



CAPABILITY STATEMENT

The supply requirements of miners and mineral processors are diverse and extensive. Fortunately, so are the resources of Filchem Australia. Filchem provides an extensive range of products ranging from activated clays and carbons, filter aids, frothers & flotation agents, cartridge filters and water treatment products.

FILCHEM Australia

PRODUCTS FOR THE MINING & MINERAL PROCESSING INDUSTRY

Filchem can assist across a range of processes including water and air treatment, mineral processing, extraction and purification, and filtration.

Our sales team in conjunction with our supply partners will ensure that we provide the right product for your process and application. Our range of products include:

FLOTATION AND FROTHING AGENTS

ACTIVATED CARBON

ACTIVATED CLAY

FILTER AID POWDERS

ION EXCHANGE RESINS

REVERSE OSMOSIS MEMBRANES

CARTRIDGE FILTERS

HEAVY METAL REMOVAL MEDIA

www.filchem.com.au



MINERALS & MINERAL PROCESSING INDUSTRY

FLOTATION AND FROTHING AGENTS

Frothers are an essential reagent in most flotation reagent suites and directly through their action improve grade, recovery or both in a float circuit.

Filchem are a major supplier of frothers to the mining industry and supply a wide range of products from the NASACO range of NASFROTH frothers.

The NASFROTH range is primarily a group of specially formulated frothers, developed through NASACO R+D labs and in partnership with many customers in on-site testing. Frothers range from site specific products to formulations which can be used for specific commonly occurring groupings of minerals and varying size ranges.

Nasfroth Chemistries include:

- Alcohols
- Glycols
- Glycol ethers
- Proprietary formulations

Filchem can also assist in the selection and supply of the following products required for flotation circuits:

- Collectors
- Depressants
- Flocculants

In collaboration with Nasaco, Filchem can offer mineral liberation analysis (MLA). This is used to measure any loss of valuable minerals in the final flotation tail, then optimise the flotation process to increase recoveries.

FILCHEM AUSTRALIA PTY LTD



MINERALS & MINERAL PROCESSING INDUSTRY

ACTIVATED CARBON

FILCHEM are exclusive distributors for Oxbow Activated Carbon LLC in Australia, NZ and the Pacific region.

Oxbow are one of the world's leading activated carbon manufacturers due to their extensive product offering and technical expertise across a range of applications. Filchem partners with Oxbow to deliver excellent customer service, technical support, and competitive pricing to our customers.

In Australia Filchem stock a range of powdered, granular, and pelleted products in coal, coconut shell or wood base.

Specific to the mining industry Oxbow have products for applications such as:

- Gold Processing GAC for CIP/CIL/CIC
- Potable water (NSF Std 61 certified)
- Wastewater and recycled water
- Process water pre-RO, etc
- Air treatment including impregnated products
- Remediation and Environmental management

The Oxpure range is known for superior quality. Oxbow together with Filchem can provide a complete solution for your activated carbon requirements.



FILCHEM AUSTRALIA PTY LTD



MINERALS & MINERAL PROCESSING INDUSTRY

ION EXCHANGE RESIN

FILCHEM partner with global leader Lanxess to offer the Lewatit ion exchange resins. Lanxess lead the way in quality, range, technical support and experience in the liquid purification industry.

Many mining applications can benefit by incorporating ion exchange resin in stages of mining or mineral processing procedures, that had previously not been considered.

In recent years, technology has given ion exchange processes a much wider scope. Products are now available with high selectivity in the presence of acidic or alkaline conditions and other ionic species.

Applications that will benefit from ion exchange processes include:

- Softening, dealkalization and demineralisation of process waters and wastewater
- Concentration, extraction and recovery of metals from hydrometallurgy solutions
- Recovery of PFM-metals from rinse waters (eg. pre-tailings dam)

Filchem and Lanxess are able to offer technical support including system design suggestions and capabilities, projections (through their LewaPlus software), cost analysis, trial protocols and feasibility support.

FILCHEM AUSTRALIA PTY LTD



MINERALS & MINERAL PROCESSING INDUSTRY

ACTIVATED CLAY

With a unique natural occurring composition of hormite and smectite mineral, the OilDri Corporation of America clays have many processing benefits to offer over competitor products in your SX/EW process.

The product recommended to the mining and mineral processing industry is the Pureflo Supreme ProActive 2:

- Acid-enhanced adsorbent processed with OilDri's proprietary Surface
 Modified Technology for the mineral processing industry
- Highly active and fast filtering product, greatly improving phase disengagement properties of reclaimed solvents in metal recovery operations
- Outperforms montmorillonite clays in phase separation and extraction kinetics
- Lighter bulk density providing more particles per kilogram
- Excellent filtration characteristics
- Fast filter blowdown and screen cleanup

Suggested processing applications are Copper, Nickel, Uranium, and Beryllium among others

With a number of customers having completed testing and switching to the ProActive 2 from the product considered the 'standard' in the industry, we have confidence that benefits will be realised in your SX/EW filtration process.

