## **ENGINEERING & MAINTENANCE**

Setting the standard in cleaning and maintenance





**Arrow Solutions** is one of the UK's leading manufacturers of professional cleaning and maintenance chemical products.

With business in over 50 countries our high quality aerosols and liquids are solving problems for thousands of companies every day, and our reputation for innovation and manufacturing excellence is recognised through numerous awards, accreditations and OEM approvals.

Arrow is well known for our technical capability and a dedicated Research & Development department ensures that we are at the forefront of advancements in the industry.

Our focus on supplying exceptional products and a commitment to outstanding service ensure that we provide the right solution first time every time. In response to the challenge of achieving consistently high performance against a background of ever tighter regulation, more professionals trust Arrow to deliver.

Contact us today to find out how we can reduce cost and improve reliability.



### **ENGINEERING & MAINTENANCE**

Providing high quality solutions to all types of engineering operations is at the heart of what we do. Energy, mining, aerospace, automotive and defence are among the many industries that rely on Arrow products.

Whether maintaining machinery, washing components as part of the production process or merely keeping the workplace clean and safe Arrow has the right product for the job.

Our trained staff work closely with customers to identify best practice and the maximum opportunity for cost savings, from introducing simple improvements in the process to the installation of dedicated equipment, always combined with a relentless focus on achieving the very best environmental and safety standards.







### pbca

At Arrow we take our commitment to social and environmental responsibility seriously and that is truly represented by the introduction of pbca technology for many of our aerosols.

In place of using traditional flammable or high Global Warming Potential (GWP) propellants many Arrow aerosols are simply powered by compressed air. Requiring no manufacturing, transportation or storage the use of air delivers a huge reduction in carbon footprint. Furthermore the elimination of flammable gas yields significant improvement in safety. A genuinely green answer for the 21st century - and Arrow is the first company in the world to offer such products. Look for the green band and the pcba mark to see if your aerosols are powered by compressed air.



# PRODUCTION & MAINTENANCE



#### HANDY FOAM

A real multi-purpose product, Handy Foam offers a quick and convenient way of cleaning general dirt, grease and grime from all around the workplace, especially hard to clean vertical or overhead surfaces.



#### SUPERCLEAN

Used either through a pressure washer or by simply spraying and wiping, economical and versatile Superclean is a single product solution for cleaning all types of common soiling within industrial environments.



#### WIRE ROPE & GEAR LUBRICANT

Replacement intervals for costly wire ropes can be significantly extended with the use of Wire Rope & Gear Lubricant. Penetrating deep into the core, it lubricates and protects inside while forming a protective barrier against moisture, dirt and grit on the outside.



#### CHAIN LUBE

Chain Lube is the answer for lubrication of chains, linkages, drives and other moving components. Perfect for conveyor or machinery drive chains and forklifts. NSF H1 approved.



#### UNIVERSAL POWERWASH

Universal Powerwash easily washes away heavy deposits of mud, dirt, coal dust and other typical soiling from construction equipment, shipping containers and other general infrastructure.



#### **TAR & BITUMEN REMOVER**

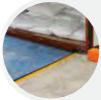
Residues of hardened oil, grease, tar or salt often build up on signage, obscuring reflective surfaces or instructions and can also interfere with the smooth running of equipment. Tar and Bitumen Remover quickly deals with even the heaviest







Ideal for cleaning machinery, Citrol is equally useful for cleaning walls, floors and other hard surfaces. It is especially effective on rubber marks left by forklifts or by production



#### RELINE

Available in seven colours, Reline is the perfect solution for line marking or stock identification. Easy to use either by hand or together with a line application machine.



#### **TRAILERWASH**

Using Trailerwash to ensure industrial floors are clean and free of hazardous oily patches means less risk of staff and equipment slipping, less risk of fire and a safer overall working environment.



#### **GL REMOVER**

Label removal can be among the most difficult and frustrating cleaning tasks. GL Remover solves the problem, clearing adhesive and label residues with minimum effort. NSF K3 approved.



