

## drawing & rolling solutions

wire rod bar strip tube profiles



## **Germ-Allcard**

Q80ils, from its European Industrial centres of excellence, develop, manufacture and market a comprehensive range of soluble and neat lubricants for the rolling and drawing applications of non-ferrous rod, bar, wire, strip, tube and profiles.

The products are marketed under the Q8 family of brands and exported to customers in over 80 countries worldwide either directly or through our network of specialist distributors and agents. This makes us one of the largest global suppliers to the rod, wire, bar, strip, tube and profile industries.

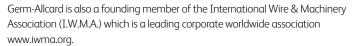


Product sales are supported by our Technical Service, through which our objective is to work with our customers to ensure the optimum productivity in all areas of the product and application to provide our customers cost savings.

The Germ-Allcard brand represents a range of neat and soluble oils, the brand is amongst the most established and well respected in the industry, with a combined heritage of over 200 years' experience in developing and supplying specialised products to the rod, wire and tube industries.

Whatever the non-ferrous materials, products like Priamus, Wirol, Aludra, Cylroll, Cyldraw and Cyldol have consistently guaranteed the quality of the finished product whilst helping our customers achieve the highest levels of productivity.

Our products are suitable for all machinery and carry approval and recognition from many drawing OEM's.



The Germ-Allcard product range compliments the wider Q80ils ranges of products for the metal manufacturing industries.







## technical service and support

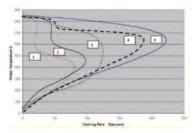
With the supply of our products comes strong technical support service quality standards verified by ISO accreditations, high profile marketing and a serious commitment to growing long term relationships with our customers.

Experienced sales, technical support, customer service professionals and a worldwide delivery network means we can consistently deliver the highest levels of customer service and after sales back up supporting this commitment.

#### Research and Development

Q80ils has three research and development laboratories which in addition to development can assure our customers of the back-up and support they expect from one of the most established brands in the wire and tube industries.

The lubricant is perhaps the smallest cost item in the process but remains one of the most influential in terms of productivity and performance of the production line.



Rolling emulsion quench analysis

#### Support

Technical Service and Support is to assist the customer maintaining the product to deliver the best performance in the application, our technical support can include all aspects of the process and not just Condition Monitoring Analysis. (Fig 1).

- Product Selection
- Emulsion Preparation and Water Quality Advice
- Comprehensive Emulsion Condition Monitoring
- Emulsion Lubrication, evaluation and advice
- $\bullet$  Rolling emulsion quench analysis
- Health and Safety Advice
- Training
- Emulsion Disposal Advice
- System Design and Filtration recommendations
- Equipment recommendations
- Technical Helplines
- Local Stock, Expertise and Support

#### Consistency of Lubrication

The consistency of the lubrication with newer generation copper wire drawing lubricants can be demonstrated and proven with both laboratory analyses and in live factory applications.

Under controlled identical conditions product technologies can be cross-referenced and compared in our laboratories.

Artificial aging under set criteria provide very stringent conditions for wire drawing emulsion evaluation and analyses.

The unique co-efficient of friction equipment used to determine the wire to capstan lubrication film performance is also used through the emulsion testing. (Fig 2)

This equipment is the only test method which utilises actual wire drawing equipment to measure a drawing emulsion's lubricating performance and can be considered a more powerful result than more traditional oil industry lubrication test methods such as Falex or Reichert.

The results from this artificial aging process can demonstrate differences from one technology of wire drawing lubricant to another. The lubrication level is monitored to determine if the performance is consistent throughout the emulsion life. This is compared with the tail off in lubrication performance commonly seen with lesser quality products. (Fig 3)

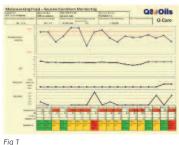
A combination of products and application knowledge, research and development capabilities and a world wide presence makes Q80ils the perfect business partner. Our mission is to be the product and solution providers by continuing to invest in the rolling and drawing lubricant technology that will protect the long term profitability of our customer and the environment.







