



T&T Eco

# Aviation Sustainment Capability Statement

SMARTER MAINTENANCE CHEMICALS



# Envirofluid Aviation Maintenance Chemicals

Envirofluid has the region's largest range of NSN codified Worksafe and environmentally compliant chemicals for the aviation industry and defence.

Since 1992 Envirofluid has been helping the Australian Defence Force and other aviation operators find better, safer and more cost effective ways to approach platform sustainment.

Designed to be highly effective and versatile, our range of aviation cleaners, degreasers, solvents, disinfectants and odour control products remove the risks associated with toxic and dangerous chemicals.



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## SAFER WORKING CONDITIONS

By reducing the amount of chemical hazards in workshops and around airfields we help organisations focus more on creating outcomes and less on managing risks.

## IMPROVED ENVIRONMENTAL OUTCOMES

Organisations can no longer afford to ignore the environmental impact of their activities. This is even truer for those servicing politically sensitive customers such as governments or Defence primes. Airfields, in particular, tend to attract significant public attention around environmental concerns.

Envirofluid's chemical range is second to none when it comes to reducing environmental impact of aviation operations.

## TOTAL COST REDUCTION

By using new chemical technologies most Envirofluid chemicals outperform the toxic and dangerous chemicals they replace, delivering higher performance with lower risk overheads. Switching to safer chemicals also drastically reduces waste management and other costly downstream issues. This enables Envirofluid to deliver increased safety and environmental sustainability at an overall net cost reduction for most businesses.

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## EXPERIENCE SUPPORTING RAAF OPERATIONS

Envirofluid has extensive experience supporting RAAF operations. In addition Envirofluid heavily supports both RAN and The Australian Army in achieving WHS and environmental compliance in platform and facility sustainment operations.



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**Track and Train Ltd.**

+44 0203 984 1976

mike@tandteco.com

www.tandteco.com

# The Envirofluid Range



**WORKSAFE & ECO-FRIENDLY  
CLEANERS, DEGREASERS &  
INDUSTRIAL CHEMICALS**



**SAFER SUBSTITUTES FOR  
TOXIC & DANGEROUS  
WORKPLACE SOLVENTS**



**POWERFUL SPECIALIST  
PRODUCTS FOR NICHE  
APPLICATIONS**

Envirofluid's three flagship brands offer a wide range of 'best-in-class' chemical products for the Aviation industry including solvents, degreasers, scale removers, water treatment chemicals, parts cleaning products and more. To view this extensive range please visit [envirofluid.com](http://envirofluid.com).

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## Key Benefits

### SAFER WORKING ENVIRONMENT

Many maintenance chemicals such as solvents and degreasers pose a severe physiochemical risk in the form of fire, explosion or chemical burns. These same products also pose a myriad of chronic health concerns such as cancer and Parkinson's Disease. Envirofluid's products dramatically reduce risk by substituting these toxic and dangerous chemicals with high performance safe alternatives. A safer working environment means reduced financial risk, fewer time consuming risk controls, less complexity and higher morale.

### REDUCED TRADE WASTE COSTS

Toxic and dangerous chemicals can create downstream costs with a significant impact on overall maintenance costs. Envirofluid's chemical range is designed to drastically reduce and even eliminate these costs with smart formulations that do not require complex disposal regimes. In most cases Envirofluid chemicals can be released directly into sewers or waterways.

### LESS STORAGE SPACE AND REDUCED WEIGHT

Envirofluid's chemical range reduces inventory complexity by providing a powerful set of multi-purpose products. A single product, for example, can be used for parts cleaning, surface cleaning and degreasing. In addition to reducing inventory complexity Envirofluid's inherently safe products can be stored in a highly concentrated state without creating increased risk. This reduces the space and weight impact of chemical inventory.



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## LONGER ASSET LIFE

Many traditional maintenance chemicals can cause corrosion and surface damage. This can result in high replacement costs, safety concerns and inconvenient or expensive maintenance downtime.

