MetalFlow®

Die casting release agents

metal-flow.com

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.

READY TO USE TECHNOLOGY

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

NEOSIL TECHNOLOGY

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

FREE PASS TECHNOLOGY

Developed to prevent nozzles and filters from clogging.

BIOSHIELD TECHNOLOGY

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	Description	Metal	Working Temp. ºC	Paintability	Ratio dilución
CASTFLOW 1000	High complexity parts that require coating or painting after the casting.	Al / Zk	150 - 250	● ● ●	1:50 - 1:100
CASTFLOW 2000	High compatibility with painting and coating after the casting (heaters, etc…).	Al / Zk	150 - 280	● ●	1:50 - 1:150
CASTFLOW 5000	Medium size parts for automotive and aluminum and magnesium parts for IT.	Al / Mg	150 - 300	●	1:50 - 1:150
CASTFLOW 6000	Wide application range: automotive, electrical appliances, buildings, etc…	Al	150 - 320	●	1:50 - 1:200
CASTFLOW 8000	Heavy duty parts (big size automotive).	Al	200 - 350	●	1:50 - 1:200
CASTFLOW 9000	Highly demanding parts (structural & high complexity parts).	Al / Mg	200 - 350	●	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.
- Eco-friendly: no water consumption or fumes generation.
- High efficiency at high temperatures.
- No porosity defects.
- Minimization of die thermal shock.
- Drastic reduction of cycle times.

WATER BASED
Superconcentrate

	Description	Metal	Working Temp. ºC	Paintability
CASTFLOW CONC 1000	Parts that require coating or painting after the casting.	Al / Zk	100 - 300	● ● ●
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)

LIQUIDS	Base	Flashpoint
PISTONFLOW M	Mineral Oil	> 260ºC
PISTONFLOW S	Synthetic Oil	> 260ºC
PISTONFLOW W	Water	n / a

PISTONWAX

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

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

MetalFlow®

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 = Paste L= Liquid

(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.

Industrial Auxiliary Products

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

METALWORKING FLUIDS

- Coolants
- Cutting Oils
- Forming Lubricants

DIE CASTING LUBRICANTS

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

FORGING LUBRICANTS

- Graphite Based Release Agents
- Graphite Free Release Agents

INDUSTRIAL LUBRICANTS

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

SURFACE TREATMENTS

- Cleaners
- Surface Protectors

EQUIPMENT

- Dosing & Application Equipment
- Monitoring Equipment

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

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