



# PROVIDING VALUE TO INDUSTRY SINCE 1884

A.W. Chesterton Company is a leading international manufacturer and distributor of five distinct product lines. Each product line is positioned to provide value-driven solutions to meet industry needs.

Since 1884 we have worked closely with our customers to provide solutions that help them operate more reliably, efficiently, and economically.

A.W. Chesterton Company is ISO 9001/14001 and MRP II Class-A certified.

### Chesterton in Europe, The Middle East, and Africa

Chesterton has been using high performance materials, formulations, and designs to solve your toughest industrial applications to provide value-driven solutions with documented success and recognition across Europe, The Middle East, and Africa.

### **Local Service**

The expertise of your local Chesterton Technical Specialist combined with the support of our engineering staff will enable you to enjoy significantly reduced operating costs, increased reliability, and years of trouble-free service.



# **Service and Sales Locations** Sales and Certified Service/Repair

Chesterton International GmbH

Am Lenzenfleck 23

D-85737 Ismaning

Germany

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<b>Rotating Equipment</b>

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# Meet your plant's performance objectives with Chesterton<sub>®</sub>

Depend on Chesterton to provide high performance solutions that meet the needs of your facility. Our knowledgeable and experienced specialists and application engineers can help you meet your asset management objectives. We have a comprehensive line of mechanical seals, packing, coatings, cleaners, lubricants and polymeric seals designed to maximize performance.

### The world of tomorrow is created today.

 $That's \textit{ why we build solutions that increase energy efficiency, improve \textit{ reliability, and protect our environment.}}$ 

For more information go to www.chesterton.com





# SERVICE AND PERFORMANCE

### Unparalleled in the Industry

At Chesterton, we place strong emphasis on working together as partners to provide real solutions. Our high service levels are delivered by combining both industry and product knowledge with experience to implement Best Available Techniques. Our wide geographical reach and local service capabilities enable us to be responsive to your needs.

### **Reliability Through Innovation**

To be a full service provider takes a wide array of high quality, engineered sealing products that address your needs. Innovative, high performance products are the core of Chesterton's offerings as a premier sealing solution provider. Some of our standard offerings are:

- Split Seals
- Cartridge Seals
- Gas Seals
- Component Seals
- Pump Packing
- Bearing and Gearbox Protection
- Rotary Seals
- SpiralTrac™

### Improving Productivity with High Impact Programs

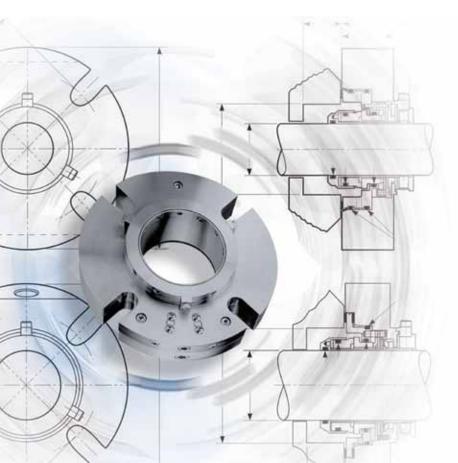
In today's global economy, our clients are faced with increased profitability pressures. Chesterton can assist users in achieving their productivity goals by improving asset reliability and lowering the total cost of ownership. Our programs are easily customized for each plant to:

- Improve equipment availability
- Increase process throughput
- Lower total cost of ownership

### **Delivering Results for Industry**

Meeting industry needs requires a thorough knowledge and understanding of the key drivers specific to a plant. Chesterton's depth of experience allows us to deliver results such as:

- Increased equipment reliability
- Reduced water consumption
- Reduced environmental emissions
- Increased energy efficiency



### **Mechanical Seals Application Guide**

Please contact your local		Equipment Types		Fit				Duty					
Chesterton Representative to help you select the best product for your application.  Family			S-690E-OSI	ISO-3069-C	EN-12756	Light Duty	Large Equipment	Solids	Crystallizing Media	Emissions Control	Corrosive Media		
Split Seals	442	Pumps Agitators Mixers	<b>√</b>			<b>√</b> +	<b>√</b> ++	<b>√</b> +*	✓		✓		
Why disassemble the equipment? Chesterton's split mechanical seals offer a reliable sealing solution—reducing maintenance costs for larger	442M	Agitators Mixers					<b>√</b> ++	<b>√</b> +*	✓		✓		
equipment that is difficult and time consuming to disassemble.	442PR	Boiler Feed Pumps	4				<b>√</b> ++	✓			✓		
Cassette Seals  All the wearing parts are contained in a single, replaceable cassette unit. Single and dual cassettes share a common	S10	Pumps	4	<b>~</b>		<b>√</b> +	4	<b>✓</b>	<b>√</b> +	<b>√</b> +	<b>√</b> ++		
universal gland. Repair becomes a matter of exchanging cassettes, making it faster and easier while significantly reducing costs associated with repair.	S20	Pumps	✓	<b>✓</b>			4	<b>√</b> +	<b>√</b> +	<b>√</b> ++	<b>√</b> +		
Cartridge Seals	150	Pumps	✓	<b>✓</b>		<b>√++</b>	✓	<b>✓</b>	✓		✓		
Cartridge Seals have been designed to be rugged performers in sealing	250	Pumps	<b>✓</b>	<b>✓</b>			✓	<	<b>√</b> +	✓	✓		
applications across industry segments. They are proven performers for plant-wide standardization, providing	280	Pumps Reactors	4	4			<b>√</b> +	<b>√</b> +	<b>√</b> ++	4	<b>√</b> +		
maximum reliability.	170	Pumps		<			<b>√</b> +	<b>/++</b>	<b>√</b> +		<b>√</b> +		
Gas Seals  Chesterton gas seal technology overcomes performance limitations common to dual liquid cartridge seals. Reach your plant reliability goals with the addition of simple gas seal technology.	4400	Pumps		<b>&gt;</b>				<b>√</b> +	4	<b>√</b> ++	<b>√</b> +		
Component Seals		Pumps	✓		✓								
Fits all DIN, ISO, ANSI, and other popular pumps; no shaft sleeve wear; self-aligning capability. All wearing	491	Agitators				<b>√</b> ++	✓	<b>√</b> +	<b>√</b> +		✓		
parts, seal faces, O-rings, screws, and springs are replaceable at low cost.	RBS	Pumps	✓		✓	<b>√</b> +		✓					

<sup>\*</sup>Solids handling capability enhanced by use of SpiralTrac  $^{\mathsf{m}}$  split environmental controller

 $\sqrt{++}$  = Best Choice  $\sqrt{+}$  = Better Choice  $\sqrt{-}$  = Good Choice



### **Pump Packing Application Guide**

Please contact your local
Chesterton Representative
to help you select the
best product for your
application.