## PARTS & COMPONENTS



#### **WORKSHOP WIPES**

Removal of adhesives, resins and semi-cured sealants is a particularly difficult cleaning challenge during assembly or disassembly processes. The strong yet safe formulation impregnated into Workshop Wipes leaves surfaces clear of messy and unsightly sealant residues.



#### **FASTKLEAN**

Fastklean combines exceptional degreasing ability with fast evaporation, powering through grease, oil, adhesive and sealant residues to minimise the time spent cleaning parts and assemblies.





The outstanding cleaning power of HDD softens and removes even the hardest deposits of oil, grease and bitumen as well as protective coatings and waxes. Perfect for use in dip tanks or for cleaning of large components.



#### DELTA

Heavy grease and oil, tar and bitumen will all be removed by Delta. Ideal for use in workshop parts washers. Its rapid separation characteristics make it the perfect choice for use with interceptor systems.



#### METAKLENZ

For use on aluminium and other sensitive metals as well as galvanised surfaces, Metaklenz tackles carbonised residues and the most stubborn deposits of hardened grease and oil.



#### SODAKLENZ

Carbon build up can be encountered on many different types of components, especially engine or other parts exposed to high temperatures. Sodaklenz provides the solution, effortlessly removing carbonised or baked on deposits.



#### AQUAKLENZ LF

The first choice for spraywash systems, Aquaklenz LF can also be used in ultrasonic and dip tanks. Safe for use on all non-ferrous metals including aluminium, brass, copper and zinc.



#### LOTOXANE RANGE

Non-flammable and virtually odourless, Lotoxane continues to set the standard for safety in all types of degreasing applications. Equally effective in cleaning electrics, mechanical components or prior to coating or welding. See pages 22-23 for more information on the whole Lotoxane range.



## **ELECTRICS & ELECTRONICS**



#### SUPERSOLVE AS

Supersolve AS is safe for use in cleaning even the most sensitive electronic componentry, in the most critical applications, and will not damage insulating materials or circuit boards.

NSF K1 approved.



#### ZX-54

ZX-54 is a versatile product for the maintenance of electrical switches, motors and ignition systems, not only providing routine cleaning but also lubricating and displacing water to ensure ongoing reliability.



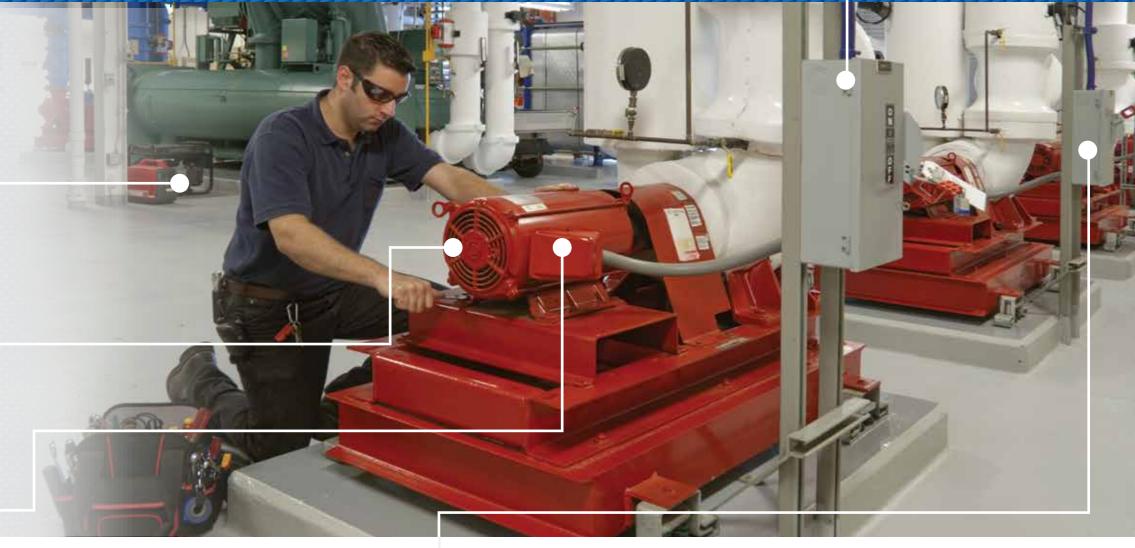
#### LOTOXANE

Non-flammable and virtually odourless, Lotoxane sets the standard for safety in electrical degreasing applications. See pages 22-23 for more information on the whole Lotoxane range.



