

A close-up photograph of industrial machinery, likely a pump or valve, with a thick, yellow, viscous liquid being poured or flowing through it. The machinery is made of metal and has various pipes and fittings. The background is blurred, showing more of the industrial environment. A large blue diagonal stripe runs across the lower half of the image.

GUIDE
DOWNLOAD

The essential guide to understanding

INDUSTRIAL SOLVENT DEGREASING CHEMICALS FOR MRO

The essential guide to understanding Industrial Solvent Degreasing Chemicals for MRO

In the realm of industrial maintenance, repair, and overhaul (MRO), solvent degreasing chemicals are indispensable. These chemicals play a critical role in ensuring that machinery and equipment remain free from contaminants, which can impede performance and lead to premature failure.

However, the use of these chemicals is not without its challenges and risks. This blog will delve into the importance of industrial solvent degreasing chemicals, the common ingredients used, their dangers, necessary precautions and personal protective equipment (PPE), and their contribution to volatile organic compounds (VOCs) emissions.



Importance of Industrial Solvent Degreasing Chemicals

In industrial settings, machinery and equipment are often exposed to various forms of contamination, including oils, greases, dirt, and residues from manufacturing processes.

Solvent degreasing chemicals are crucial for several reasons:



Performance Optimisation

Clean machinery operates more efficiently. Removing grease and oil ensures that components can move smoothly, reducing wear and tear and enhancing overall performance.



Preventive Maintenance

Regular degreasing helps prevent the buildup of contaminants that can lead to mechanical failures. This extends the lifespan of equipment and reduces downtime.



Preparation

Solvent degreasing is essential in preparing parts and surfaces for Non-Destructive Testing (NDT), assembly, and welding.



Safety

Accumulated grease and oil can create hazardous conditions, such as slip and fire risks. Degreasing mitigates these dangers, ensuring a safer working environment.

Solvent Degreasing for Preparing for NDT, Assembly, and Welding

Solvent degreasing is vital for ensuring clean surfaces in NDT, assembly, and welding. It enhances inspection accuracy, adhesive bonding, mechanical fit, corrosion resistance, weld quality, and overall process efficiency while improving safety. Incorporating solvent degreasing into preparation routines leads to higher quality and reliability in industrial processes.

Non-Destructive Testing (NDT)

Inspection Accuracy

NDT methods like ultrasonic and dye penetrant testing rely on clean surfaces. Oils and dirt can obscure defects, leading to inaccurate results. Solvent degreasing removes these contaminants, ensuring precise and reliable inspections.

Surface Preparation

For dye penetrant testing, contaminants can prevent the penetrant from entering cracks properly. Solvent degreasing ensures a clean surface for effective defect detection.

Assembly

Adhesive Bonding

Contaminants weaken adhesive bonds. Solvent degreasing ensures clean surfaces for stronger, more durable bonds.

Mechanical Fit

Clean surfaces ensure proper fit during assembly. Contaminants can cause misalignments and increased wear. Solvent degreasing helps achieve precise assembly.

Corrosion Prevention

Residual oils and greases can hinder protective coatings. Solvent degreasing allows coatings to adhere properly, enhancing corrosion resistance.

Welding

Weld Quality

Clean surfaces are crucial for high-quality welds. Contaminants can cause defects like porosity and inclusions, weakening the weld. Solvent degreasing removes these contaminants, ensuring strong, defect-free welds.

Process Efficiency

Contaminated surfaces can cause issues like poor arc stability and excessive spatter. Solvent degreasing ensures clean surfaces, leading to more efficient welding.

Health and Safety

Burning oils and greases during welding can release harmful fumes. Solvent degreasing reduces these emissions, creating a safer work environment.



What's in a Solvent Degreaser?

Industrial solvent degreasers often contain a mix of organic and inorganic compounds, each with specific properties tailored to break down and remove grease and contaminants.