to be	help you select st product for polication.	t the	Water	Steam	Chemicals	Slurries	High Temperatures	jh Pressures	jh Speeds	Reliability	Economy Solution	Emissions	Control Valves	Block Valves	Motor Operated Valves	e Flanges	at Exchangers	Housings
	Family	Product	Wa	Ste	ਚੁੱ	NS	Hig	High	High	Rel	Ecc	Em	Col	Blo	Мо	Pipe	Heat	운
		1730	<b>√</b> ++		<b>√</b> +	<b>√</b> ++	<b>√</b> +	<b>√</b> ++	✓	<b>√</b> ++	<b>√</b> +							
		1760	<b>√</b> ++		<b>√</b> ++	<b>√</b> +	<b>√</b> +	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++	<b>√</b> +							
	Pump Packing	1765	<b>√</b> ++		<b>√</b> ++	1	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> ++	<b>√</b> +							
		1830	<b>√</b> ++		<b>√</b> ++	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> ++	<b>√</b> +	<b>√</b> ++							
		1830-SSP	<b>√</b> ++		<b>√</b> ++	<b>√</b> ++	<b>√</b> +	<b>√</b> +	<b>√</b> ++	<b>√</b> +	<b>√</b> +							
		1400R	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++	✓	<b>√</b> ++	<b>√</b> +	<b>√</b> ++	<b>√</b> ++	<b>√</b> +	<b>√</b> +		<b>√</b> ++				
	nvironmental nhancers	SuperSet™				<b>√</b> ++			·	<b>√</b> ++		·						

Key Benefit

Equipment

√ = Good Choice √++ = Best Choice **√+** = Better Choice

# **Application Guide for Bearing Protection and Rotary Seals**

Speed Types		ed Types Product Profile		Description	Attributes			Friction			Wear Resistance		
			Series		mold	**mach	split	Low	Mid	High	Low	Mid	High
Rotary	Applications												
to 20 m/s	Restriction Bushing	14K		Restriction bushing for rotary equipment		•	•	•				•	
(4 000 ft/ min)	Continuous Rotary Lip Seals	30K		Single acting, low pressure seal for bearing and gearbox protection		•			•			•	
Bearing and Gearbox Protection												•	
to 12,5 m/s (2 500 ft/ min)	Split Rotary Lip Seals	33K		Single acting, non-pressure split seal for bearing and gearbox protection		•	•	•				•	
to 20 m/s (4 000 ft/ min)	Continuous Rotary Excluder	50K	7	Single acting rotary face excluder	•				•			•	
to 25 m/s (5 000 ft/	Continuous/Split Rotary Lip Seal	51K	J	Single acting, low pressure seal for bearing and gearbox protection	•		•		•			•	
min)	Continuous Rotary Lip Seal	52K	3	Single acting, low pressure seal for bearing and gearbox protection	•				•			•	
to 35 m/s (7 000 ft/ min)	Continuous Rotary Lip Seal	53K	19	Single acting, low pressure seal for bearing and gearbox protection	•				•			•	
to 1 m/s	Wipers	W21K		Positive angled profile with flange, slow rotary	•	•	•	•				•	
(200 ft/min)	Rod and Piston Seals	R22KN5	1	Single acting, positive angled profile, slow rotary	•	•	•			•		•	

<sup>\*\*</sup>Machined product does not require tooling.



# **442**<sup>™</sup>**C**

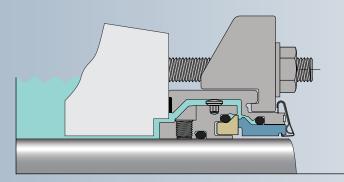
# Cartridge Split Mechanical Seal

New Technology for 2014!

The 442™C Cartridge Split Mechanical Seal is the latest innovation in split seal technology combining superior performance with the ease of installation of a cartridge split seal.

Operating C	onditions	Materials					
Sizes	20 mm to 610 mm*	Faces	CB, CER, RSC				
Pressure	711 mm Hg Vacuum to 31 bar g	Elastomers	FKM, EPDM, FEPM				
Temperature	120°C	Metals	1.4401 (316SS)				
Speed	20 m/s	Springs	Elgiloy™				

ATEX Category I, Group 2 Approved, Fits ISO-3069, ACS Approved \*Available as 442C 20 mm to 120 mm beginning second quarter 2014.



- Simple cartridge installation without equipment disassembly
- Innovative design with superior performance
- Fits majority of rotating equipment
- Easy field repair

### **Support Products**



### 442M

### Split Mixer Seal

The mixer version of the standard split seal that accommodates large radial and axial shaft motion associated with mixers, agitators, reactors, and blenders.



### 442PR

### Split Pumping Ring Seal

The high capacity pumping ring provides for maximum heat removal and reliability in hot water services such as heater drain and boiler feed pumps.



# **SpiralTrac**<sup>Th</sup>

# **Environmental Controllers**

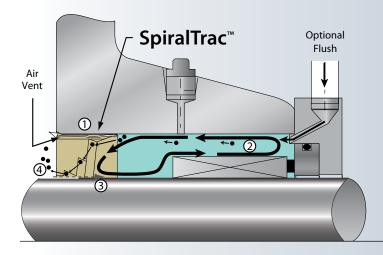
When used with Chesterton® mechanical seals,
SpiralTrac™ Environmental Controllers greatly
enhance seal reliability by effective removal of solids
and improved cooling of the stuffing box

Version	5
F (Split)	Greatly reduced flush
N	Reduced/No flush in no fibrous fluids
D	Reduced/No flush in fibrous fluids
P (Split)	Packing version
C	With drain for crystallizing media

Available Materials						
1.4401 (316SS)						
416 SS						
PTFE – Glass Filled						
PTFE – Carbon Graphite Filled						
Bronze						
Ti/EN 3.7035						
AWC800 – Red Polymer						
Monel K400 / EN 2.4360						



- Extends seal reliability in most rotating equipment applications
- Reduces cost of flushing in abrasive applications
- Fits all rotating equipment



### (1) Air

Vented from cavity when pump is stationary (eliminates crystalization, coking overheating due to air)

### (2) Circulation

Driven around seal (excellent face cooling)

### (3) Exchange

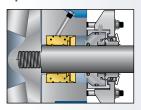
In and out of cavity (heat removed from cavity)

### 4 Particulate

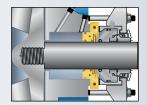
Immediately removed from cavity through the exit groove, flush or no flush

### **Configurations Available**

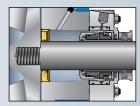
### **Split**



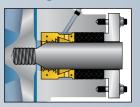
### **Adapter**



### **Standard**



### **Packing**



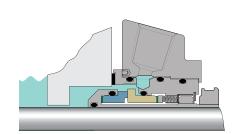


### **MECHANICAL SEALS**

# **S10**

# **High Performance Single Cassette Seal**

A unique modular cassette that combines advanced seal technology with flexibility in maintenance and repair



Operating Co	nditions	Materials	Materials				
Sizes	25 mm to 120 mm	Faces	CB, SSC, TC				
Pressure	Vacuum to 31 bar g	Elastomers	FKM, EPDM, FEPM, ChemLast™				
Temperature	-55°C to 300°C	Metals	1.4401 (316SS)				
Speed	25 m/s	Springs	2.4819 (Alloy C-276)				

Fits ISO-3069, ASME B73.1, B73.2

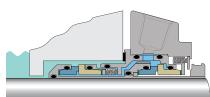


- High performance sealing
- One optimized sealing concept for plant-wide standardization
- Easy to maintain

# **S20**

# High Performance Dual Cassette Seal

A unique modular cassette that combines advanced seal technology with flexibility in maintenance and repair



Operating Cor	nditions	Materials	
Sizes	25 mm to 120 mm	Faces	CB, SSC, TC
Pressure	Vacuum to 31 bar g, 17 bar g inboard differential	Elastomers	FKM, EPDM, FEPM, ChemLast™
Temperature	-55°C to 300°C	Metals	1.4401 (316SS)
Speed	25 m/s	Springs	2.4819 (Alloy C-276)