#### FASTKLEAN

Heavier soiling of electrical systems can be particularly challenging to remove. The exceptional degreasing ability of Fastklean provides the answer, restoring equipment back to perfect working order.





#### QED

The perfect solution for general electrical and electronic maintenance, QED quickly and effectively cleans and degreases motors, switchgear, solenoids and all similar equipment.



# PRODUCTION & MAINTENANCE ENGINEERING



#### ADHESIVE SPRAY

Wood, textiles and metals are among the many substances that can be effortlessly bonded together with Adhesive Spray. Mess free application and rapid tack make it ideal for carpet fitting and general assembly work.



#### **WORKSHOP WIPES**

Removal of adhesives, resins and semi-cured sealants is a particularly difficult cleaning challenge during assembly or disassembly processes. The strong yet safe formulation impregnated into Workshop Wipes leaves surfaces clear of messy and unsightly sealant residues.



#### SUPER SLAKS

Corroded and seized nuts, bolts, shafts and bearings can all be removed with the help of Super Slaks, saving precious time and preventing expensive shearing.



#### UNIVERSAL

Every engineer needs a convenient maintenance spray for routine tasks. Universal quickly lubricates, penetrates and protects mechanisms of all types.



#### SYNTHETIC CUTTING FLUID

Synthetic Cutting Fluid not only provides exceptional cooling and lubrication of machining tools but its advanced formula will not corrode the workpiece nor become contaminated, eliminating unpleasant odours.



#### BREAKFREE TF

Using Breakfree TF in machining operations greatly extends tool life and achieves a higher quality finish. It also clings firmly to the tool meaning more time between applications and a cleaner process.

improved as it leaves no residue.



#### SEIZE EEZE

Seize Eeze is a specialised high temperature grease that protects against seizing of mechanisms, linkages and assemblies, preventing damage and allowing for easy disassembly even many years after application.



#### LEAK DETECTION SPRAY

Leak Detection Spray simply and accurately identifies leaks in pneumatic and compressed gas systems, ensuring safety and maintaining optimum performance.



# PRODUCTION & MAINTENANCE ENGINEERING CONTINUED



#### FOOD GRADE LUBRICANT

Food Grade Lubricant is optimised for maintenance and repair of equipment within the food industry and food processing areas. NSF H1 approved.



#### HANDY FOAM

A real multi-purpose product, Handy Foam offers a quick and convenient way of cleaning general dirt, grease and grime from all around the workplace, especially hard to clean vertical or overhead surfaces.



#### **POWERSOLVE**

Sticky and awkward residues such as inks, glue and sealant are effortlessly removed by Powersolve, rinsing easily with water to provide a totally clean surface. Especially useful in the printing industry.



#### SPRAY GREASE

Spray Grease delivers heavy duty, long lasting lubrication and protection for bearings and other moving parts. It is highly resistant to wash off and salt attack.



VISCOLUBE

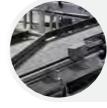
Fast moving chains and other rotating components throw off conventional lubricants, creating mess, waste and a slip hazard as well as reducing the lubrication effect. Viscolube clings quickly and tightly once applied, allowing operations to resume with minimum delay.





#### Chain Lube is the answer for lubrication of chains, linkages, drives and other fast moving components. Through becoming more viscous after application it has excellent resistance to

throw off and maximises component life.