#### **Q80ils**, smart engineering solutions





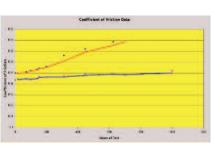


Fig 2

Fig 3





## Copper Wire Drawing

Priamus X7	Semi-trans Emulsion	Priamus X7, is a semi-synthetic lubricant optimised for copper rod breakdown and intermediate drawing on all high speed slip machines and is suited for rolled, cast, or dipform rod and is also recommended for shaved rod and small section copper strip.
Priamus X10	Semi-trans Emulsion	Multipurpose, semi-synthetic wire drawing lubricant, the low reactivity of Priamus X10 results in excellent cleanliness and exceptionally long life even at elevated operating temperatures.
Priamus X11	Semi-trans Emulsion	A semi-synthetic lubricant suitable for drawing all copper wire sizes from rod to fine wire on all types of drawing machines. It is also especially suitable for both multi-wire and in-line drawing enamelling machines.
Priamus X255	Semi-trans Emulsion	Multipurpose, semi-synthetic wire drawing lubricant, Priamus X255 is suitable for drawing all wire sizes from rod to fine wire, on all types of wire drawing machines and is especially suited for multi-wire machines and in-line drawing.
Priamus V12	Semi-trans Emulsion	Multipurpose semi-synthetic wire drawing lubricant, Priamus V12 utilises the latest synthetic ester technology to give excellent cleanliness and low reactivity.
Wirol 2000 LFG	Clear Solution	Wirol 2000 LFG is a synthetic product recommended for drawing of intermediate and small wire sizes of plain and tinned wire on both single and multi-line machines. Wirol 2000 LFG is especially recommended for drawing or rolling wire for enamelling. Further specialised applications include nickel plated and silver plated copper wires. Strip and section cold rolling is also possible with Wirol 2000 LFG.
Wirol 2020	Clear Solution	Wirol 2020 is a synthetic, very high lubricity product recommended for drawing of intermediate, fine and super fine wire sizes of plain and tinned copper in all applications, single and multiwire. Wirol 2020 is especially recommended for the tandem in-line drawing or rolling for enamelling. Further specialised applications include the drawing of nickel plated and silver plated copper wires as well as the drawing of precious metals.
Wirol 5000	Semi-trans Emulsion	Wirol 5000, a semi-synthetic lubricant is optimised for drawing plain and tinned copper wire of intermediate, fine and superfine sizes on single and multi-line machines. Independent tests show that Wirol 5000 can reduce tension breaks on multi-line machines by approx 40% compared with other products in identical conditions.

The Germ-Allcard copper wire drawing lubricants are formulated to provide the optimum balance of lubrication and cleanliness. This balance provides greater die and capstan protection, long emulsion life and consistent production eliminating manufacturing downtime.

Germ-Allcard Products	Oper	ation						Material							
Priamus X7	•	•				•	•	•	•						
Priamus X10	•	•	•	•	•	•	•	•	•						
Priamus X255	•	•	•	•	•	•	•	•	•	•	•				
Priamus V12	•	•	•	•	•	•	•	•	•	•	•				
Priamus X11	•	•	•	•			•	•	•						
Wirol 2000 LFG			•	•	•		•	•	•			•	•	•	•
Wirol 2020		•	•	•	•		•	•	•			•	•	•	•
Wirol 5000		•	•	•			•	•	•						
	Rod	Intermediate	Multiwire	FineWire	Super Fine	Shaving	Continuous Annealers	Copper	Tinned Copper	Brass	Bronze	Gold	Platinum	Silver	Nickel

## Annealing Fluid

Annealer Fluid-LF Annealer Fluid-LF is a fully synthetic, water-soluble additive that is entirely free frommineral oil and conventional fatty soaps. Annealer Fluid-LF is recommended for use in the cooling water of continuous annealers for both plain and tinned copper wire production.