Fits ISO-3069, ASME B73.1, B73.2



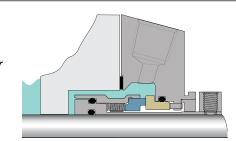
- Advanced sealing performance
- One optimized sealing concept for plant-wide standardization
- Easy to maintain



# 150

### **General Purpose Cartridge Single Seal**

Designed for baseline applications and for upgrading packed or component-sealed equipment—this seal is a value leader in its class



Operating Co	nditions	Materials	
Sizes	25 mm to 120 mm	Faces	CB, SSC
Pressure	Vacuum to 20 bar g	Elastomers	FKM, EPDM, FEPM, ChemLast™
Temperature	-55°C to 300°C	Metals	1.4401 (316SS)
Speed	20 m/s	Springs	2.4819 (Alloy C-276)

Fits ISO-3069, ASME B73.1, B73.2, ACS Approved

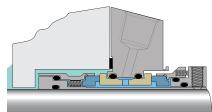


- Simple upgrade to reduce plant maintenance costs
- Reliable cartridge design that increases seal life

# 250

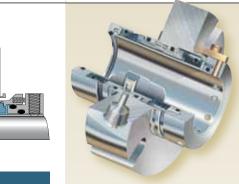
# General Purpose Cartridge Dual Seal

Designed for cost-effective upgrading from packing and under performing single seals—this seal is a value leader in its class, further increasing plant reliability



Operating Co	nditions	Materials	
Sizes	25 mm to 120 mm	Faces	CB, SSC
Pressure	Vacuum to 20 bar g, 10 bar g outboard	Elastomers	FKM, EPDM, FEPM, ChemLast™
Temperature	-55°C to 300°C	Metals	1.4401 (316SS)
Speed	20 m/s	Springs	2.4819 (Alloy C-276)

Fits ISO-3069, ASME B73.1, B73.2



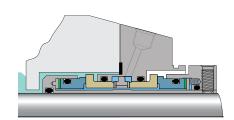
- Provides sealing security that conventional single seals cannot match
- Reliable cartridge design that increases seal life



### **280**<sup>™</sup>

### Heavy Duty Cartridge Dual Seal

A dual seal design for severe duty and greatest reliability in difficult applications—including mixers and agitators\*



Operating C	onditions	Materials	
Sizes	25 mm to 120 mm	Faces	CB, SSC, TC
Pressure	Vacuum to 40 bar g, 17 bar g outboard	Elastomers	FKM, EPDM, FEPM, ChemLast™
Temperature	-55°C to 300°C	Metals	1.4401 (316SS)
Speed	25 m/s	Springs	2.4819 (Alloy C-276)

Fits ISO-3069, ASME B73.1, B73.2, ATEX Category I, Group 2 Approved

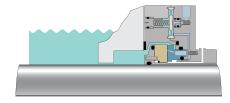


- High-reliability sealing
- Maximum solids handling capability
- Superior performance for demanding applications
- Motion tolerant for mixer applications\*

# 4400

### **Gas Seal**

Advanced technology made simple in a gas seal design. The 4400 is a seal for all purposes, and provides for an easy gas seal upgrade option. It is an ideal choice for upgrading under-performing, liquid lubricated seals to high performance, non-contacting operation.



Operating Co	nditions	Materials	
Sizes	25 mm to 90 mm	Faces	CB, SSC
Pressure	Vacuum to 20 bar g	Elastomers	FKM, EPDM, FEPM, ChemLast™
Temperature	-55°C to 300°C	Metals	1.4401 (316SS)
Speed	25 m/s	Springs	2.4819 (Alloy C-276)

Fits ISO-3069-C



- Delivers low cost-ofownership for a broad range of applications
- Advanced technology that is easy to install and operate
- Exclusive In-Gland Control System eliminates the need and expense of an external gas panel

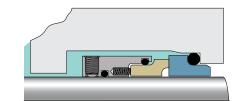


<sup>\*</sup>Extended motion capability available in 280M version

### 491

### **DIN Rotary Pusher Seal**

Designed for the replacement of low technology component seals, resulting in overall reliability increase and maintenance efficiency



Operating Cor	nditions	Materials	
Sizes	16 mm to 110 mm	Faces	CB, SSC
Pressure	Vacuum to 10 bar g	Elastomers	FKM, EPDM, FEPM, ChemLast™
Temperature	-55°C to 300°C	Metals	1.4401 (316SS)
Speed	20 m/s	Springs	2.4819 (Alloy C-276)

Fits EN12756, ISO-3069-S, ATEX Category I, Group 2 Approved

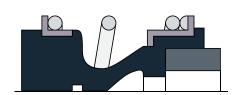


- Reliable upgrade from original equipment seals
- Designed not to fret shaft or sleeves
- Fits EN12756 L1K with standard supplied DIN stationary

### **RBS**

# Single Component Seal for General Purpose Sealing

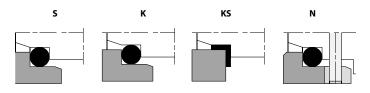
With proven Chesterton® quality, the RBS seal is the ideal choice for sealing small pumps where axial space is limited.
Designed with a robust friction drive and large spring format, the RBS provides reliable sealing for a large range of fluids.



Operating Cor	nditions	Materials	
Sizes	10 mm to 60 mm	Faces	CB, SSC
Pressure	12 bar g	O-rings	FKM, EPDM
Temperature	-15°C to 200°C	Springs	1.4301 (304SS)
Speed	10 m/s	Bellows	EPDM, FKM

Fits EN12756, ISO-3069-S

### Stationary Seats





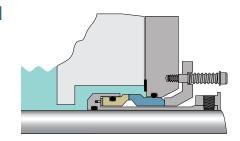
- Bidirectional seal with short axial length—fits most small pumps
- Robust frictional drive makes seal tolerant to unfavorable conditions
- Versatile enough to meet the needs of many applications
- Features a large spring that does not clog—suitable for media containing solids



# 170

### **Slurry Cartridge Single Seal**

Engineered to operate in harsh, heavy consistency slurry environments and to eliminate costly external seal flushes in the majority of applications



Operating Cor	nditions	Materials	
Sizes	25 mm to 228 mm	Faces	SSC, TC
Pressure	Vacuum to 17 bar g	Elastomers	FKM, EPDM, FEPM, ChemLast™
Temperature	-55°C to 300°C	Metals	1.4401 (316SS)*
Speed	11 m/s	Springs	2.4819 (Alloy C-276)

<sup>\*</sup>Duplex stainless steel available as option



- Runs longer in heavy abrasive slurries without the need for flush or quench water
- Reliable design that deals with real life slurry pumping conditions
- Easy to maintain

# **Intelli-Flow**<sup>™</sup> **HT**

### **Water Saver**

Features a thermally activated valve that automatically drains hot barrier fluid (only when necessary) to keep dual seals running cool and reliable. Valve opening temperature preset to work with S20 Seals.

Operating Conditions	
Pressure	20 bar g
Temperature	125°C
Temperature set point	80°C
Connections	1/4 NPT
Materials	1.4401 (316SS)



- Clean in place
- Maintenance-free
- Easy to install
- 95% water savings compared to open barrier fluid supply





Chesterton's NEW flushless 170 slurry seal and proven high strength mechanical packing and SuperSets™ can be combined for plant-wide sealing.