#### DRI LUBE

Unlike conventional lubricants Dri Lube does not attract dust, fluff or other contaminants, and will not drip or stain. This makes it particularly suited for use in the textile and furniture industries.



Effective at up to 260°C Silslide is an excellent mould release and general lubricant . Being clear, colourless and non-tainting it leaves componentry looking clean and mess free.



## PREVENTATIVE MAINTENANCE



#### SYSTEM DESCALER

The build up of scale dramatically reduces the efficiency of heating and cooling systems. System Descaler breaks down and removes scale and rust and will not damage non-ferrous metals. Ideal for boilers, condensers, heat exchangers and



#### SHIELD

Shield protects against corrosion, whether for parts in operational use, in storage or in transit. Its exceptional water displacement properties also brings switches, motors and ignition systems back to life.



#### **BRIGHT GALVA**

For use where a brighter finish than Zinc Galva is required, Bright Galva facilitates fast and effective repairs to galvanised coatings damaged by cutting, welding or abrasion.



WIRELUBE HD /

Wirelube HD delivers exceptional lubrication and protection of even the heaviest duty wire ropes, chains and gears. Component life is greatly extended, replacement cost reduced and expensive downtime minimised.



#### ZINC GALVA

Far more convenient than liquid alternatives, repairs to damaged or incomplete galvanised coatings are easily accomplished with the use of Zinc Galva aerosol. Also acts as a superb primer, suitable for over painting where required.



#### **BRITOX PLUS**

The toughest deposits of limescale, rust and concrete will be removed by Britox Plus. Use for de-rusting steel components or cleaning mortar and concrete from construction equipment. Outstanding brick and tile cleaner.



#### **RUST REMOVER 28**

Rust Remover 28 allows for more controlled, less aggressive removal of rust from sensitive metals and alloys. Particularly useful as a treatment for rust prior to phosphating, painting or varnishing.



## SKINCARE



PROCARE OS

Procare OS is a daily use barrier cream formulated to be especially effective against the contaminating and drying effects of oils and solvents. Non-sticky in application and allows hands to be easily cleaned during and after work.



#### HANDISAN

Ensuring hands are regularly sanitised is often an important requirement where workers may be exposed to sources of bacteria. Handisan kills 99.999% of all common bacteria, rapidly evaporating but leaving hands supple. *Tested to BS EN1500*.



#### TEXTRA

For use in all types of industrial environments, Textra is a lime scented, beaded hand cleaner. Grease, oil and other typical industrial residues are gently washed away from the hands, leaving them supple even after frequent use.



#### TUFSTUF

Tufstuf is mild on the skin but effective on oil and grease. Non-beaded and lightly fragranced, it is also excellent as an all over body wash for workers in dirty jobs such as mining, oil production and sewer maintenance.



#### WVDIT

Washing facilities are often unavailable or inconvenient to engineers working under equipment or out in the field. Portable Wypit wipes allow hands to be cleaned of grease and oil wherever you may be.





#### **GOLDEN ARROW**

Designed for the removal of oil, grease and general soiling, Golden Arrow gel has a fresh orange fragrance. It rinses freely from the hands, leaving them supple and non-greasy.



#### GOLDEN FLUID

Golden Fluid hand cleaner tackles the hardest contaminants to be found in industry. Heavy oils, adhesives, asphalt, dyestuffs, lacquers, paints and resins can all be washed away and hands restored to normal.



## AIRCRAFT MRO



#### WORKSHOP WIPES

Removal of adhesives, resins and semi-cured sealants is a particularly difficult cleaning challenge during assembly or disassembly processes. The strong yet safe formulation impregnated into Workshop Wipes leaves surfaces clear of messy and unsightly sealant residues.



#### LOTOXANE FAST WIPES

Easy to use Lotoxane Fast Wipes deliver the cleaning power of Lotoxane Fast in a convenient wipe format. The lint free wipes save time, reduce wasteage and enable a mess free workspace.



