polartech®

Afton CHEMICAL

Metalworking Fluid Solutions

polartech®

Afton

Your partner for metalworking fluid solutions

Afton is one of the world's major suppliers to the international metalworking fluid markets. And, our Polartech® brand is the only global brand in the market, covering additives and packages, through to fully customized solutions.

But what makes us so different is the **unique way** we do business and our **Passion for Solutions™**, as symbolized by the triangle below. Our triangle emphasizes that it is the inspiring and enthusiastic **people** which – when combined with our expert and **innovative** chemistry – delivers effective **solutions** for our customers, helping them achieve their business goals.

3 key benefits for choosing Polartech®

Choice, Knowledge and Service underpin the partnerships we form with our customers. Because we believe that sharing knowledge is the only way to deliver the solution that will help our customers meet their business goals.

Throughout Afton, our culture is undoubtedly our best product… and our people our most treasured asset. Nowhere is this more evident than in the complete service package we offer our customers.

2

Knowle

1

Choice

We provide our customers with the **choice** to formulate a complete range of products, from additives and packages, through to fully customized solutions.

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The more **knowledge** we have about the needs of our customers and the requirements of the market, the better we can tailor solutions to meet their needs.

3

Service

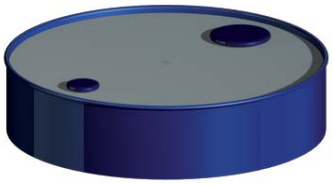
Service is a fundamental part of the Afton offering. From advice on product formulation, through to laboratory services for products in use – nothing is too much trouble.

Additives for metalworking fluids

Polartech® additives are designed to provide the metalworking fluid formulator with optimized performance in classical, modern and next generation metalworking fluids.

For those companies that wish to develop their own metalworking fluids using our Polartech® additives, we are happy to share our formulatory and applicational knowledge.

Natural petroleum sulphonate



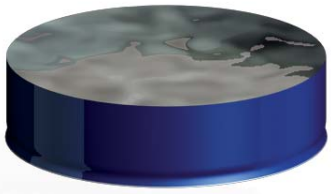
Corrosion Inhibitors

Corrosion Inhibitors are the backbone of modern water-based metalworking fluid technology. Water accelerates the corrosion processes in metals, but with the right combination of Polartech® additives this effect can be minimized.

BA™ Series - Borate Esters with a choice of boron and amine contents.

DA™ Series - Exceptional ferrous corrosion protection, based on combinations of amines and mono, di and poly-carboxylic acids.

Multitect™ Series - Speciality corrosion inhibitors specifically developed for use on non-ferrous applications.



Emulsifiers

Emulsifier choice can be a challenge due to the variety and complexity of options. As a specialist in emulsification technology, we offer a range of Polartech® additives designed for the metalworking fluid market.

MA™ Series - Based upon an optimized combination of fatty acids and amines these products offer corrosion inhibition, emulsification and lubricity enhancement all within a single product.

EA™ Series - Non-ionic emulsifiers that improve your emulsion stability in hard water conditions.

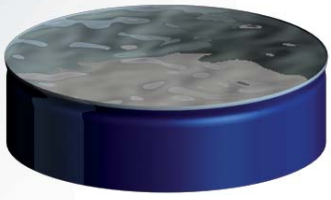
Fusion™ Series - Natural petroleum sulphonates with balanced emulsifier and anti-corrosion properties.

Lubricity Additives

LA™ Series - An extremely effective range of products for improving the lubrication and boundary layer properties of both neat oil and water-based formulations. Esters from natural sources, modified synthetic or polymeric provide a renewable, environmentally sound option for high performance chlorine free products.

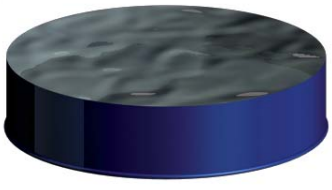
Extreme Pressure Additives

XP™ Series - A range of Extreme Pressure (EP) additives that are predominantly chlorine free and suitable for use in a wide variety of neat oils and watermix metalworking fluids. Light in colour and low odour, combined with excellent EP characteristics, allows the formulation of sophisticated high performance fluids.



Antifoams

Antimus™ Series - Antifoam agents that include a wide variety of polysiloxane wax and ester based derivatives that have been developed to control foaming even in the most demanding conditions. The additives can be selected for use in either the concentrate or as a tankside addition.