### Aluminium Wire Drawing

Germ-Allcard provide a range of products for the drawing of Aluminium and Aluminium alloys, these products are suitable for slip, limited slip and non-slip drawing applications in high and slow speed wire drawing machines. Lubricants for the drawing of Single or Twin Rod, Intermediate, Fine and Super Fine applications are available and these provide benefits of long lubricant life and enhanced brightness of the drawn aluminium. Within our range we can offer options to our customers, either to use a NEAT or SOLUBLE OIL for the drawing applications.

#### Neat

Germ-Allcard ALUDRA which is a range of neat drawing oils are formulated using our own unique Q8 base oils which have exceptional characteristics of high oxidation stability and low sulphur levels. These properties promote a longer lubricant life, reduced top up and a brighter surface finish to the drawn aluminium. The ALUDRA products are also enhanced with synthetic lubricity additives and performance additives to provide lubrication and protection to the dies and capstan surfaces.

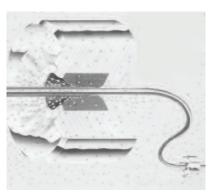
#### Soluble

The latest generation of Germ-Allcard PRIAMUS soluble oils are very successful for the high speed drawing of Aluminium and Aluminium alloys. These emulsions provide substantial benefits over the use of neat oils for the aluminium drawing application in both high and slow speed applications. The Germ-Allcard PRIAMUS products are clean in use, provide exceptional cooling and promote a very clean drawn wire surface. These soluble drawing oils compliment the Germ-Allcard CYLROLL, hot rolling emulsions for aluminium thereby keeping a clean rod and wire throughout the rolling and drawing process.

Please consult our technical department for more details, also referring to the technical papers for aluminium wire drawing using neat and soluble wire drawing lubricants.

Aludra 30	30	A low viscosity oil with high oxidation stability for the drawing of aluminium and aluminium alloy in Medium and Fine wire sizes on slip machines, it is also suitable for shaving applications and for use as a finishing die lubricant to facilitate a cleaner and brighter surface wire finish.
Aludra 150	150	A medium viscosity oil with high oxidation stability for the drawing of aluminium and aluminium alloys for Rod and Intermediate applications, it is also suitable for high speed slip and non-slip machines drawing shaped conductors and processing shaved rod.
Aludra 200	200	A high viscosity oil with high oxidation stability for the drawing of aluminium and high magnesium/silicon content aluminium alloys. ALUDRA 200 can draw all conductor wire, welding wire, rivet wire and handle a variety of obscure applications. It is also suitable for cold heading applications for fasteners and rivets as well as tube drawing applications from 20mm to capillary sizes.
Aludra 3993A Conc		A low viscosity lubricity additive for lubrication in aluminium stranding and compaction applications where it is used to provide residual lubrication within the compaction die. The product has vanishing properties hence leaving no residues on the compacted conductor. It can also be used as a lubricity booster for the ALUDRA range when drawing oils become contaminated with tramp oils.

Germ-Allcard P	Operati	ion		Material					
Aludra 30	Neat				•	•		•	•
Aludra 150	Neat	•	•	•				•	•
Aludra 200	Neat	•	•	•				•	•
Priamus	Soluble	•	•	•	•	•	•	•	•
		Rod	Intermediate	Multiwire	Fine Wire	Super Fine	Shaving	Aluminium	Aluminium Alloy