Some common ingredients include:

- ▲ **Trichloroethylene (TCE):** A powerful solvent used for its effectiveness in dissolving greases and oils.
- ▲ **Methylene Chloride (Dichloromethane):** Known for its strong solvent properties, it's effective in removing tough contaminants.
- ▲ **Perchloroethylene (PERC):** Widely used for dry cleaning and degreasing, it's valued for its ability to dissolve a wide range of organic materials.
- ▲ **Acetone:** A versatile solvent used for cleaning and degreasing due to its rapid evaporation rate and effectiveness in breaking down resins and plastics.
- ▲ **Isopropyl Alcohol (IPA):** Commonly used for its disinfecting properties and effectiveness in removing oils and residues.



Trichloroethylene

Trichloroethylene (TCE) is a chlorinated hydrocarbon commonly used as an industrial solvent. It is a colourless, volatile liquid with a sweet odour. Trichloroethylene is a powerful solvent used in industrial degreasing due to its effectiveness and non-flammability. However, its use comes with significant health and environmental risks.

Adhering to CoSHH guidelines, using appropriate PPE, and ensuring proper ventilation and training are crucial to safely manage the dangers associated with TCE. Understanding and mitigating these risks helps maintain a safer workplace and protect the environment.

Why is Trichloroethylene used in solvent degreasing?

Trichloroethylene is used in solvent degreasing due to its effectiveness in dissolving a wide range of organic materials, including greases, oils, and waxes.

It has several advantageous properties:

- ▲ **Solvency Power:** TCE is highly effective at breaking down and removing stubborn contaminants from metal surfaces.
- ▲ **Non-Flammability:** Unlike many other solvents, TCE is non-flammable, reducing the risk of fire during use.
- ▲ **Volatility:** TCE evaporates quickly, leaving minimal residue on cleaned surfaces.

CoSHH Guidelines and Hazard Symbols

The Control of Substances Hazardous to Health (CoSHH) regulations in the UK provide guidelines for managing hazardous substances like TCE.

Key CoSHH guidelines for TCE include:

- ▲ **Risk Assessment:** Conduct a thorough risk assessment to identify potential hazards and implement control measures.
- ▲ **Exposure Limits:** Adhere to the Workplace Exposure Limits (WELs) set for TCE to protect worker health.
- ▲ **Health Surveillance:** Implement health surveillance for workers exposed to TCE to detect early signs of adverse health effects.
- ▲ **Control Measures:** Use engineering controls, safe work practices, and PPE to minimise exposure.



GHS07 (Exclamation Mark)

Indicates that TCE can cause irritation to the skin, eyes, and respiratory system.



GHS08 (Health Hazard)

Signifies that TCE is a carcinogen and can cause serious health effects.



GHS09 (Environmental Hazard)

Indicates that TCE poses a risk to the environment, particularly aquatic life.

Dangers Associated with Trichloroethylene

Despite its effectiveness, TCE poses significant health and environmental risks:

CARCINOGENICITY

TCE is classified as a carcinogen, with long-term exposure linked to an increased risk of cancer, particularly liver and kidney cancers.

NEUROLOGICAL EFFECTS

Prolonged exposure can cause neurological issues, including dizziness, headaches, and cognitive impairments.

RESPIRATORY ISSUES

Inhalation of TCE vapours can lead to respiratory irritation and central nervous system depression.

ENVIRONMENTAL IMPACT

TCE can contaminate soil and groundwater, posing long-term environmental hazards.

Precautions

To mitigate the risks associated with TCE, strict safety measures are necessary:

VENTILATION

Ensure adequate ventilation to disperse TCE vapours and reduce inhalation risks. Use fume hoods or local exhaust ventilation systems.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Gloves: Use chemical-resistant gloves to prevent skin contact.

Respirators: Use appropriate respirators to protect against inhalation of TCE vapours.

Eye Protection: Wear safety goggles or face shields to protect against splashes.

TRAINING

Provide comprehensive training on the safe handling, storage, and disposal of TCE.

MONITORING

Regularly monitor air quality and TCE levels in the workplace to ensure they remain within safe limits.