FILCHEM AUSTRALIA PTY LTD



MINERALS & MINERAL PROCESSING INDUSTRY

DIATOMITE & PERLITE FILTER AIDS

Filchem Australia can assist with selection and supply of the optimum grades of diatomaceous earth and perlite filter aids.

As exclusive distributors for respected Celite® and Harborlite® brands Filchem supply filter aids for the mining industry with applications including:

- The Merrill Crowe filtration process
- Purification of process and drinking water
- Clarification of waste water
- Capture of precious metals
- Solvent extraction systems

Celite® and Harborlite® filter aids are sourced from the largest network of diatomaceous earth and expanded perlite plants in the world. All batches are supplied with a certificate of analysis for identification and traceability compliance. This will be compatible with any quality systems run on mine sites.

Celite® and Harborlite® filter aids are suitable for any of the following filter types:

Pressure Filters

- Plate and Frame
- Vertical Leaf
- Horizontal Leaf
- Candle (Tubular)

Vacuum

Rotary Vacuum Precoat

Filchem are also able to supply filters from bench testing for scale up to full production systems.

FILCHEM AUSTRALIA PTY LTD



MINERALS & MINERAL PROCESSING INDUSTRY

REVERSE OSMOSIS MEMBRANES

Complimenting the Lanxess Lewatit Ion Exchange Resins, Filchem also offer the Lanxess Lewabrane range of Reverse Osmosis membranes.

In a fully automated state-of-the-art facility built in Germany in 2015, the Lewabrane RO membranes are suitable for desalination, brackish and low salinity waters for industrial and potable applications.

The RO membrane chemistry and element construction is designed for optimised, low cost water treatment. With emphasis on exceeding industry standards, a higher crosslinking of the polyamide layer results in higher durability to cleaning chemicals, more stable ion rejection, and lower surface charge to reduce fouling tendency.

Membranes are available in standard 40" length and 4" or 8" diameters to fit existing equipment, and a number of options including Low Energy, High Flow, Fouling Resistant, and High Rejection.

Recently Lanxess have released their ASD (Alternate Strand Design) range for Brackish Water with improved pressure drop and better fouling and cleaning properties (results in lower energy use and running costs) to their 8" diameter products.

The energy saving of the ASD membranes will be shown in their LewaPlus design software, which can incorporate both Ion Exchange resin and Reverse Osmosis membranes in a single system design and projection.

FILCHEM AUSTRALIA PTY LTD



MINERALS & MINERAL PROCESSING INDUSTRY

CARTRIDGE FILTERS

As distributors for the USA manufactured Graver cartridge filters, Filchem can offer a high quality product range from general sediment filters to extremely critical filtration applications. They are available in a range of micron ratings, media, and end-cap options to retrofit any existing housings.

Product range includes:

- Standard spun polypropylene 2.5" diameter sediment cartridges in nominal and absolute.
- Pleated PP, PES (and other media) for higher performance in critical applications.
- High Flow units for up to 2000L/min per cartridge flow rates, able to retrofit most other systems.
- Filter housings custom or standard designs.

FILCHEM AUSTRALIA PTY LTD

Telephone: (02) 9899 4633 Email: sales@filchem.com.au

Website: www.filchem.com.au



MINERALS & MINERAL PROCESSING INDUSTRY

HEAVY METAL REMOVAL MEDIA— Metsorb™

Graver's Metsorb™ is an NSF Std 61 certified, Titanium based adsorbent for the removal of heavy metals from liquids, either from the potable water supply or for the difficult-to-remove heavy metals from the back end of your waste water treatment.

Benefits of Metsorb™:

- Extremely effective at removing both As(III) and As(V) without dumping, and a wide variety of heavy metals including Pb, Sb, Cd, Cu, Cr(+6), Se, Ni, V, Hg, U, and Zn.
- Very fast kinetics requiring small footprint vessel, EBCT 1-3mins generally.
- High holding capacity, high volume treated until breakthrough.
- Least affected media from other interfering ions.
- Low cost /Litre treatment.
- Tolerant of chlorine at typical sanitation levels.
- With full technical support from Graver Technologies in the USA we can advise if Metsorb™ Media is a suitable treatment process for your application.

FILCHEM AUSTRALIA PTY LTD

FILCHEM

Australia

PRODUCTS FOR THE MINING & MINERAL PROCESSING INDUSTRY

Filchem Australia Pty Ltd

HEAD OFFICE

NEW SOUTH WALES

2/7 Salisbury Road
CASTLE HILL NSW 2154

Telephone: (02) 9899 4633

VICTORIA

2/15-17 Pakington Street ST KILDA VIC 3182

Telephone: (03) 9525 4575

QUEENSLAND

3/26 Argyle Street ALBION QLD 4010

Telephone: (07) 3262 5288

WA / SA / TASMANIA Telephone: 1800 33 11 25

All enquiries: sales@filchem.com.au

www.filchem.com.au