Our experienced specialists can consult with you and have the unique ability selecting from the best available technologies to fit your specific needs. Chesterton's high performance mechanical packing combined with advanced mechanical seal technologies can deliver increased meantime between failure and an overall reduction in your plant sealing costs.



Chesterton delivers an unbeatable combination of sealing knowledge and innovative high performance products to the power industry.

For more information go to www.chesterton.com/slurry





### **PLANTWIDE PACKING**

# 1730

### **General Service Packing**

Durable performance packing that is easy to install and will not score shafts

Technical Data			
Materials	Thermoset fibres with lubrican	ts and blocking age	ents
Applications	Water Pumps, Paper Stock Pumps, Slurries, Agitators, Mixers		
Available Sizes	6 mm to 25,4 mm (1/4" to 1")		
Pressure	28 bar g	Temperature	290°C
Speed	10 m/s	pН	1 to 13

Applicable Standards and Approvals: BAM



- Easy and fast break in
- Abrasion resistant, while non-scoring
- Good chemical resistance
- Good temperature resistance

# 1760

### **Chemical Packing**

Strong and dense PTFE fibre packing for chemical applications with the heat dissipating properties of graphite

Technical Data			
Materials	Graphite coated PTFE yarn with break in lubricants		
Applications	Black Liquor Pumps, Chemical Pumps, Agitators		
Available Sizes	3,2 mm to 25,4 mm (1/8" to 1")		
Pressure	17 bar g	Temperature	260°C
Speed	18 m/s	рН	0 to 14



- Dense braid ensures excellent leakage control and prevents solid embedment
- Excellent chemical resistance
- High shaft speed

# 1765

### **White Chemical Packing**

Non-staining chemical packing, ideally suited for bleach pumps and other rotary applications

Technical Data				
Materials	White expanded PTFE yarn with	White expanded PTFE yarn with a special filler		
Applications	Bleach pumps, chemical pumps, agitators			
Available Sizes	6,4 mm to 25,4 mm (1/4" to 1")			
Pressure	20 bar g	Temperature	Min -40°C, Max 260°C	
Speed	10 m/s	рН	0 to 14 except for Fluorine (F²), CIF³ and related compounds, and molten alkali metals	



- Non-staining
- Superior chemical resistance
- Low friction for improved speed capability
- Longer packing life

# 1830

### **Advanced Expanded Graphite PTFE Packing**

Economical packing developed to meet strict specifications in pumps, agitators, mixers, and other rotating equipment

Technical Data			
Materials	Expanded graphite PTFE filame	ents	
Applications	Wide range of applications	Temperature	260°C
Speed	18 m/s	рH	0 to 14 with exception of strong oxidizers in the 0 to 2 pH range

Applicable Standards and Approvals: BAM



- Excellent chemical resistance
- Low friction, less heat generation and nonabrasiveness saves shafts and shaft sleeves
- Easy installation and removal
- Low leakage and long life

# 1400R

### **Carbon Reinforced Graphite Packing**

Combines the unique sealing properties of flexible graphite with the high strength of carbon fibre

Technical Data					
Materials	Carbon fibre reinforced flexible o	raphite packing			
Applications	Process Pumps, Boiler Feed Pum	ps, Block Valves, R	efiners, Agitators, Mixers		
Available Sizes	3,2 mm to 25,4 mm (1/8" to 1")				
Pressure	14 bar g (rotating applications)	Temperature	Min -240°C		
	275 bar g (valves)		Max 650°C (steam)		
			Max 455°C (oxidizing atmosphere)		
Speed	20 m/s	рН	0 to 14 except oleum, fuming nitric acid, and aqua regia		

Applicable Standards and Approvals: BAM



- Flushless packing
- High shaft speed capability
- Passive molybdate corrosion inhibitor
- For use in valves and pumps

# 1830-SSP

### **Slurry Packing**

Designed with a hybrid yarn combining advanced, expanded graphite PTFE yarn with carbon yarn reinforcement

Technical Data					
Materials	Carbon reinforced expanded gra	phite PTFE			
Applications	Slurry Pumps, Mineral Handling Slurries, Tailing Pumps				
<b>Available Sizes</b>	9,5 mm to 25,4 mm (3/8" to 1")				
Pressure	28 bar g	Temperature	260°C		
Speed	18 m/s	pН	0 to 14 with exception of strong oxidizers in the 0-2 pH range		



- Developed to meet rigid demands of slurry sealing applications
- Excellent chemical resistance
- Low friction, less heat generation, non abrasive, saves shafts and shaft sleeves



# **SuperSet**<sup>TM</sup>

### **Enhanced Packing Sets**

Chesterton® performance packing sets, in combination with the patented SpiralTrac™ Environmental Controller, reduce flush water consumption and increase equipment service life

Versions	Applications
1730 SuperSet	General service in slurries and clean fluids
1400R SuperSet	Worn equipment, high speed and high temperature applications
1760 SuperSet	Highly aggressive chemical environments



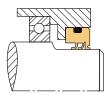
- Reduces flush water consumption
- Increases equipment MTBR
- Reduces shaft sleeve wear

### **BEARING AND GEARBOX PROTECTION**

# **30K**

# Bearing and Gearbox Protection

Advanced sealing protection technology keeps the lubricant in and the dirt out for long-term sealing



Applicable standards: ISO3760/ISO3761

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### **SPECIFICATIONS**

						•
Material (combination) (adapters/sealer rings)	Size Range* mm (inch)	Temperature °C (°F)	Speed m/s (ft/min)	Pressure MPa (psi)	Recommended use	Mating surface (Rockwell C)
AWC100 (PTFE) Polyimide					Excellent dry Excellent low viscosity No water and steam	≥45
AWC300 (PTFE) Molybdenum & glass	20 to 600	-20 to 149	Up to 20	0,07	Excellent high viscosity Good dry and good in water	≥55
AWC400 (PTFE) Carbon & graphite	(0,787 to 24)	(-30 to 300)	(4 000)	(10)	Excellent in water Good dry and low viscosity	≥55
AWC510 (PTFE) Mineral (FDA listed)					Excellent dry Good in water and steam No petroleum liquids	≥45

 $Performance \ depends \ on \ concurrent \ conditions \ including \ shaft \ hardness, shaft \ surface \ roughness, \ material, \ lubrication, \ temperature, \ and \ pressure.$ 

### PRODUCT PROFILES:













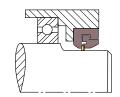
- New designs and materials to outperform conventional lip seals
- High performance PTFE compounds offers advanced wear and abrasion resistance
- Unique design provides lower friction and decreased shaft wear
- High performance lip seals prevent contaminants from entering housing



# 33K

# Split Bearing and Gearbox Protection

Unitized split seal for bearing and gearbox protection



### **SPECIFICATIONS**

Material (adapters/sealer rings)	Size Range* mm (inch)	Temperature °C (°F)	Speed m/s (ft/min)	Pressure MPa (psi)	Recommended use	Mating surface (Rockwell C)
AWC800 Adapters (EU)						
AWC100 (PTFE)	25 to 610	85	12,7	0,007	Excellent dry	≥45
Polyimide	(1 to 24)	(185)	(2 500)	(1)	Excellent low viscosity	
AWC300 (PTFE)	25 to 610	85	12,7	0,007	Excellent high viscosity	≥55
Molybdenum & glass	(1 to 24)	(185)	(2 500)	(1)	Good dry and good in water	
AWC400 (PTFE)	25 to 610	85	12,7	0,007	Excellent in water	≥55
Carbon & graphite	(1 to 24)	(185)	(2 500)	(1)	Good dry and low viscosity	
AWC860 Adapters (EU)	•					
AWC100 (PTFE)	25 to 457	121	12,7	0,07	Excellent dry	≥45
Polyimide	(1 to 18)	(250)	(2 500)	(1)	Excellent low viscosity	
AWC300 (PTFE)	25 to 457	121	12,7	0,07	Excellent high viscosity	≥55
Molybdenum & glass	(1 to 18)	(250)	(2 500)	(1)	Good dry and good in water	
AWC400 (PTFE)	25 to 457	121	12,7	0,07	Excellent in water	≥55
Carbon & graphite	(1 to 18)	(250)	(2 500)	(1)	Good dry and low viscosity	

Performance depends on concurrent conditions including shaft hardness, shaft surface roughness, material, lubrication, temperature, and pressure.