Methylene Chloride

Methylene chloride, also known as dichloromethane (DCM), is a volatile, colourless liquid with a sweet aroma. It is widely used as an industrial solvent due to its excellent solvency properties. Methylene chloride is a powerful solvent widely used in industrial degreasing due to its high solvency power and non-flammability.

However, it poses significant health and environmental risks. Adhering to CoSHH guidelines, using appropriate PPE, and ensuring proper ventilation and training are essential to manage the dangers associated with methylene chloride. By understanding and mitigating these risks, industries can maintain a safer workplace and protect the environment.

Why is Methylene Chloride used in solvent degreasing?

Methylene chloride is used in solvent degreasing for several reasons:

- ▲ **High Solvency Power:** It effectively dissolves a wide variety of organic compounds, including greases, oils, and waxes.
- ▲ **Fast Evaporation:** Methylene chloride evaporates quickly, which minimises residue on cleaned surfaces.
- ▲ **Non-Flammability:** It is non-flammable under most conditions, reducing the risk of fire during its use.
- ▲ **Penetration Ability:** Its low surface tension allows it to penetrate and clean intricate parts and complex assemblies effectively.

CoSHH Guidelines and Hazard Symbols

The Control of Substances Hazardous to Health (CoSHH) regulations in the UK provide guidelines for managing methylene chloride.

Key CoSHH guidelines include:

- ▲ **Risk Assessment:** Conduct a detailed risk assessment to identify potential hazards and implement appropriate control measures.
- ▲ **Exposure Limits:** Adhere to the Workplace Exposure Limits (WELs) for methylene chloride to protect worker health.
- ▲ **Health Surveillance:** Implement health surveillance for workers exposed to methylene chloride to detect early signs of adverse health effects.
- ▲ **Control Measures:** Use engineering controls, safe work practices, and PPE to minimise exposure.



GHS07 (Exclamation Mark)

Indicates that methylene chloride can cause irritation to the skin, eyes, and respiratory system.



GHS08 (Health Hazard)

Signifies that methylene chloride is a carcinogen and can cause serious health effects.



GHS09 (Environmental Hazard)

Indicates that methylene chloride poses a risk to the environment, particularly aquatic life.

Dangers Associated with Methylene Chloride

Despite its usefulness, methylene chloride poses several health and safety risks:

TOXICITY

Inhalation of methylene chloride vapours can cause dizziness, headache, nausea, and in severe cases, central nervous system depression.

CARCINOGENICITY

Methylene chloride is classified as a potential carcinogen, with long-term exposure linked to an increased risk of cancer.

RESPIRATORY AND SKIN IRRITATION

Prolonged exposure can cause respiratory irritation and skin contact can lead to dermatitis.

CARBON MONOXIDE PRODUCTION

Methylene chloride can metabolise to carbon monoxide in the body, leading to symptoms of carbon monoxide poisoning, such as shortness of breath and chest pain.

Precautions

To safely handle methylene chloride, the following precautions are necessary:

VENTILATION

Ensure adequate ventilation to disperse methylene chloride vapours. Use local exhaust ventilation or fume hoods.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Gloves: Wear chemical-resistant gloves to prevent skin contact.

Respirators: Use appropriate respirators to protect against inhalation of vapours.

Eye Protection: Use safety goggles or face shields to protect eyes from splashes.

TRAINING

Provide thorough training on the safe handling, storage, and disposal of methylene chloride.

MONITORING

Regularly monitor air quality and methylene chloride levels in the workplace to ensure they are within safe limits.



Perchloroethylene

Perchloroethylene, also known as tetrachloroethylene or PERC, is a chlorinated hydrocarbon. It is a colourless liquid with a sweet, ether-like odour and is commonly used as a solvent in various industrial applications. Perchloroethylene is a powerful solvent widely used in industrial degreasing due to its high solvency power and non-flammability.

However, it poses significant health and environmental risks. Adhering to CoSHH guidelines, using appropriate PPE, and ensuring proper ventilation and training are essential to manage the dangers associated with PERC. Understanding and mitigating these risks helps maintain a safer workplace and protect the environment.

Why is Perchloroethylene used in solvent degreasing?