## REDUCED PPE REQUIREMENTS

PPE is unreliable and its proper use is difficult to monitor. Harmonised work safety guidelines recommend that reliance on PPE to create a safe working environment should be a last resort. Wherever possible guidelines require that safer chemical alternatives should be employed. In addition PPE increases complexity, increases costs and reduces worker comfort.

Envirofluid's chemical range is designed to drastically reduce and, in many cases, completely eliminate PPE requirements.

## STREAMLINED WORK PROCESSES & FASTER TURN-AROUND

Envirofluid's chemical technology is designed to be highly targeted for its intended purpose with few collateral effects. A product designed for degreasing, for example, will not simultaneously introduce a corrosive or other adverse effect that could damage sensitive systems or equipment. This means that Envirofluid products can usually be applied to equipment without the need to decommission or isolate the system. This drastically reduces turn-around times and man-hour requirements.

## LOW LITIGATION RISK

Health, safety and environmental risks also amount to a litigation risk. By using the safest and most environmentally responsible chemicals available organisations can protect themselves from unnecessary legal exposure.

## PROTECTS THE ENVIRONMENT

No organisation, particularly those that serve government, can afford to ignore environmental impacts of its activities. Public concern over environmental outcomes is at an all time high and will only increase in the years ahead. A successful environmental policy, well communicated, can pay big dividends for future thinking businesses.

## ENHANCES DEFENCE'S COMMITMENT TO THE SAFETY OF ITS PEOPLE AND THE ENVIRONMENT

Defence is committed to the continuous improvement of its WHS and environmental outcomes. Organisations wishing to support Defence's ongoing sustainment programs must be similarly committed. By adopting worksafe, environmentally sustainable chemistry Defence contract bidders can put themselves ahead of the competition.



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# Defence Experience & Case Studies

A selected set of brief case studies are included below. For further information and case studies please contact Envirofluid.

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## Aircraft Exterior Washing

Because of the serious concerns regarding the potential for hydrogen embrittlement and other corrosion issues associated with old style washing materials, prudence required the masking of aircraft landing gear prior to washing the aircraft. This protective masking process required many man hours to accomplish and resulted in considerable downtime.

Total maintenance time and man-hours were drastically reduced by substituting **Triple7 Aircraft** and **Metal Cleaner**. Triple7 Aircraft and Metal Cleaner passes all of the stringent corrosion tests and hydrogen embrittlement tests and eliminated the need for masking landing gear during exterior cleaning.

The reduction of downtime during aircraft washing has increased aircraft availability and the increased dilution rate of Triple7 Chemistries over old-style cleaners has reduced operating costs.



## Precision Cleaning Solvents

Faced with the ban on Trichloroethylene and other ozone depleting solvents used for cleaning activities on aircraft, Envirofluid developed a replacement solvent that would work as well for the same tasks. The alternative had to clean effectively, leave no residue, and be nonconductive. It also had to pass independent laboratory performance and material compatibility tests.

**Purasolve Precision Cleaner** and **Purasolve Surface Prep** replaced the targeted solvents and also act as alternatives to brake cleaner and electrical cleaning solvents.

Purasolve solvents have proved well for preparing aircraft prior to painting, bonding, and sealant applications. They are also suited to cleaning: avionics, electrical systems, hydraulic systems, and fire control systems and replace many other halogenated solvents and other toxic solvents.



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## Parts Washing

Defence has used old style parts washing technology that involves the use of mineral spirits for years – indeed it had become a legacy issue. This cleaning solvent was hazardous waste when disposed of and also contained Benzene, a known carcinogen. Monthly disposal of the spent parts washer solvent was generating huge amounts of hazardous waste from each site and was creating a major cost centre for the client.



**Purasolve Parts Cleaner** passes all hazardous waste tests, contains no Benzene, and cleans parts more effectively than the old mineral spirits. In order to reduce costs of operation a micro filtration system is fitted with an online closed loop reclamation that constantly removes the oils and greases that are dissolved into the Purasolve cleaning solution.

By switching to Purasolve Parts Cleaner Defence have eliminated liquid Parts Cleaner solvent waste for over four years and significantly reduced on-site hazards.

