## Solvents : Printing Press Blanket Wash - Printing Facility, Lab Results

Filter Technology "Knife-edge" filtration is not only proving to be extremely efficient at filtering oils and fuels. "Knife-edge" filtration can also filter a range of industrial solvents with outstanding results. Our most successful large solvent filtration applications are located at Australia's major newsprint facilities.

At these facilities, press-cleaning teams utilise a cleaning solvent known as "Blanket Wash" to clean the printing presses at the end of each print production run. In the past, broadsheet print facilities have been forced to dispose of their used "Blanket Wash".

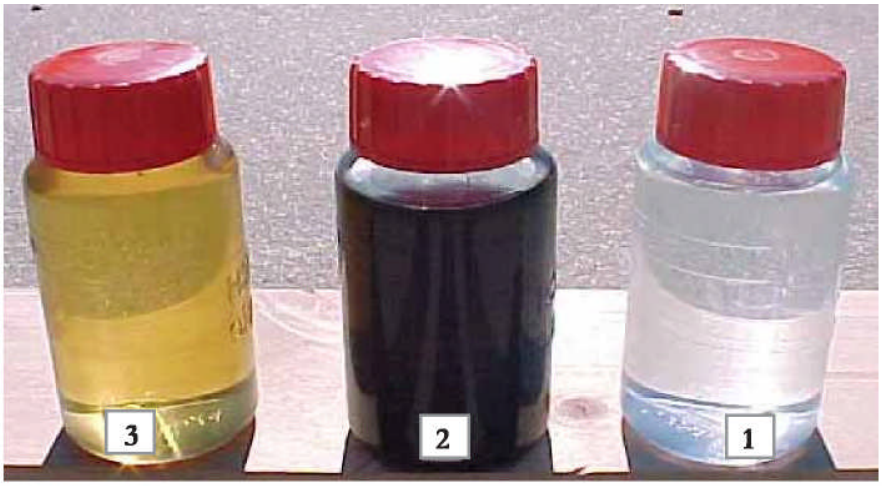
Following our initial approach to a major Australian news print facility, Filter Technology conducted a number of successful tests proving the suitability of our filtration systems to filter and recycle "Blanket Wash" solvents.

By recycling used "Blanket Wash" through Filter Technology "Knife-edge" filters, and simply topping up the recycled solvent with new solvent, it is now possible to recycle used "Blanket Wash" indefinitely without the need to ever dispose of used solvent into the environment.

Now, Filter Technology "Knife-edge" filtration of used "Blanket Wash" has resulted in a significant reduction in the overall environmental impact of Australian printing facilities (through reduced waste solvent disposal) and is achieving both new and used solvent cost reductions in the order of hundreds of thousands of dollars for them each year.

## Fairfax - Age Print Centre - Tullamarine, Victoria

Commissioned Recycler: AIM 62C Ultimate Quickbreak solvent samples.




LUBE TECH

| | |
|---|---|
| *Site* | The Age Print Centre Tullamarine |
| *Unit ID/Name* | **AIM 62C Ultimate / Quickbreak** |
| *Manufacture/Model* | |
| *Origin* | **Solvent** |
| *Fuel/Oil Type* | |

**Diagnosis:**

Sample 41818 is "Virgin Solvent" from Bulk Tank.
Sample 41819 is "Used Solvent" from Wash Room.
Sample 41820 is "Recycled Solvent" from Wash Room Tap.