Perchloroethylene is used in solvent degreasing due to several beneficial properties:

- ▲ **Effective Solvent:** PERC has a high solvency power, effectively dissolving a wide range of organic substances, including oils, greases, and waxes.
- ▲ **Non-Flammability:** PERC is non-flammable, making it safer to use in various industrial environments.
- ▲ **Stability:** It is chemically stable and does not degrade easily, ensuring consistent performance.
- ▲ **Low Evaporation Rate:** PERC has a relatively low evaporation rate, which allows for prolonged contact time and more effective cleaning.

CoSHH Guidelines and Hazard Symbols

The Control of Substances Hazardous to Health (CoSHH) regulations in the UK provide guidelines for managing perchloroethylene.

Key CoSHH guidelines include:

- ▲ **Risk Assessment:** Conduct a detailed risk assessment to identify potential hazards and implement appropriate control measures.
- ▲ **Exposure Limits:** Adhere to the Workplace Exposure Limits (WELs) for PERC to protect worker health.
- ▲ **Health Surveillance:** Implement health surveillance for workers exposed to PERC to detect early signs of adverse health effects.
- ▲ **Control Measures:** Use engineering controls, safe work practices, and PPE to minimise exposure.



GHS07 (Exclamation Mark)

Indicates that PERC can cause irritation to the skin, eyes, and respiratory system.



GHS08 (Health Hazard)

Signifies that PERC is a carcinogen and can cause serious health effects.



GHS09 (Environmental Hazard)

Indicates that PERC poses a risk to the environment, particularly aquatic life.

Dangers Associated with Perchloroethylene

Despite its effectiveness, perchloroethylene poses several health and environmental risks:

CARCINOGENICITY

PERC is classified as a potential carcinogen, with long-term exposure linked to an increased risk of cancer, particularly liver and kidney cancers.

NEUROLOGICAL EFFECTS

Prolonged exposure can lead to neurological symptoms such as dizziness, headaches, and cognitive impairments.

RESPIRATORY ISSUES

Inhalation of PERC vapours can cause respiratory irritation and central nervous system depression.

ENVIRONMENTAL IMPACT

PERC can contaminate soil and groundwater, posing long-term environmental hazards.

Precautions

To mitigate the risks associated with perchloroethylene, the following precautions should be taken:

VENTILATION

Ensure adequate ventilation to disperse PERC vapours. Use local exhaust ventilation or fume hoods.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Gloves: Wear chemical-resistant gloves to prevent skin contact.

Respirators: Use appropriate respirators to protect against inhalation of PERC vapours.

Eye Protection: Use safety goggles or face shields to protect eyes from splashes.

TRAINING

Provide thorough training on the safe handling, storage, and disposal of PERC.

MONITORING

Regularly monitor air quality and PERC levels in the workplace to ensure they are within safe limits.



Acetone

Acetone, also known as propanone, is a colourless, volatile, and flammable liquid with a distinct, sweet odour. It is a simple ketone and is widely used as an industrial solvent. Acetone is a versatile and effective solvent widely used in industrial degreasing due to its high solvency power, rapid evaporation, and compatibility with various materials.

However, its high flammability and potential health effects necessitate careful handling. Adhering to CoSHH guidelines, using appropriate PPE, ensuring proper ventilation, and implementing fire safety measures are crucial for safely managing the risks associated with acetone. Understanding and mitigating these risks helps maintain a safer workplace and protect both workers and the environment.

Why is Acetone used in solvent degreasing?

Acetone is used in solvent degreasing for several reasons:

- ▲ **High Solvency Power:** Acetone is effective at dissolving a wide range of organic materials, including greases, oils, and resins.
- ▲ **Rapid Evaporation:** Acetone evaporates quickly, leaving minimal residue on cleaned surfaces, which is ideal for processes requiring clean and dry parts.
- ▲ **Low Toxicity:** Compared to some other industrial solvents, acetone has relatively low toxicity, making it safer for use in various applications.
- ▲ **Compatibility:** Acetone is compatible with many materials, including metals and plastics, making it versatile for different cleaning tasks.