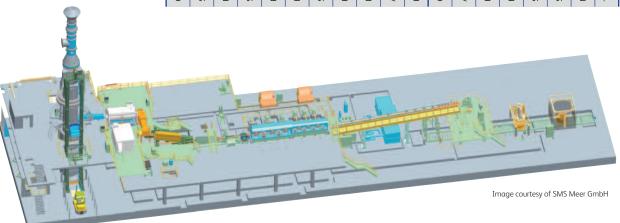


## Non-Ferrous Rolling

	Cylroll CR55	Heavy duty rolling oil for aluminium and copper. Specially developed for roughing mill applications. Enhanced to stop oxides adhering to the roll surface and flush the loose scale to the filters.
	Cylroll CR65	Synthetically fortified rolling oil for copper. Specially developed for finishing mill applications. Enhanced to stop oxides adhering to the roll surface and flush the loose scale to the filters. Provides superior roll life performance, protection and give increased productivity.
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	Priamus X10	Multipurpose, semi-synthetic rolling lubricant, the low reactivity of Priamus X10 results in excellent cleanliness and exceptionally long life even at elevated operating temperatures.
	Priamus X255	Multipurpose semi-synthetic rolling lubricant, PRIAMUS X255 has the high lubricity and cleanliness required for difficult rolling applications for rod, strip, wires, tubes and profiles.
	Wirol 2020	WIROL 2000LFG is a fully synthetic, oil free product recommended for cold rolling applications of fine and super fine wires, strip, profiles and section. Multi-materials include copper, tin plate, nickel plate, silver plate and all precious metals.
	Wirol 2000 LFG	WIROL 2020 is a fully synthetic, oil free product with high lubricity and cleanliness for cold rolling applications of fine and super fine wires, strip, profiles and section. Suitable for all materials including yellow metals, plated metals, precious metals and stainless steel.
	Q8 Bach R Series	A speciality range of superior performance neat rolling oils for the cold rolling of strip, the products cover the rolling of steel, stainless steel and all yellow metals.

The Germ-Allcard range of emulsifiable oils form stable and highly effective emulsions for the hot and cold rolling of non-ferrous rod and strip. The range includes specific grades for hot rolling continuously cast copper and aluminium on Southwire, Contirod and Properzi mills. Complementing the range are the Q8 Bach R Series Neat Rolling Lubricants for strip production.

Germ-Allcard Products	Mill	Mill Type									Material								
Cylroll CR55	•	•	•	•	•							•	•	•					
Cylroll CR65	•	•	•									•							
Priamus X10				•	•							•	•						
Priamus X255				•	•							•	•	•	•				
Wirol 2000 LFG				•	•							•		•	•				
Wirol 2020				•	•							•		•	•				
Q8 Bach R Series						•	•	•	•	•	•	•		•	•	•	•	•	•
	Contirod	Southwire	Properzi	Senior	Buhler	Fives DMS	Sundwig	Frohling	Demag	Achenbach	Hitachi	Copper	Aluminium	Brass	Bronze	Stainless	Steel	Nickel Chrome	Titanium







### Yellow Metal Protectives

These are specialised products for the increased protection of yellow metals. They include wax-coat protection of hot rolled continuously cast and upcast copper as well as quenching protection products for copper and alloy hot extrusion of tubes and profiles.

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Copprotect	-

Wax coat protective for copper rod following the rolling or upcast application, it contains a unique wax substitute to give a tacky finish for neat rod coiling, including an advanced yellow metal protection package for humid conditions.

## Copprotect Z

Copprotect Z can be used in virtually any system or environment where the requirement is to prevent the corrosion of copper ions in accelerating the degradation of other metals or components. It can be used at various concentrations ranging from 0.05% in water.





### Tube Drawing

Cyldraw 6000	6500	Single Shot high viscosity non ferrous tube drawing lubricant for drawing all sizes of tube, optimum lubrication and surface finish is achieved.
Cyldraw 1900C	3400	Single Shot medium viscosity non ferrous tube drawing lubricant, multipurpose product for all tube applications.
Cyldol OC32	210	Cyldol OC32 is used for drawing copper and copper alloy tubes from shells to finish sizes on draw benches and bull blocks. It is also especially suited for final die lubrication and finishing applications on Schumag equipment. Cyldol OC32 is a medium viscosity neat lubricant with superior friction reducing characteristics and bright annealing properties developed for use in extremely humid environments. Using selected polymeric additives and boundary lubricants Cyldol OC32 achieves an excellent tube surface finish, whilst promoting die life. Having excellent temperature and viscosity characteristics, Cyldol OC32 is easier to pump at low temperatures but yet maintaining viscosity at higher temperatures for more severe applications.
Cyldol TBL	29	Cyldol TBL is a low viscosity neat lubricant with superior friction reducing characteristics and exceptional bright annealing properties. Using selected polymeric additives and boundary lubricants Cyldol TBL achieves an excellent tube surface finish, whilst promoting good die life. Annealing characteristics are achieved by use of a uniquely processed mineral oil from our own Group refineries.