## Painting Operations

Painting operations typically generate a very large quantity of waste from the cleaning of paint equipment (paint guns, paint lines, paint pots, etc.). In addition, due to the high toxicity of the typically used products, worker health and safety was a major concern. From an environmental rule and regulation perspective, the number of Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs) that were being emitted into the air were creating problems with Air Quality Permits that were frequently required. All of these issues were creating increasing financial burdens for the client.



Envirofluid's research scientists created **Purasolve Paint Equipment Cleaner** a cleaning solution that is non-hazardous, low VOC, and non-HAP as a substitute for the previously used solvents. Purasolve Paint Equipment Cleaner is typically used with Envirofluids reclamation systems like the PS200 that use a sophisticated multi-stage micro-filtration that greatly extends the service life of the fluid many times over. The filtration, along with the innate properties of the solvent dramatically reduced the hazardous waste generated from paint clean-up activities and seriously reduce the operating cost of paint clean-up activities when compared to traditional methods.

Typical results have been an 80% reduction of hazardous generation, an 82% reduction of paint equipment clean-up costs, a 97% reduction in VOC and HAP emissions, as well as a major improvement in worker health and safety.

Purasolve Paint Equipment Cleaner is the only compound utilized for paint operations clean-up that has full compliance with Defence WHS policy.



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# Are Your Workplace Chemical Risks ALARP?

## Meeting Your Positive Duty of Care

The ADF has already done a great deal of work creating a safer and healthier environment for Defence Force workers. When it comes to health and safety, meeting your duty of care is a never ending responsibility involving a constant search for new and safer ways of getting the job done.

When it comes to maintaining and building upon the ADF's safety reputation, Envirofluid is a proud partner in helping Defence decision makers meet their positive duty of care by replacing toxic and hazardous chemicals in the workplace.

It's an undeniable fact that almost every Australian workplace contains some form of chemical hazard and, in many cases, this an unavoidable risk that must be tolerated. What is less understood, however, is that there is still a vast array of other hazardous workplace chemicals for which more effective and far safer alternatives exist. Meeting your duty of care obligations means considering these options.

## Common Chemical Risk Sources

In the ADF hazardous chemicals are abundant. Fires, spills, run-off and accidental exposure is of particular concern to those managing risk.

Flammable, toxic solvents used in common maintenance procedures require special storage and handling, create large amounts of toxic waste and pose a health risk to workers. Many common cleaning and degreasing agents currently contain toxic ingredients which, even with careful use, are likely to expose workers and the environment to risk.

## Risk Treatment Through Substitution

The chemical technology that has created these workplace risks is fast being superseded by newer, more advanced products, which are more targeted and effective in their action and have far fewer undesired effects. In today's workplace, decision makers have the option to substitute many hazardous and toxic solvents, cleaners, degreasers and other chemicals with safe, more cost effective alternatives.



## ALARP Principle

The ALARP Principle (As Low as Reasonably Practicable) forms part of the ADF's risk management framework.

Under this principle risk treatment options are weighed against the cost of implementation and the severity of potential consequences in order to establish whether a particular risk should be tolerated.

If simple, cost effective steps are available to lower WHS risks without affecting performance then those steps must be taken in order to meet duty of care requirements. This includes exposure to hazardous chemicals.