CoSHH Guidelines and Hazard Symbols

The Control of Substances Hazardous to Health (CoSHH) regulations in the UK provide guidelines for managing acetone.

Key CoSHH guidelines include:

- ▲ **Risk Assessment:** Conduct a detailed risk assessment to identify potential hazards and implement appropriate control measures.
- ▲ **Exposure Limits:** Adhere to the Workplace Exposure Limits (WELs) for acetone to protect worker health.
- ▲ **Health Surveillance:** Implement health surveillance for workers exposed to acetone to detect early signs of adverse health effects.
- ▲ **Control Measures:** Use engineering controls, safe work practices, and PPE to minimise exposure.



GHS02 (Flame)

Indicates that acetone is highly flammable.



GHS07 (Exclamation Mark)

Signifies that acetone can cause irritation to the skin, eyes, and respiratory system.

Dangers Associated with Acetone

Despite its usefulness, acetone poses several risks:

FLAMMABILITY

Acetone is highly flammable, and its vapours can form explosive mixtures with air.

HEALTH EFFECTS

Inhalation of acetone vapours can cause respiratory irritation, headaches, dizziness, and in high concentrations, central nervous system depression. Skin contact can lead to dryness and irritation.

ENVIRONMENTAL IMPACT

While acetone is less harmful to the environment than many other solvents, its rapid evaporation contributes to air pollution and the formation of ground-level ozone.

Precautions

To handle acetone safely, the following precautions should be observed:

VENTILATION

Ensure good ventilation to disperse acetone vapours. Use local exhaust ventilation or work in well-ventilated areas.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Gloves: Wear chemical-resistant gloves to prevent skin contact.

Respirators: Use appropriate respirators if ventilation is inadequate to protect against inhalation of vapours.

Eye Protection: Use safety goggles or face shields to protect against splashes.

FIRE SAFETY

Keep acetone away from open flames, sparks, and other sources of ignition. Use flame-proof equipment where necessary.

STORAGE

Store acetone in tightly closed, properly labelled containers in a cool, well-ventilated area away from incompatible substances.



Isopropyl Alcohol

Isopropyl alcohol (IPA), also known as isopropanol or 2-propanol, is a colourless, flammable liquid with a strong odour. It is a common industrial solvent and cleaning agent. Isopropyl alcohol is a versatile and effective solvent widely used in industrial degreasing due to its high solvency power, rapid evaporation, and disinfectant properties.

However, its flammability and potential health effects necessitate careful handling. Adhering to CoSHH guidelines, using appropriate PPE, ensuring proper ventilation, and implementing fire safety measures are crucial for safely managing the risks associated with IPA. Understanding and mitigating these risks helps maintain a safer workplace and protect both workers and the environment.

Why is Isopropyl Alcohol used in solvent degreasing?

Isopropyl alcohol is used in solvent degreasing for several reasons:

- ▲ **Effective Solvent:** IPA dissolves a wide range of non-polar compounds, making it effective at removing oils, greases, and resins.
- ▲ **Rapid Evaporation:** It evaporates quickly, leaving minimal residue on surfaces, which is ideal for applications requiring clean, dry parts.
- ▲ **Disinfectant Properties:** IPA has antimicrobial properties, making it useful for both cleaning and disinfecting surfaces.
- ▲ **Non-Corrosive:** It is non-corrosive to metals and many plastics, making it suitable for use on a variety of materials.

CoSHH Guidelines and Hazard Symbols

The Control of Substances Hazardous to Health (CoSHH) regulations in the UK provide guidelines for managing isopropyl alcohol.

Key CoSHH guidelines include:

- ▲ **Risk Assessment:** Conduct a detailed risk assessment to identify potential hazards and implement appropriate control measures.
- ▲ **Exposure Limits:** Adhere to the Workplace Exposure Limits (WELs) for IPA to protect worker health.
- ▲ **Health Surveillance:** Implement health surveillance for workers exposed to IPA to detect early signs of adverse health effects.
- ▲ **Control Measures:** Use engineering controls, safe work practices, and PPE to minimise exposure.