Applicable standards: ISO3760/ISO3761



 Split design eliminates the need for equipment disassembly

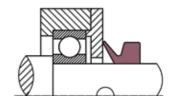
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- New design and materials proven to outperform conventional lip seals
- Patented design combines high performance PTFE and polymer materials
- Filled PTFE materials provide high wear and abrasion resistance

# **50K**

### **Mill Rotary Face Seal**

Designed to protect against ingress of solid particles, dust, and fluids while sealing lubricants in rotary applications



### **OPERATIONAL CONDITIONS**

Material	NBR70	FKM 70		
Lubricating greases	-20°C/100°C	-20°C/150°C		
Water	5°C/100°C	5°C/80°C		
Surface speed (m/sec)	12 m/sec*	20 m/sec*		
Technical pressure (Mpa)	0,03	0,03		
Size range mm (inch)** shaft dia	200 to 1 650 (8 to 65)	200 to 1 650 (8 to 65)		

- \* At over 8 m/s the seal has to be supported in axial direction while over 12 m/s radial retention is needed.
- \*\* Please contact your Chesterton representative for other sizes.

### PRODUCT PROFILES:













- High performance elastomer materials
- Long elastic memory and good resistance to aging
- Optimized lip interference with low friction
- Direct retrofit, no equipment modifications required



<sup>\*</sup>Please contact your Chesterton representative for larger sizes

# 51K

### **Mill Rotary Seal**

Designed to provide long lasting sealing and superior protection for rotary applications, bearing houses, and gearboxes across the heavy industries



### **OPERATIONAL CONDITIONS**

Floring	NIDDOO : DTEE	LINDD 70	FKAAZO - DTEE	
Elastomers	NBR80+PTFE	HNBR 70	FKM70+PTFE	
OD Fabric	Textile +NBR	Textile + HNBR	Textile + FKM	
Materials of garter spring	AISI 302-316	AISI 302-316	AISI 302-316	
Lubricating greases	-20°C/100°C	-30°C/150°C	-20°C/200°C	
Mineral oils	-20°C/100°C	-30°C/150°C	-20°C/200°C	
Water	5°C/100°C	5°C/150°C	5°C/100°C	
Surface speed (m/sec)	15	20	25	
Technical pressure (Mpa) 51K, 51KW, 51KL Solid	0,05	0,05	0,05	
Technical pressure (Mpa) 51K, 51KW, 51KL Split	No pressure can be applied	No pressure can be applied	No pressure can be applied	
Technical pressure (Mpa) 51HP Solid	0,4	0,4	0,4	
Size range mm (inch)** Seal OD	300 to 1 200 (12 to 47)	300 to 1 200 (12 to 47)	300 to 1 200 (12 to 47)	

<sup>\*\*</sup> Please contact your Chesterton representative for other sizes.

- High resistance to wear
- Specially designed seal lips combined with autolubricated elastomer to reduce friction
- Solid and split versions are available
- Direct retrofit, no equipment modifications required

### PRODUCT PROFILES:









# **52K**

### **Mill Rotary Seal**

Designed to provide long lasting sealing and superior protection for rotary applications, bearing houses, and gearboxes across the heavy industries. The unique design with flexible stiffener ring ensures improved fitting in the seal cavity and allows installation in stuffing boxes without end covers.



### **OPERATIONAL CONDITIONS**

Elastomers	NBR80+PTFE	FKM70+PTFE		
Material of metal case	C72 tempered	C72 tempered		
Materials of garter spring*	AISI 302-316	AISI 302-316		
Lubricating greases	-30°C/100°C	-20°C/200°C		
Mineral oils	-30°C/100°C	-20°C/200°C		
Water	5°C/100°C	5°C/100°C		
Surface speed (m/sec)	15	25		
Technical pressure (Mpa)	0,05	0,05		
Size range mm (inch)** Seal OD	300 to 1 200 (12 to 47)	300 to 1 200 (12 to 47)		

### PRODUCT PROFILES:







- \*On request PVC cover to avoid dust entering garter spring
- \*\* Please contact your Chesterton representative for other sizes.



- Unique lip design
- Specially designed seal lips combined with auto-lubricated compound to reduce friction
- Metallic flexible stiffening ring is used to allow mounting without end cover
- Direct retrofit, no equipment modifications required



### **53K**

### **Mill Rotary Seal**

Designed to provide long lasting sealing and protective solutions that withstand high speeds and misalignment of large rolls in heavy industries



### **OPERATIONAL CONDITIONS**

Elastomers	NBR70+PTFE	FKM 70+PTFE
Material of metal case	Fe-PO3	Fe-PO3
Material of steel filler ring	Fe37	Fe37
Material of spring carrier	AISI 301	AISI 301
Materials of garter spring	AISI 316	AISI 316
Lubricating greases	-20°C/100°C	-20°C/200°C
Mineral oils	-20°C/100°C	-20°C/200°C
Surface speed (m/sec)	25	25 to 35
Technical pressure (MPa) 53K, 53KW, 53KL, 53KHS 53KLPT	0,05	0,05
Technical pressure (MPa) 53KHP	0,1	0,1
Size range mm (inch)** Seal OD	300 to 1 200 (12 to 47)	300 to 1 200 (12 to 47)

<sup>\*\*</sup> Please contact your Chesterton representative for other sizes.

### PRODUCT PROFILES:













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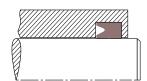


- Unique lip preloaded system with highly elastic garter-finger spring
- Specially designed seal lips combined with auto-lubricated compound to reduce friction
- Large shaft run-out compensation capability
- Maintains lube oil film underneath the lip for longer seal life

# **R22KN5**

### **Split Rotary Seal**

High performance, proven design for slow rotating applications exposed to large shaft run-out



### **SPECIFICATIONS**

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Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
AWC700 (FKM)	6 to 152 (1/4 to 6)	-30 to 200 (-20 to 400)	34,5 (5 000)	1,5 (300)
AWC800 (EU)	6 to 1 400 (1/4 to 55)	-50 to 85 (-60 to 185)	103,5 (15 000)	1 (200)
AWC830 (EU)	6 to 254 (1/4 to 10)	-35 to 75 (-30 to 165)	52,0 (7 500)	0,9 (185)
AWC850 (EU)	6 to 254 (1/4 to 10)	-50 to 104 (-60 to 220)	103,5 (15 000)	0,9 (185)
AWC860 (EU)	6 to 508 (1/4 to 20)	-50 to 120 (-60 to 250)	103,5 (15 000)	1,25 (250)

### PRODUCT PROFILE:



Pending on the seal height and cross section, the split joint can be interlock arrow cutt or butt cut.