Coupling Agents

GA™ Series - Specially designed coupling agents which give the formulator improved control in achieving concentrate and emulsion stability. Push the temperature barrier with these low odour, operator friendly products.

Packages for metalworking fluids

Polartech® packages offer the ideal 'half way' option between in-house formulations and bought in finished products. Typically where there are economies to be gained either in transportation or blending capacity utilization, packages are the preferred option for many of Afton's global customers.

6000 Series

Boron-free, conventionally emulsified soluble oil packages for the manufacture of metalworking fluids. They are designed to be customer base oil specific, and offer either secondary amine, or amine free technology and include variants with and without biocide.

Superbase™ Series

Based around our own boron technology, this series offer an innovative range of concentrates for use in the manufacture of ranges of long service life fluids. Both Extreme Pressure (EP) and non-EP variants are available; they are primarily formulated for dilution with different ratios of base oil and water to give cost-effective, high performance, inherently stable fluids.

PGC and GFC™ Series

These are used to formulate fully synthetic, inherently stable, nitrite-free grinding and cutting fluids.

VertoPak™ Series

A parallel range to our Superbase™ products but without boron based additives as part of the formulation, where either for manufacturing reasons or through environmental limitations this element is considered undesirable.

VGC™ Series

The sister series to Vertopak™, producing a range of synthetic, high quality, boron-free grinding fluids. Designed to be compatible with Polartech® synthetic lubricity additives allowing easy blending of high quality cutting fluids.

One package + a few sele
= an effective range of ful

Polartech®
Package

Standard
Blend

High Lubricity
Blend

ct raw materials
ly customized solutions

High Lubricity +
Biocide/Fungicide Blend

Free From Irritancy
Labelling Blend

Product Key

- Polartech® VertoPak™ FLX*
- Water
- 100 SUS naphthenic base oil
- Polartech® LA VPL
- Biocide
- Polartech® Antimus™ 5000

* Polartech® VertoPak™ FLX is replaced by Superbase™ Series BLC, as a compatible equivalent in Asia Pacific.

Reduce your costs by using one of our packages as a platform for an entire range of metalworking fluids

Where the chemistry between people creates the difference

Through a combination of innovative chemistry and the passion and integrity of our people, we are able to offer our customers a very special relationship when partnering with us.

Manchester is the home of the Polartech® product range, housing manufacturing, R&D and the technical services laboratory. This, in addition to plants, technical services and local support in the US, China and India means we are able to provide a complete support service to the applications of the manufacturing industry globally.

With global reach and localized knowledge we help our customers achieve their business objectives with passion, integrity and openness – always in a collaborative way.

Afton® CHEMICAL
Passion for Solutions™

Afton Chemical Corporation Regional Headquarter Offices

ASIA PACIFIC
Afton Chemical Asia Pacific LLC
111 Somerset Road #09-05
Singapore
238164
T | 65 6732 0822
F | 65 6737 4123

EMEAI
Afton Chemical Limited
London Road, Bracknell
Berkshire RG12 2UW
England
T | 44 1344 304 141
F | 44 1344 420 666

LATIN AMERICA
Afton Chemical
Industria de Advitivos LTDA
Avendia Rio de Janeiro 901 (Parte)
CEP-20931-670
Brazil
T | 55 21 3860 9994
F | 55 21 2580 8647 & 2589 0531

NORTH AMERICA
Afton Chemical Corporation
500 Spring Street
Richmond
VA 23219
USA
T | 1 804 788 5800
F | 1 804 788 5184

Afton Chemical Corporation Polartech Global Offices

CHICAGO
Afton Chemical Corporation
7201 W 65th Street
Bedford Park IL 60638
USA
T | 1 (800) 323 3231
F | 1 (708) 458 0286

HYDERABAD
Polartech India Pvt Ltd.
Plot No.197, Phase II, Ida Cherlapally
Hyderabad 500051
India
T | 91 (0)40 447 68999
F | 91 (0)40 447 68925

MANCHESTER
Afton Chemical Limited
Ashburton Road West
Trafford Park
Manchester M17 1SX
England
T | 44 (0) 161 876 5673
F | 44 (0) 161 872 1922

SUZHOU
Afton Chemical (Suzhou) Co. Ltd. BTW
No. 26 Ping Sheng Road, Sheng Pu Town
Phase 4, Suzhou Industrial Park
Suzhou 215021
China
T | 86 512 6281 0276
F | 86 512 6281 0267

www.aftonchemical.com

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