GHS02 (Flame)

Indicates that IPA is highly flammable.



GHS07 (Exclamation Mark)

Signifies that IPA can cause irritation to the skin, eyes, and respiratory system.

Dangers Associated with Isopropyl Alcohol

While useful, isopropyl alcohol poses several risks:

FLAMMABILITY

IPA is highly flammable, and its vapours can form explosive mixtures with air.

HEALTH EFFECTS

Inhalation of IPA vapours can cause respiratory irritation, headaches, dizziness, and central nervous system depression at high concentrations. Prolonged skin contact can lead to dryness and irritation.

ENVIRONMENTAL IMPACT

Although IPA is less harmful to the environment than many other solvents, its volatility can contribute to air pollution.

Precautions

To handle isopropyl alcohol safely, the following precautions should be observed:

VENTILATION

Ensure adequate ventilation to disperse IPA vapours. Use local exhaust ventilation or work in well-ventilated areas.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Gloves: Wear chemical-resistant gloves to prevent skin contact.

Respirators: Use appropriate respirators if ventilation is inadequate to protect against inhalation of vapours.

Eye Protection: Use safety goggles or face shields to protect against splashes.

FIRE SAFETY

Keep IPA away from open flames, sparks, and other sources of ignition. Use flame-proof equipment where necessary.

STORAGE

Store IPA in tightly closed, properly labelled containers in a cool, well-ventilated area away from incompatible substances.

Contribution to VOCs

Volatile Organic Compounds (VOCs) are emitted as gases from certain solids or liquids, including many industrial solvents. VOCs contribute to air pollution and pose significant environmental and health risks.



Air Quality

VOCs contribute to the formation of ground-level ozone and smog, impacting air quality and public health.



Health Risks

Exposure to VOCs can lead to respiratory issues, headaches, and long-term health effects such as liver and kidney damage and cancer.



Regulations

Regulatory agencies, such as the Environmental Protection Agency (EPA), have established guidelines and limits for VOC emissions to mitigate their impact.





Industrial solvent degreasing chemicals are vital for maintaining the efficiency and safety of machinery and equipment in MRO activities. However, their use comes with significant health and environmental risks. Understanding the dangers associated with these chemicals, adhering to safety precautions, and using appropriate PPE can mitigate these risks.

Furthermore, awareness of their contribution to VOC emissions can drive efforts to adopt safer, more sustainable alternatives, balancing industrial needs with environmental and public health considerations.

Talk to our experts
and find out the best solution
for your application.

What are the alternatives?

Whilst solvent degreasing still has its place and remains a highly effective formula for industrial degreasing, there are non-solvent based degreasers in the marketplace which are highly effective yet contribute much lower VOCs and contain far safer formulas.

The example on the next page is Lotoxane® which is manufactured right here at Arrow Solutions.

For more information, look out for our next guide:

**Aqueous Versus
Solvent Degreasing**

Revolutionising INDUSTRIAL DEGREASING with Lotoxane®



Bridging the gap between safety and efficiency, Lotoxane® is our safe and cost-effective degreaser that has been missing from your collection.

This revolutionary product redefines industrial degreasing with a blend of safety and efficiency.

The first choice for safe and effective degreasing

- ✓ Produces very low odour
- ✓ One of the safest formulations on the market
- ✓ Helps in reducing your VOCs
- ✓ Non-flammable
- ✓ Highly approved throughout the range

Highly approved and trusted by critical industries

- ▲ Rolls Royce CSS255 Type A, B, D
- ▲ Rolls Royce OMAT 1/257G
- ▲ Airbus CML ABR 9-0140
- ▲ Airbus AIPI 09-01-002 (Non-aqueous cleaning agents)
- ▲ Boeing D6-17487 Revision L
- ▲ South African Airways
- ▲ Rail Cat Approval 007/025037 (500ml aerosol)
- ▲ Rail Cat Approval 007/025036 (500ml trigger)
- ▲ Rail Cat Approval 007/025033 (5ltr)
- ▲ Rail Cat Approval 007/025034 (20ltr)
- ▲ Rail Cat Approval 007/007369 (30ltr)
- ▲ Rail Cat Approval 007/025035 (210ltr)
- ▲ BAE R10 6026 (cleaning – cold solvent – general purpose)
- ▲ BAE R10-6027 (cleaning – cold solvent – critical applications)