#### LOTOXANE FAST

Providing superb degreasing performance, yet low odour in use, Lotoxane Fast is OEM approved for solvent cleaning in engine maintenance operations. Also excellent for pre-paint cleaning of airframes and components.



#### SUPERSOLVE AS

Supersolve AS is safe for use in cleaning even the most sensitive electronic componentry, in the most critical applications, and will not damage insulating materials or circuit boards.



#### LOTOXANE

Lotoxane is widely approved within aerospace for a huge variety of degreasing applications, from the frame of the aircraft to sensitive components such as wheel assemblies and fuel lines. Safe to use on all metal and plastic surfaces.



## AIRCRAFT CLEANING



AIRCRAFT DISINSECTANT

World Heath Organisation requirements
mandate disinsection treatment of aircraft on
certain routes. The 'one shot' discharge system of
Aircraft Disinsectant provides easy, accurate and
effective treatment of aircraft of any size.







#### **AIRCRAFT CLEANER 281**

Dirty aircraft present a negative impression of the operators' brand, and the weight and increased friction caused by accrued soiling impacts on fuel costs. Aircraft Cleaner 281 washes away dirt and grime to restore the aircraft to its original finish.



#### CARPET SHAMPOO 631

Carpet Shampoo 631 not only cleans but also freshens and brightens carpets and upholstery. Whether spot cleaning by hand or deep cleaning it brings fabrics back to life.



#### DEEP CLEAN

Suitable for use on all interior hard surfaces, Deep Clean easily removes typical soiling such as food residues, drink spillages and finger marks. Ideal for galley areas, tray tables, armrests and windows.



#### CHEWING GUM REMOVER

A rapid and mess free way to remove chewing gum from both hard surfaces and all types of fabrics, Chewing Gum Remover is the perfect answer to this permanent problem.

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Why use flammable or toxic degreasers when the Lotoxane range offers an equally effective, safe alternative?

Lotoxane is the market leading safe solvent degreaser. Tested and approved by numerous major OEMs such as General Electric, BAe Systems, MAN, Gaz, Siemens and Airbus it is in daily use worldwide for removal of grease, protective coatings, hydraulic oils and cutting oils from metals, plastics and painted surfaces.

Extremely versatile, it can be applied by spray, brush, dip tank or ultrasonic bath. The very low odour means that not only is the environment improved for the worker but the same task can be safely carried out with less PPE. The acute risk of flammability when using traditional degreasers is eliminated. Furthermore the controlled evaporation of Lotoxane and its high contaminant loading can usually significantly reduce VOC emissions



#### **RISK EXPLANATION**

**Flashpoint** - The temperature at which a liquid will burn when ignited by a spark. With a flashpoint of 62°C Lotoxane is classified as non-flammable whereas solvents such as IPA, MEK or Acetone will catch fire at low or even sub-zero temperatures.

**Workplace Exposure Limit (WEL)** - The highest average concentration of vapour a worker is allowed to be exposed to before risk of dizziness and nausea. Lotoxane has a WEL of 1200mg/M3, which is twice the level allowed for MEK, four times than for White Spirit and six times as much as that for Xylene or Toluene.

**Evaporation Rate** - the speed of evaporation, and at which VOCs are emitted to the atmosphere from hydrocarbon solvents. Within any given period Lotoxane will emit half the VOCs of White Spirit, 60 times less than MEK and nearly 100 times less than Acetone.

### **LOTOXANE RANGE**

For where faster drying times are required Lotoxane Fast, Lotoxane XF and Lotoxane Triple F provide progressively quicker evaporation while retaining the same WEL as Lotoxane and similar low VOC emissions. Where the challenge is to remove heavier grease or oil Lotoxane HD offers increased degreasing performance with all the same characteristics as standard Lotoxane.