\*Please contact your Chesterton representative for larger sizes.



- Flexible dynamic lip design for large shaft run-out compensation
- Split configuration simplifies installation
- Robust static lip design allows stack set arrangement and provides stability
- Excellent abrasion-resistance, withstands demanding environments

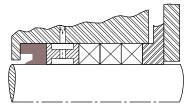


### **ROTARY SEALS**

# 14K

### **Restriction Bushing**

A robust restriction bushing for rotating equipment



### **SPECIFICATIONS**

 			•
Material Size Range* (designation) mm (inch)		Temperature °C (°F)	pH range
AWC520 (PTFE)	25 to 600 (1 to 24)	Up to 200 (400)	0 to 14
AWC800 (EU)	25 to 1 400 (1 to 55)	Up to 100 (185)	4 to 10

Applicable standards: ISO 3069

### PRODUCT PROFILES:











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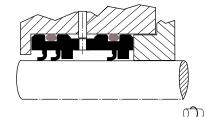


- Prevents particles from entering the stuffing box, extending packing and seal life
- Tapered lip design controls fluid bypass
- Designed for pumps and other rotating equipment, such as agitators, mixers, and refiners

# **30KC**

### **Seal for Viscous Fluids** and Powders

High performance, proven cartridge design for sealing powders and viscous fluids



### SPECIFICATIONS

SPECIFICATIONS							<del></del>																						
Material** (combination) (adapters/sealer rings)	Shaft Size* mm (inch)	Tempera- ture °C (°F)	Speed m/s (ft/min)	Pressure MPa (psi)	Mating surface (Rock- well C)	Surface finish μm Ra (μ inch)	Recommended use***																						
AWC100 (PTFE) Polyimide					45	Dynamic	Excellent dry Excellent low viscosity (<2 000 cp) Powders, oil, resins, glues, paints No water or steam																						
AWC300 (PTFE) Molybdenum & glass	25 to 200 (1 to 8)		55	0,2 to 0,4 (8 to 16)	Excellent high viscosity (>2 000 cp) Good in dry, water or steam																								
AWC400 (PTFE) Carbon & graphite	(: 10 <b>0</b> )		(	( ',					(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(50.1)	(504)	(904)	(904)	(904)	(904)	(904)	(904)	(904)	(904)	(504)	(504)	(904)	(904)	(904)	(904)	(504)	(130)	55	0 ,4 to 0,8 (16 to 32)
AWC510 Mineral (FDA listed)					45		Excellent dry Good in water or steam Chocolate and syrups																						



- Outperforms conventional packing, sealing viscosity fluids, and dry powders
- Decreases downtime, easy-to-install, versatile cartridge design
- Improves performance of compression packing, distinct PTFE materials
- Custom-designed cartridges made to equipment dimensions
- \* Please contact your Chesterton representative for larger sizes
- \*\* Fluoroelastomer O-rings provided (FDA listed with AWC510)
- \*\*\* Runout to 0,15 mm (0,05")



# **Ancillary Products**



800 GoldEnd®Tape

Heavy-duty, high-density PTFE sealing tape. Go to page 56.



785 & 785 FG

High-performance, extreme pressure anti-seize compound. Go to page 54.



### 860 - Moldable Polymer Gasketing

Two-part extrudable gasket material for flange and thread sealing. Go to page 56.



**615 HTG** 

High-performance grease for for extreme operating conditions. Go to page 52.



# **Lubricant Dispensers**

Automatic lubricant dispensers to apply Chesterton greases and oils. Go to page 53.



### **662FG Barrier Fluid**

This is an ISO grade 22, high performance lubricant designed specifically as a barrier fluid for mechanical seal applications Go to www.chesterton.com.



# MEET ENVIRONMENTAL AND BUSINESS GOALS

Chesterton® mechanical packings and gaskets enable our customers to meet their goals by offering the right product fit for every application on static equipment.

### **Value and Performance Programs**

There are many different applications in a process plant and across industries. Critical applications need a top quality performance packing, while a standard packing might be fully adequate for less demanding applications.

- High quality performance packing
- Standard packing range
- Solutions for every plant and industry
- Total cost focus

### **Reliability and Environmental Protection**

Live loading for flanges, and valves increase reliability and performance while reducing emissions and leakage by adjusting for system issues that affect packing performance.

### **Application-Specific Solutions**

For some applications a plant-wide packing just won't do and some applications have requirements that need a specially developed solution. Chesterton has developed specific products for various applications in different industries that bring the best performance for that specific piece of equipment and service conditions. Examples are:

- Soot blower solutions for the power industries
- Solutions for solvent dewaxing units in the oil refining industry



### Valve Packing and Gaskets Application Guide

Please contact your local to be ap

Please contact y			Me	dia			Duty		Ke	y Bene	fit			Equip	ment		
Chesterton Reproson on the control of the control o	ct the your	Water	Steam	Chemicals	Slurries	High Temperatures	High Pressures	High Speeds	Reliability	Economy Solution	Emissions	Control Valves	Block Valves	Motor Operated Valves	Pipe Flanges	Heat Exchangers	Housings
Family	Product	-		_	S			Ī				ŭ		Σ	<u>P</u>	Ĭ	Ĭ
	1600	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++		<b>√++</b>	<b>√</b> ++		<b>√</b> ++	<b>√</b> +	<b>√</b> +		<b>√</b> ++				
	1622	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++			<b>√</b> ++		<b>√</b> ++	<b>√</b> +	<b>√</b> ++		<b>√</b> ++				
Valve	1724	<b>√</b> ++		<b>√</b> ++			<b>√</b> +		<b>√</b> ++	<b>√</b> +	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++	<b>√++</b>			
Packings	5800	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++		<b>√</b> ++	<b>√</b> +		<b>√</b> ++	<b>√</b> +	<b>√</b> ++	<b>√</b> ++					
	Valve Live Loading								√++		<b>√</b> ++	<b>√</b> ++	<b>√</b> ++	<b>√+</b> +			
	455EU	<b>√</b> ++	<b>√</b>	<b>√</b> +		<b>√</b> +	<b>√</b> +		<b>√</b> +	<b>√</b> ++	<b>√</b> +				<b>√</b> ++		<b>√</b> ++
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Flange Sealing	Spiral Wound Gasket SG/ SGI/SR/SRIR	√++	<b>√</b> ++	<b>√++</b>		<b>√</b> ++	<b>√</b> ++		<b>√</b> +	<b>√</b> ++	<b>√</b> ++				<b>√</b> ++		
	Camprofile Gasket KG1/KR	√++	<b>√</b> ++	<b>√</b> ++		<b>√</b> ++	<b>√</b> ++		√++		√++				<b>√</b> ++	<b>√</b> ++	
	Steel Trap™ Gasket	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++		<b>√</b> ++	<b>√</b> ++		<b>√</b> ++		<b>√</b> ++				<b>√</b> ++	<b>√</b> ++	<b>√</b> ++
	Flange Live Loading		<b>√</b> ++			<b>√</b> ++	<b>√</b> ++		<b>√</b> ++		<b>√</b> ++				<b>√</b> ++	<b>√</b> ++	<b>√</b> ++

√++ = Best Choice **√+** = Better Choice √ = Good Choice

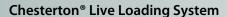


# LIVE LOADING

# **Flanges and Heat Exchangers**

Increase reliability, lower emissions, and reduce total costs by using tailored sealing solutions for critical flanges

Technical Data	5500	5505L	5505H		
Materials	Specialized stainless steel alloy	High strength, high temperature resistant and corrosion resistant stainless steel alloy	Chromium steel with oxide coating		
Temperature	-200°C to 300°C	-100°C to 350°C	0°C to 600°C		
Corrosion resistance	good	good	average		
Applications	Use in combination with Chesterton® Camprofile or Steel Trap™ gaskets on process flanges, heat exchangers, vessels, reactors, valve bonnets, housings, sight glasses				
Warranty	3 year warranty (see f	lange live loading warra	anty for conditions)		



Chesterton Flange Live Loading increases flange reliability by increasing the elastic energy in the flange assembly. This ensures that a pre-calculated gasket stress is maintained at all times, regardless of pressure fluctuations, gasket thickness loss, or thermal cycles. Chesterton Flange Discs are specially designed for flange applications and maintain their flexibility under extreme mechanical and thermal conditions.