| | Sample Number | 41820 | 41819 | 41818 | | | | | Indicative Levels |
|---|---|---|---|---|---|---|---|---|---|
| | Date | 31/05/2003 | 30/05/2003 | 29/05/2003 | | | | | |
| | Total Hours/Km | 3 | 2 | 1 | | | | | |
| | Hours/Km on Oil | | | | | | | | |
| | Oil Changed | NO | NO | NO | | | | | |
| | Oil Added | | | | | | | | |
| Condition Tests | Fuel Dilution (%) | | | | | | | | |
| | WT Solids (%) | | | | | | | | |
| | Volume Water (%) | ND | >1% | ND | | | | | ND |
| | Water PPM | | | | | | | | |
| | Viscosity @ 40C (cST) | | | | | | | | |
| | TAN (mg/KOH/g) | | | | | | | | |
| | TBN (mg/KOH/g) | | | | | | | | |
| | ApH | | | | | | | | |
| | PQ90 Index | | | | | | | | |
| Wear Metals | Aluminum (Al) | <1 | 3 | <1 | | | | | |
| | Silicon (Si) | 1 | 6 | 1 | | | | | |
| | Tin (Sn) | <1 | <1 | 1 | | | | | |
| | Iron (Fe) | <1 | 1 | 1 | | | | | |
| | Lead (Pb) | 23 | 19 | <1 | | | | | |
| | Copper (Cu) | 1 | 1 | 4 | | | | | |
| | Chromium (Cr) | <1 | <1 | <1 | | | | | |
| | Sodium (Na) | 1 | 38 | 1 | | | | | |
| | Zinc (Zn) | <1 | <1 | 8 | | | | | |
| | Others | | | | | | | | |
| Cleanliness | ISO4406 | 15/12 | >25/22 | 24/21 | | | | | |
| | Gravi-Metric | | | | | | | | |
| | >2 micron | 786 | | 271900 | | | | | |
| | >5 micron | 290 | | 99179 | | | | | |
| | >15 micron | 31 | | 9654 | | | | | |
| | Contamination | Low | Very High | Very High | | | | | |
| | | OK | WARNING | WARNING | | | | | |

Polyfibron Technologies

**LABORATORY REPORT**

**Customer:** News Limited NSW

**Contact:** Mr Ken Mullins

**Purpose of Test:** To determine whether there are any adverse swell effects caused by a specific was supplied by Aim to our newspaper blankets.

**Product Test**:

Blankets
- Polycell 1.96mm
- Graffity 1.96mm

Blanket wash
- Aim 62C

**Testing Procedure:** Samples of Polycell and Graffity were immersed in the 62C blanket wash for periods of 1, 4 and 72 hours. After each time check, the blankets were removed and dried with paper towel and the amount of swell (if any), calculated after re-measuring.

**Results**: There was no caliper increase with either sample after 1 hour, the Graffity showed a 0.3% increase after 4 hours, and a 1.5% increased after 72 hours. Polycell did not show any measurable increase.

It must be pointed that the total immersion of the blanket samples in the 62C blanket wash is an extreme test as in most cases, only the rubber surface to the blanket comes into contact with the blanket wash.

The Aim “62C” ultimate safety blanket wash exhibited no detrimental effect on either Polycell or Graffity blankets.

Thank you for the continued support of our Polyfibron blankets, please contact me if clarification or assistance is required.

Yours sincerely

**TOM FALLON**
National Technical Specialist

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# Laboratory Report

**Purpose**
To assess the samples of 62C "Ultimate" both 'filtered' and 'un-filtered' to determine any performance differences between the two.

**Method**
The following tests were conducted on both samples;

- Flash Point
- Blanket Swell Test
- Cleaning Ability (K B Value)
- Filter Test
- Evaporation rate
- Odour
- Emulsification
- F.T.I.R Spectrophotometer Analysis

**Flash Point**
Both conformed to specification

- Blanket Swell Test
  See Polyfibron Report

- Cleaning Ability
  The K B Value was assessed by both dissolving a predetermined amount of ink in solution and by cleaning ink from Blanket and Roller surfaces. Whilst both products did clean, a better result was achieved with the filtered product, which was attributed to less pigment and residue being retained in the solvent.

- Filter Test
  Both samples were passed through Glass Micro Fibre Filters

  The unfiltered sample returned a high degree of soil – presumably pigment particles, while the filtered sample left no residue.

- Evaporation Rate
  Both samples dried on the Blanket at the same time and within specification.

- Odour
  Odour was similar in both samples.

- Emulsification
  There was zero emulsification in either sample due to the 62C Ultimate not containing any surfactants. Water settled out immediately leaving a clear bi-phase liquid.

- F.T.I.R. Spectrophotometer
  After filtering, both samples were run through the F.T.I.R. Spectrophotometer to analyse the 'Footprint' of the AIM 62C Ultimate and the graph result in enclosed for your reference.

- Conclusion
  Both products, before and after were within specification of 'virgin' material indicating that there had been no 'pollutants' or 'inclusions' and that the filtered product would perform as virgin Blanket Wash.

AIM offer complete analysis of their Blanket Wash products Free of Charge and can return results within 24 hours to ensure product is within specification at all times.