## DEGREASING

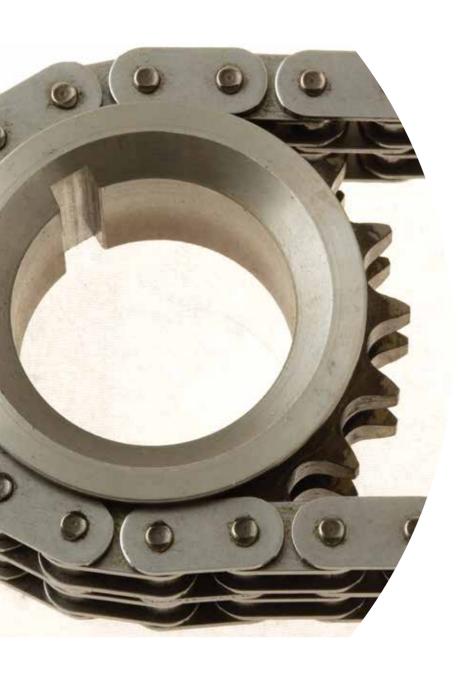


						Н	ard Surf	ace Clean	ing							
		Product	Dilution	Manual Dilution	Non Caustic Aluminium Safe	Biodegradeable	Low fearm	Hot use	Cold use	Spray & wipe	Brush/mop & Bucket	Scrubber dryer	Pressure wash	Soak clean	Spraywash systems	Ultrasonic
	Multi purpose cleaner.	Superclean	1:10 to 1:200					•	•	•	•	•	•			
Hard surface cleaning	Environmentally friendly cleaner & degreaser, CHAS / HCCNF approved for offshore use	ECAD	1:510 1:100	•					٠	•			•			
-	Heavy duty cleaner & degreaser	Citrol	up to 1,20	٠			•		•		•		•	٠		
ipment	Non caustic degreaser for spraywash systems - medium duty.	Metaklenz	1:10 to 1:200			•	•	•						(0)	•	
Component, machinery, equipment	Low fearn, non caustic degreaser for spraywash systems – heavy duty.	Aquaklenz LF	1.16 to 1.50			•	•	•	•!							
ent, mach	Heavy duty medium caustic deaner	Universal Powerwash	1:10 to 1:200			•		•	•				•			
Сотрог	Very heavy duty, high caustic cleaner.	Sodaklenz	1:20 to 1:200	•		•		•	•				•			
rete	A rust and scale remover for delicate alloys.	Rust Remover 28	T:4 to 1:8			•	•		•	•				•		
Descaling, concrete &rust removal	Powerful descales and rust remover for ferrous and most types of non-ferrous metals.	System Descaler	1:10 to 1:20	•	•!	•	•		•	•						
Desca	High strength descaler, concrete & rust remover	Britox Plus	up to 1:10	•		•	•		•	•				•		
port	Daily extenor cleaner with shine additive	Ecowash Autoshine	1:30 to 1:100	•		•		•	•		•		•			
Transport	Deep clean oxalic acid based extenor cleaner	Oxalwash	1:30 to 1:100			•	•		•				•			
Resin, adhesive	Wipe format	Workshop Wipes	N/A				No foam			•						

For further detail see Arrow Technical Data Sheet.