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# Department of Defence

## NSNs for Envirofluid Products

MRO Panel (SON) 404267

Recognised Supplier to Department of Defence

NSN	Envirofluid Part #	Product
6850 66 159 7245	AAAM-5	Triple7 Aircraft & Metal Cleaner, 5 Litres
6850 66 159 7248	AAAM-20	Triple7 Aircraft & Metal Cleaner, 20 Litres
6850 66 159 7249	AAAM-200	Triple7 Aircraft & Metal Cleaner, 200 Litres
6850 66 155 7312	AAAF-5	Triple7 Antifoam, 5 Litres
6840 66 164 0987	AAAQS-05	Triple7 AquaSmart, 500ml
8520 66 164 0991	B822000D	Triple7 Awaken, 300g
8520 66 164 0992	B822002D	Triple7 Awaken, 4.75kg
8520 66 164 0993	ZS28000D	Triple7 Awaken, 20 kg
6850 66 164 0782	AABCN-20	Triple7 BioConcentrate, 20 Litres
7930 66 159 7250	AAECL-5	Triple7 EnviroClear, 5 Litres
6850 66 164 0776	AAESCAC-5	Triple7 EnviroScale, 5 Litres
6850 66 152 0080	AAESCAC-20	Triple7 EnviroScale, 20 Litres
6850 66 152 0081	AAESCAC-200	Triple7 EnviroScale, 200 Litres
6850 66 164 0804	AAESCPL-20	Triple7 EnviroScale Plus, 20 Litres
9150 66 163 7035	AAFPG-20	Triple7 Fog-Pro, 20 Litres
7930 66 164 0808	AAGSR5-1	Triple7 Glass Shine Commercial, 1 Litre
7930 66 164 0809	AAGS-5	Triple7 Glass Shine, 5 Litres
7930 66 159 7251	AAHD-5	Triple7 Heavy Duty, 5 Litres
7930 66 152 0078	AAHD-20	Triple7 Heavy Duty, 20 Litres
7930 66 152 0079	AAHD-200	Triple7 Heavy Duty, 200 Litres
7930 66 164 0996	AAHDP-20	Triple7 Heavy Duty Plus, 20 Litres
7930 66 164 0784	AAHDR10-1	Triple7 Heavy Duty Commercial, 1 Litre
7930 66 164 0785	AAHDR10-5	Triple7 Heavy Duty Commercial, 5 Litre
7930 66 164 0786	AAHDR10-20	Triple7 Heavy Duty Commercial, 20 Litre
7930 66 159 7252	AAHOS-5	Triple7 Hospitality, 5 Litres
7930 66 164 0981	AAHOSR5-1	Triple7 Hospitality Commercial, 1 Litre
7930 66 153 2102	AAIOD-20	Triple7 Iodosan, 20 Litres
7930 66 164 0798	AAMCLR5-1	Triple7 Mega Clean Commercial, 1 Litre
7930 66 156 0358	AAMETS-5	Triple7 Metal Shine, 5 Litres



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NSN	Envirofluid Part #	Product
7930 66 164 0802	AAPRCL-5	Triple7 Pristine Clean, 5 Litres
7930 66 164 0803	AAPRCLR5-1	Triple7 Pristine Clean Commercial, 1 Litre
6840 66 154 6200	AAOC-5	Triple7 Odour Control, 5 Litres
6840 66 159 7256	AAOC-20	Triple7 Odour Control, 20 Litres
6840 66 164 0984	AACOR10-20	Triple7 Odour Control Commercial, 20 Litres
8520 66 164 0989	ZS28501D	Triple7 Revive, 500ml
8520 66 164 0990	ZS28507D	Triple7 Revive, 4.75kg
7930 66 164 0810	AASAUS-5	Triple7 Saucepan Shine (Liquid), 5 Litres
7930 66 164 0801	AASAUS-20	Triple7 Saucepan Shine (Liquid), 20 Litres
7930 66 159 7257	AASWL-5	Triple7 Safewash Liquid, 5 Litres
7930 66 164 0794	AASWLP-20	Triple7 Safewash Liquid Plus, 20 Litres
7930 66 159 7258	AASWP-2	Triple7 Safewash Powder, 2 kilograms
7930 66 164 0807	AASWP-20	Triple7 Safewash Powder, 20 kilograms
6850 66 164 0997	AASAFST-5	Triple7 Safestain, 5 Litres
7930 66 164 0812	AASUPERS-5	Triple7 Supershine, 5 Litres
7930 66 164 0983	AASUPERS-20	Triple7 Supershine, 20 Litres
7930 66 164 5235	EFS42700	Triple7 Glass Shine Screen-Printed Bottle, 500ml with Spray Nozzle (empty/ refillable)
7930 66 164 5237	EFS42701	Triple7 Mega Clean Screen-Printed Bottle, 500ml with Spray Nozzle (empty/ refillable)
7930 66 164 5238	EFS42702	Triple7 Pristine Clean Screen-Printed Bottle, 500ml with Spray Nozzle (empty/ refillable)
7930 66 164 5239	EFS42704	Triple7 Odour Control Screen-Printed Bottle, 500ml with Spray Nozzle (empty/ refillable)
7930 66 164 5240	EFS42705	Triple7 Heavy Duty Screen-Printed Bottle, 500ml with Spray Bottle (empty/ refillable)
7930 66 164 5241	EFS42706	Triple7 Hospitality Screen-Printed Bottle, 500ml with Spray Bottle (empty/ refillable)
7930 66 164 5242	EFS42703	Triple7 Saucepan Shine Screen-Printed Bottle, 500ml - 4ml dispensing pump (empty/ refillable)
4730 66 164 5243	SU42501B	Purasolve Power-Fill automated filling station for EverSafe Atomisers
6530 66 163 7114	SU42101B	Purasolve EverSafe 750mL Aluminum Sprayer with Adjustable Nozzle
4940 66 164 5877	PS6PW	Purasolve PS6 Parts Washer complete with Purasolve Filter System



