > 95               |
|                       |  | Synthetic Oil | 20                  | 70                 |

SPAIN - Barcelona  
MEXICO - Querétaro  
BRAZIL - São Paulo  
INDIA - Pune  
CHINA - Hefei



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## METALWORKING FLUIDS

- Coolants
- Cutting Oils
- Forming Lubricants

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## DIE CASTING LUBRICANTS

- Die Casting Release Agents
- Gravity and Low Pressure Release Agents
- Plunger Lubricants
- Industrial & Technical Auxiliary Lubricants

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## FORGING LUBRICANTS

- Graphite Based Release Agents
- Graphite Free Release Agents

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## INDUSTRIAL LUBRICANTS

- Hydraulic Fluids
- Gear Oils
- Slideway & Chain Oils
- Thermic Oils
- Boundry lubrication additives

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## SURFACE TREATMENTS

- Cleaners
- Surface Protectors

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## EQUIPMENT

- Dosing & Application Equipment
  - Monitoring Equipment
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