	Flammable	Vapour Toxicity Classification	Carcinogenic*
Acetone	✓	Causes drowsiness and dizziness, narcotic	✗
Trichloroethylene	✗	Causes genetic defects, drowsiness and dizziness, narcotic	✓
Perchloroethylene	✗	Causes drowsiness and dizziness, narcotic	✓
Methl Ethyl Ketone (MEK)	✓	Causes drowsiness and dizziness, narcotic	✗
Isopropyl Alcohol (IPA)	✓	Causes drowsiness and dizziness, narcotic	✗
Lotoxane®	✗	Not classified	✗

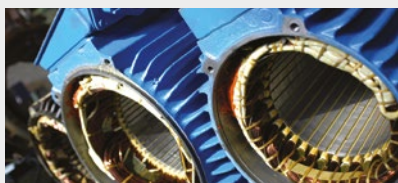
*Carcinogenic = causes cancer

Discover flexibility

Lotoxane® is renowned as one of the most effective and trusted products in the market. Its versatility is unmatched, making it suitable for a wide range of applications and materials, including metals, plastics, composites, and coatings. Unlike harsh solvent degreasers, Lotoxane® won't cause any damage.

Electrical maintenance

Degreasing of motors, switchgear and wiring assemblies.



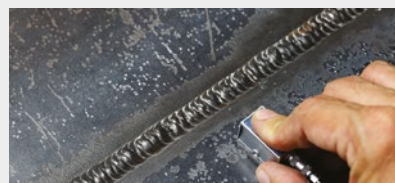
Protective coatings

Removal of transport or storage coatings.



NDT

Stage 1 cleaning.



Component preparation

Removal of cutting oils and general contamination before assembly or further processing.



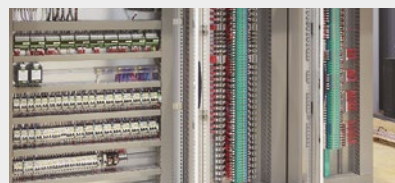
Dewatering

Displacement of water from complex forms and blind holes.



Electronics

Contact cleaning.



Final cleaning

Removal of fingerprints, adhesive and other marks on finished goods before delivery.



Maintenance inspection

Removal of lubricants and other contamination.



Surface preparation

Cleaning before coating, bonding or welding operations.



Want to know more about Lotoxane®?

At Arrow Solutions, we have been at the forefront of manufacturing and supplying exceptional cleaning and maintenance products since 1968. With a commitment to innovation and delivering the safest and highest-performing solutions, you can trust us to meet your degreasing needs while prioritising safety and sustainability.

For more information on Lotoxane®:

[Read our Product Spotlight](#)

[Download the Brochure](#)

[View the Entire Lotoxane® Range](#)



50 OVER *Years* OF INNOVATION

We're here to help you tackle your toughest cleaning and maintenance tasks with confidence.

At Arrow Solutions, we're proud to be a leading manufacturer of professional, industrial cleaning and maintenance chemical products. Our high-quality aerosols and liquids are trusted by thousands of companies worldwide to solve their everyday problems.

We've earned a reputation for innovation and manufacturing excellence, which has been recognised through numerous awards, accreditations, and OEM approvals. Our main focus is on providing exceptional products and outstanding service. We're dedicated to finding the right solution for even the most complex challenges our customers face.

In today's world, where regulations are getting stricter and performance standards are rising, more professionals are turning to Arrow Solutions. They trust us to deliver on our promise to set the standard in cleaning and maintenance.



Arrow Solutions, Rawdon Road, Moira, Swadlincote, Derbyshire, DE12 6DA, England.
+44 (0)1283 221044 sales@arrowchem.com www.arrowchem.com