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NSN	Envirofluid Part #	Product
4940 66 164 5874	PS6KIT	Purasolve PS6 Parts Washer complete with Purasolve Filter System and 60l Purasolve Parts Cleaner SK Solvent
4930 66 163 6884	ES30PW	Purasolve PS-30 Parts Washer complete with Purasolve Filter System
4940 66 163 7116	ES40PW	Purasolve PS-40 Parts Washer complete with Purasolve Filter System
4330 66 163 7112	ESRFK	Purasolve Retrofit Filter Kit
4330 66 163 6949	ESRPF	Purasolve Resin Pre-Filter Replacement Cartridge
4330 66 163 6950	ESFLT	Purasolve Secondary Filter Replacement Cartridge
4940 66 164 5970	ESPPS-1	Purasolve Pressure Sprayer, 1 Litre Trigger
6850 66 164 5234	ESBKC-400	Purasolve Brake Cleaner, 400ml Aerosol
6850 66 164 0797	ESBKC-5	Purasolve Brake Cleaner, 5 Litres
6850 66 163 6890	ESBKC-20	Purasolve Brake Cleaner, 20 Litres
6850 66 163 6889	ESPRC-20	Purasolve Parts Cleaner, 20 Litres
6850 66 163 7361	ESPRC-200	Purasolve Parts Cleaner, 200 Litres
6850 66 163 6888	ESPSK-20	Purasolve Parts Cleaner SK, 20 Litres
6850 66 163 6887	ESPSK-200	Purasolve Parts Cleaner SK, 200 Litres
6850 66 164 5233	ESPC-400	Purasolve Precision Cleaner, 400ml Aerosol
6850 66 164 0999	ESPC-5	Purasolve Precision Cleaner, 5 Litres
6850 66 159 7259	ESSRP-20	Purasolve Surface Prep, 20 Litres
6850 66 163 7352	ESWPC-20	Purasolve Weapons Cleaner, 20 Litres
4940 66 149 0283	BL74907	Kranzle CA11-130 High Pressure Cleaner complete with 15-meter hose
6850 66 163 6885	AEARV-15	ActiveEco ActiRevenge, 15 Litres
7930 66 164 0985	AEABZ-5	ActiveEco ActiveBlitz, 5 Litres
7930 66 164 1003	AAECCOS-05	ActiveEco Complete – General Purpose Carpet Spotter 500ml
6840 66 164 0979	AAEDIF-05	ActiveEco Disinfect – Forest Eucalypt, 500ml
6840 66 164 0978	AEDIF-5	ActiveEco Disinfect – Forest Eucalypt, 5 Litres
6840 66 164 0977	AEDIF-15	ActiveEco Disinfect – Forest Eucalypt, 15 Litres
7930 66 164 1002	SBAEKRL-4	ActiveEco Krystal, 4.5kg
7930 66 164 1000	SBAEPRW-5	ActiveEco Prewash, 5 Litres
7930 66 164 1001	SBAEPFS-5	ActiveEco Premium Fabric Softener, 5 Litres
4240 99 991 3183	EDS-BS-08-001	BlastSax
7920 99 213 4663	EDS-FS-020	FloodSax



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