- Shut down to shut down reliability
- Significantly reduces downtime on critical equipment
- Lowers emissions and meets environmental regulations
- Reduces leakage and product loss
- Reduces safety and housekeeping concerns
- Improves plant efficiency and reduces total cost



# **Valves**

An engineered sealing system that maintains operability and improves reliability—from shut down to shut down—in compliance with environmental regulations

Technical Data						
Materials	5300 die formed graphite packing with style 1600 Inconel® reinforced braided graphite packing, carbon bushing, live loading spring sets.					
Pressure	317 bar g					
<b>Temperature</b> Maximum	2 760°C in a non-oxidizing atmosphere					
	430°C in an oxidizing atmosphere					
Minimum	-240°C					
рН	0 to 14 with the exception of oleum, fuming nitric acid, aqua regia, fluorine, hydrochloric acid and hydrofluoric acid.					
Applications	Block valves and air/motor operated valves in the Power, Petrochemical, Oil Refining, Chemical, and other industries.					
Warranty	5 year warranty (see valve emissions warranty for conditions)					

Chesterton 5300 and 1600 sealing solutions pass API 589 Fire Test





- Improves reliability in critical valves
- Compensates for system pressure upsets, vibrations, and thermal cycling
- Prevents leakage by gland force retention
- Extends MTBR
- Reduces maintenance costs
- Reduced stem friction ensures operability

### **Other Versions**

# Chesterton® 1724E Emission and Chemical Live Loading Kits



Our 1724E Live Loading sets combine 1724 braided PTFE packing with the advantages of live loading. The system is TA-Luft approved and provides excellent emission control and maximal chemical compatibility. The sets can be used on block valves, motor operated valves, and control valves.

# Chesterton® 5800 Control Valve Live Loading Kits



5800 Graphite Wedge Packing reduces valve stem friction by 30% compared to square cross-section, die-formed graphite.

# **EMISSIONS CONTROL**

# **1622 Low Emissions Valve Packing**

### **Emission Control Packing For Block Valves**

Chesterton® 1622 Emissions Packing is designed to minimize valve emissions and exceeds current emissions requirements for the refinery, petrochemical, and chemical industries.

Technical Data					
Materials	Inconel wire reinforced flexible graphite packing with special blocking agents				
Pressure	260 bar g				
Temperature	Max 650°C (steam) Max 455°C (oxidizing atmosphere)				
рН	0 to 14 except in strong oxidizers				
Applications	Block valves with emission requirements in the refining, petrochemical and chemical industry				

Applicable Standards and Approvals: API 622 tested and qualified, Fire Safe to API 607, ChevronTexaco Standard tested and passed, API 589 and API 607 Fire Approval



- Extremely low emissions
- Fire safe
- Single spool packing
- High pressure capability
- Warranteed performance

### **Supporting Program**

### **Chesterton Leak Detection and Repair**

A Chesterton services program to help plants comply with environmental regulations, making factories safer and reducing costs.





### SEALING SOLUTIONS FOR STATIC EQUIPMENT — VALVE PACKING

# 1600

### **Advanced Valve Stem Packing**

Off-the-spool performance with emission guarantee

Inconel® wire reinforced flexible graphite packing					
Block Valves, as an end ring on Control Valves, Motor Operated Valves and Sootblowers					
3,2 mm to 25,4 mm (1/8" to 1")					
580 bar g	Temperature	Max 650°C (steam)			
		Max 455°C (oxidizing atmosphere)			
0 to 14 except strong oxidizers					
	Block Valves, as an end ring on C 3,2 mm to 25,4 mm (1/8" to 1") 580 bar g	Block Valves, as an end ring on Control Valves, Mo 3,2 mm to 25,4 mm (1/8" to 1")  580 bar g  Temperature			

Applicable Standards and Approvals: Passed API 589 standards at API 607 temperatures and pressures



- Fire safe
- Excellent emission control
- High pressure capability
- Guaranteed performance
- Easily cut to size on site

# 1724

### **PTFE Valve Packing**

Excellent emission control and chemical resistance

Technical Data					
Materials	PTFE yarn with protective lubricants				
Applications	Block Valves, Motor Operated Valves, Control Valves				
<b>Available Sizes</b>	3,2 mm to 25,4 mm (1/8" to 1")				
Pressure	210 bar g	Temperature	260°C		
рН	0 to 14				

 ${\bf Applicable\ Standards\ and\ Approvals:\ TA-Luft\ (Live\ Loaded)}$ 



- Excellent chemical resistance
- Excellent emission control
- Remains flexible

# 5800

### **Graphite Wedge Packing**

Patented control valve sealing solution designed to lower valve stem friction and improve sealability

Technical Data			
Materials	Die formed high-purity graphite		
Applications	Control Valves		
Pressure	210 bar g (no end rings)	Temperature	2 760°C (non-oxidizing atmosphere) 430°C (oxidizing atmosphere)
	310 bar g (1600 end rings)		450 C (Oxidizing atmosphere)
рН	0 to 14		

Applicable Standards and Approvals: Meets API 589 Fire Test



- Dramatically improved valve stem response
- Low emissions guarantee
- Excellent chemical and temperature resistance



### SEALING SOLUTIONS FOR STATIC EQUIPMENT — FLANGE GASKETS

### **SEMI-METALLIC GASKETS**

# **Camprofile**

### **High Performance Semi-Metallic Gasketing**

Highly reliable flange gasket with excellent emission control

Stainless steel carrier with a graphite or PTFE sealing element (more materials available)				
Pipe Flanges, Heat Exchangers, Vessels, Reactors, Valve Bonnets, Housings				
300 bar g	Temperature	graphite sealing layer 550°C		
		(inert media -200°C to 900°C)		
		PTFE sealing layer 300°C		
0 to 14				
	(more materials available) Pipe Flanges, Heat Exchangers, V 300 bar g	(more materials available) Pipe Flanges, Heat Exchangers, Vessels, Reactors, V 300 bar g <b>Temperature</b>		

Applicable Standards and Approvals: TA-Luft



- Certified low emission performance
- High reliability
- DIN and ANSI standard gaskets
- Custom shapes available, including heat exchanger gaskets

# **Spiral Wound**

### **Economical Semi-Metallic Gasketing**

Excellent emission performance in an all-round general plant gasket

Technical Data					
Materials	Stainless steel windings with graphite or PTFE sealing layer, stainless steel inner ring, coated carbon steel outer ring (more materials available)				
Applications	Pipe Flanges, Vessels, Reactors, Valve Bonnets, Housings				
Pressure	350 bar g	Temperature	graphite sealing layer 450°C PTFE sealing layer 300°C		
рН	0 to 14				