Aludra

Lubricants for the drawing of aluminium and aluminium alloys in circulatory lubrication systems, drawing all sizes from large to capillary tubes.

With the two ranges of non-ferrous tube drawing lubricants from Germ-Allcard are advanced lubricants for Bench and Block drawing of copper, aluminium and alloy tubes.

30 150

200

Germ-Allcard Products	Operat	tion	Tube (	Tube OD Size					Material							
Cyldraw 6000	•	•	•	•	•	•		•	•	•	•	•	•	•		
Cyldraw 1900C	•	•	•	•	•	•		•	•	•	•	•	•	•		
Cyldol OC32	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Cyldol TBL	•	•			•	•	•	•	•	•	•	•	•	•		
Aludra	•	•	•	•	•	•	•			•	•					
	Drawbench	Block	>500mm dia.	500-25mm	25-10mm	<10mm	Capilliary	Copper	Copper Alloy	Aluminium	Aluminium Alloy	Brass	Bronze	Precious Metals		





## Stainless Steel Bar, Rod & Wire

These are lubricants developed for the wet drawing of stainless steel and alloy steel bars, rods, wires and section. In addition to these drawing lubricants we also have a full range of products developed for the bar and rod manufacturing process which have the OEM approval of Danieli.

Tantaroll 2	550	A high viscosity, high performance drawing oil for the most severe applications of bar drawing.
Tantaroll STS/M	140	A medium viscosity drawing oil for the lubrication of bar and rod drawing.
Tantaroll 725	23	A low viscosity drawing oil for the drawing of stainless steel fine wires.

Germ-Allcard Products	Operation Material							
Tantaroll 2	•	•		•			•	
Tantaroll STS/M	•	•	•	•	•	•	•	
Tantaroll 725			•				•	
	Rod	Intermediate	Fine	Bar	Steel	Galvansied Steel	Stainless Steel	



## **Ancillary Products**

Within the Germ-Allcard portfolio there is a comprehensive range of ancillary products to complement our wire and tube drawing lubricants. These include: System Cleaners, Biocides, Antifoams, pH Buffers and Copper Protectives.

## **Complementary Products**

Within the Q8 family of brands, we have complementary products including Rolling emulsions for Welded Tubes, Rolling Oils, High Temperature Chain Oils and a full range of Metalworking Products, please refer to our Product Portfolio list and technical department.











## product portfolio

Q80ils product portfolio consists of over 1,000 grades of finished lubricants, process oils, extracts and waxes. This comprehensive range makes Q80ils one of the most complete suppliers of lubricants and petroleum based products in the industry.

For the Metal Manufacturing Industries, our product range includes the following:

Wire Drawing Lubricants for Copper, Aluminium and all other Non-Ferrous Metals

Full Synthetic Wire Drawing Lubricants for Fine and Super fine sizes

Rolling Emulsions for the Hot Rolling of Continuously Cast Copper and Aluminium

Yellow Metal Protective for Hot Rolled Copper, and all other Copper Applications

Tube Drawing Lubricants for Copper, Aluminium and all other Non-Ferrous Metals

Tube Rolling and Drawing Lubricants for Welded Tubes, Steel and Stainless Steel

**Bar Drawing Oils** 

Rolling Emulsions for the Cold Rolling of Copper, Aluminium and other materials

Cold Rolling Oils for Stainless Steel, Copper, Brass and Phosphor Bronze

High Temperature Chain Oils for Production Conveyor Systems

Heat Treatment Oils and Emulsions

Wire Rope Lubricants and Greases

Casting Lubricants

Corrosion Protectives for all Metals

Greases

Morgan Bearing Oils

Soluble Metalworking Fluids for Metal Removal, all applications

Neat Metalworking Oils for Metal Removal, all applications

Neat and Soluble Pressworking, Punching and Forming Oils

Vanishing Pressforming Oils for Electrical Connectors

Biodegradable and Renewable Resource Products

Wash Fluids

Comprehensive Range of Plant Maintenance Oils and Greases, including Danieli approved Products

Energy Products, including Gas Engine, Wind Turbine and Turbine Oils

Technical Services and Support for all our Products

This is not an exhaustive list, hence if your product requirement is not shown, please contact your Customer Service or Technical Contacts.