## LUBRICATION



				Lubrica	ints & Su	rface P	rotectio	ì				
			Product	Penetration	Water Displacement	Corrosion Protection	Lubricant Properties	Mould Release Agent	Colour	Film Properties	Resistance to throw off	Temp range (
	Multi use		Universal	Good	Good	Good	Light		Clear	Light oil	N/A	-20°C1 +120°
Mechanical Electrical	Mu	ti use	Shield	Good	Excellent	Excellent	Light		Amber	Light oil	N/A	-20°C +120°
Food use	with	PTFE	Food Grade Lubricant	Good	Good	Good	Medium		White	Thick grease	N/A	betwe -40°C u 200°
Penetrating Oil	Mechanical	with graphite	Super Slaks	Excellent		Good	Light		Black	Light oil	N/A	M/A
Anti seize compound	Anti	-seize	Seize Eeze	N/A	-N/Ä	Excellent	Heavy	N/A	Copper	Grease	.W/W	up to +1100
Multi purpose lubricant	Mu	ti usė	Silslide ISF	N/A	Good	Good	Medium	Excellent	Clear	Light oil	N/A	-40°C +260
Chains	Clear viscous	Chains & gears	Chain Lube (S)	Good		Good	Medium		Clear	Viscous oil	Excellent	betwe -18°C u +200
Wire ropes, gears & large chains	Black viscous	Wire topes, open gears & chains	Wire Rope & Gear Lubricant	Very Good	Very Good	Excellent	Heavy		Black	Viscous oil	Excellent	betwe -60°€ o +120
gears & large chains	Bulk application	Wire topes, open gears & chains	Wirelube HD	Good	Very Good	Excellent	Very Heavy		Black	Thick grease	Excellent	betwe -60°C u +120
Drilli	ng & tappir	ig	Breakfree TF			N/A	Heavy		Clear	Oil	N/A	-10°C +200
	Welding		Water Based Anti Spatter				N/A		Blue	Light oil	N/A	N/A
€ Cold	Grey	finish	Zinc Galva			Excellent	N/A		Grey	N/A	N/A	betwe -18°C u +160
galvanised surface protection	Silve	r finish	Bright Galva			Excellent	N/A		Bright Silver	N/A	N/A	betwee -18°C up +160°

#### **Aerosol Degreasers** Application Powerful degreaser Fastklean Resin/ Adhesive Glue, label & grease **GL** Remover General purpose, non ammatic, controlled drying Lotoxane® Workshop / General purpose, low odous, quicker drying Lotoxane® XF Components General purpose, very fast drying QED For critical surfaces Supersolve AS (33) Electrical / Electronic For non critical surfaces QED

#### **Evaporation Speedometer**



#### Key:

Rates shown equal "x" times faster drying than Lotoxane". As a guide Lotoxane" will dry at the same speed as water. Drying time can be decreased by air flow, heat or surface wiping. Please speak to an Arrow technical representative for further advice.

#### **Evaporating**

Application		Product				
Ultrasonic 25kHz @ 40°C	Heavy duty variant	Lotoxane® HD Lotoxane®				
maximum	Safe on most delicate surfaces					
	FAST					
	Flash point 40°C	Lotoxane® Fast				
Diptank	Flash point 62°C	Lotoxane® HD				
	Flash point 62°C	Lotoxane*				
	SLOW					
Resin /	Wipe.	Workshop Wipes				
Adhesive	Ultra fast drying	Fastklean				
	FAST					
	Hasb point -18°C	Fastklean				
	Flash point 71C	Lotoxane® Triple F				
General	Flash point 37°C	Lotoxane® XF				
Degreasing	Flash point 409C	Lotoxane" Fast Lotoxane" Fast Wipes				
	Flash point 62°C	Lotoxane*				
	Hash point 62°C	Lotoxane® HD				
	SLOW					
Electrical /	Safe on most delicate surfaces	Lotoxane®				
Electronic	Heavy duty variant	Lotoxane® HD				

#### **Water Rinsable**

A	pplication		Product				
		Multi purpose cleaner	Superclean  ECAD  Citrol  Universal Powerwash				
	Manual deaning or pressure washer	Environmentally friendly cleaner & degreaser					
		Non caustic, heavy duty					
	Lyan No.	Caustic, heavy duty					
Smoa	Diptank Including ultrasonic	90°C Non caustic, medium duty	Aquaklenz LF				
Aqueous		55°C Non caustic, heavy duty	Metaklenz				
	37kHz up to	90°C Caustic, very heavy duty	Sodaklenz				
	Lew foam	Non caustic, medium duty	Aquaklenz LF				
		Non caustic, heavy duty	Metaklenz				
	-	Caustic, very heavy duty	Sodaklenz				
		Parts Washer	HDD Heavy Duty or Delta Fast Breaking				
	Solvent	Diptank					
	Solvent	Manual					
		Glue, label & grease aerosol	GL Remover				



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