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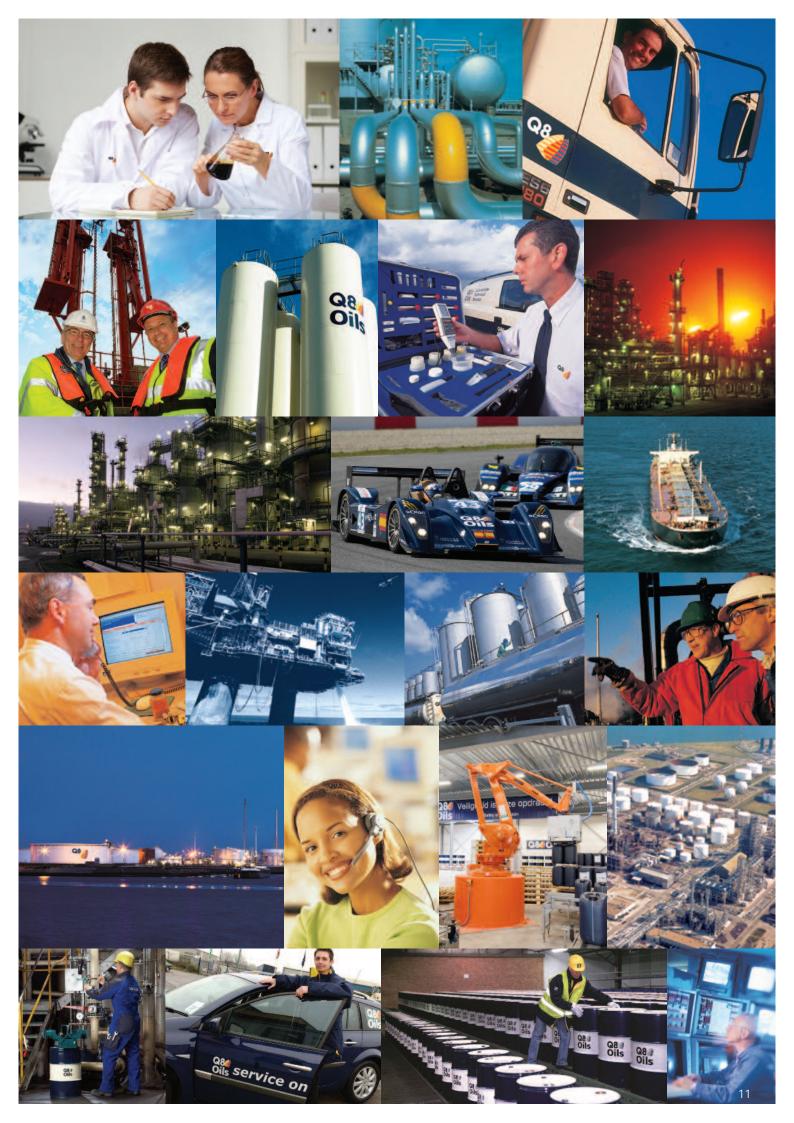


# about Q80ils

Q80ils is part of the Kuwait Petroleum Corporation (KPC), one of the world's largest oil companies. With 120 years of known reserves and crude oil production levels of 2.9 million barrels per day, it is ranked the seventh largest oil producer in the world. KPC's business spans every segment of the hydrocarbon industry: on and offshore exploration, production, refining, marketing, retailing, petrochemicals and marine transportation.

Backed by the significant corporate resources of our parent company, Q80ils is a fully integrated lubricants organisation. We refine our own high quality base oils from Kuwait Export Crude, manufacture an extensive range of oils in our own blending plants and have established state of the art European laboratories for development and technical support work. Today, Q80ils wire and tube drawing fluids are used by customers in over 80 countries around the world.







smart engineering solutions