Applicable Standards and Approvals: TA-Luft



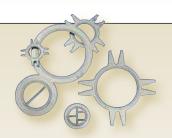
- Economical, semi-metallic solution
- Low emissions
- DIN and ANSI standard gaskets and custom shapes available
- Various configurations

# Steel Trap™ Gasket

### **High Performance, Semi-Metallic Gasket**

An innovative flange sealing system for safe and permanent sealing of flanges in severe services

Materials	Metal carrier from virtually any m	etal with graphite	e, PTFE or ceramic sealing elements		
Applications	Pipe Flanges, Heat Exchangers, Vessels, Reactors, Valve Bonnets, Housings				
Pressure	415 bar g	Temperature	Atmosphere -200°C to 500°C		
			Steam up to 650°C		
			Inert media -200°C to 900°C		
pН	0 to 14				



- Thin design and soft sealing material encapsulation provides increased blow out safety
- Replaces sheet gasketing without equipment modification
- Can be manufactured in virtually any shape



### **SHEET GASKETS**

# **Duragraf F**

### **Expanded Graphite Sheet**

An easy to use, economical, general service graphite sheet with a flat stainless steel insert

Technical Data					
Materials	Flexible graphite with a 50 $\mu m$ 316SS stainless steel flat insert				
Applications	Pipe Flanges, Vessels, Reactors, Valve Bonnets, Housings				
<b>Available Thicknesses</b>	1 mm, 1,5 mm, 2 mm, 3 mm				
Sheet Size	1 000 mm x 1 000 mm				
Pressure	100 bar g	Temperature	500°C		
рН	0 to 14				

Applicable Standards and Approvals: DVGW, BAM



- Easy to cut by hand
- Excellent performance in steam and aggressive media
- Available as a pre-cut gasket in standard and custom sizes

# **Duragraf T**

### **Expanded Graphite Sheet**

High purity graphite sheet with a tanged stainless steel insert

Technical Data					
Materials	Flexible graphite with a 100 µm 316SS tanged stainless steel insert				
Applications	Pipe Flanges, Vessels, Reactors, Valve Bonnets, Housings				
<b>Available Thicknesses</b>	1 mm, 1,5 mm, 2 mm, 3 mm				
Sheet Size	1 500 mm x 1 500 mm				
Pressure	120 bar g	Temperature	500°C		
рН	0 to 14				

Applicable Standards and Approvals: DVGW, KTW, BAM, meets Shell Spec MESC SPE 85/203



- Available in nuclear grade
- Mechanically bonding assures purity
- Available as a pre-cut gasket in standard and custom sizes

# 553

### **Environmental Gasket**

Specifically designed to keep the environment free from hazardous substances by combining an ecological composition with excellent sealing properties

Technical Data				
Materials	Aramid fibres, glas	Aramid fibres, glass fibres, special fillers, and an NBR binder		
Applications	Oils, gases, chemic	Oils, gases, chemicals, refrigerants, steam, water in all industries		
Pressure	120 bar g	Temperature 450°C		

Applicable Standards and Approvals: DVGW Approval, KTW Approval, BS 7531 Grade X, API 607 Fire Approval, TA-Luft



- Works in steam, chemicals, and a variety of hydrocarbons
- Excellent general service refinery gasket
- High temperature and pressure capability



### SEALING SOLUTIONS FOR STATIC EQUIPMENT — FLANGE GASKETS

# **455EU**

### **General Service Gasket Sheet**

Multi-purpose gasket with excellent performance in low pressure steam and light chemicals

Technical Data			
Materials	Aramid fibres, special fillers and an NBR binder		
Applications	Liquids and gaseous media, drinking water applications, general applications in industry		
<b>Available Thicknesses</b>	0,5 mm, 1 mm, 1,5 mm, 2 mm, 3 mm		
Sheet Size	1 500 mm x 1 500 mm		
Pressure	85 bar g	Temperature	250°C

Applicable Standards and Approvals: DVGW, KTW, BS 7531 Grade Y



- Economical gasket for general process applications
- Works in steam and light chemical applications
- Available as a pre-cut gasket in standard and custom sizes

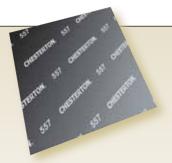
557

### **Performance Gasket Sheet**

A tough sheet gasket that is specifically designed for demanding applications in chemical, petrochemical, and pulp and paper industries

Technical Data			
Materials	Carbon fibres, special fillers and an NBR binder		
Applications	Steam; Alkaline Media; General Applications in Chemical, Petrochemical Industries, and the Pulp and Paper Industry		
Available Thicknesses	0,5 mm, 1 mm, 1,5 mm, 2 mm, 3 mm		
Sheet Size	1 500 mm x 1 500 mm		
Pressure	100 bar g	Temperature	300°C

Applicable Standards and Approvals: DVGW, BAM, BS 7531 Grade X



- Excellent resistance to alkaline media and steam
- Available as a pre-cut gasket in standard and custom sizes



### **PTFE Sheet Gasket**

Filled PTFE sheet with excellent mechanical properties and outstanding chemical resistance

Technical Data			
Materials	PTFE with fillers		
Applications	High pressure and temperature services, especially in Chemical and Hydrocarbon plants in strong acids		
<b>Available Thicknesses</b>	1 mm, 1,5 mm, 2 mm, 3 mm		
Sheet Size	1 500 mm x 1 500 mm (except 1 mm thickness: 1 200 mm x 1 200 mm)		
Pressure	83 bar g <b>Temperature</b> 260°C		
рН	0 to 14		

Applicable Standards and Approvals: FDA, TA-Luft



- High chemical resistance
- Excellent in strong acids
- Available as a pre-cut gasket in standard and custom sizes



# **Ancillary Products**

Bolted flange connections rely on accurate tensioning to assure leak tightness. Accurate tensioning is impossible on un-lubricated bolts. Chesterton anti-seize products provide a consistent coefficient of friction between the bolt and nut threads therefore assuring no leakage and low fugitive emissions. Go to page 54.



**785 & 785 FG**High-performance, extreme pressure anti-seize compound. Go to page 54.



783 ACR
Anti-seize with excellent corrosion protection for Nuts and bolts and mechanical assemblies. Go to page 54.



**615 HTG**High-performance grease for severe operating conditions. Go to page 52.



Pnuematic lubricant and conditioner cleans protects, and prolongs the life of pneumatic equipment and air operated valves.
Go to page 51.



**800 GoldEnd®Tape**Heavy-duty, high-density
PTFE sealing tape.
Go to page 56.



# **PUMP RELIABILITY SOLUTIONS**

Whether advanced shaft sealing, gearbox protection or protective coatings, Chesterton provides the total solution for improved pump reliability.

Seal the stuffing box reliability and avoid equipment disassembly with a 442™ Split Mechanical Seal



Upgrade seal performance with \$10 Single Cassette Seals or \$20 Dual Cassette Seals



Upgrade to the enhanced packing system with **SuperSet** to extend packing life



Protect the stuffing box and reduce the flush rate wth 14K Restriction Bushings



Protect pump volute against chemical attack, erosion, corrosion and abrasion with ARC 858 and 855 Composite Coatings



Eliminate abrasive particles in the stuffing box and extend seal and packing life with **SpiralTrac™** 

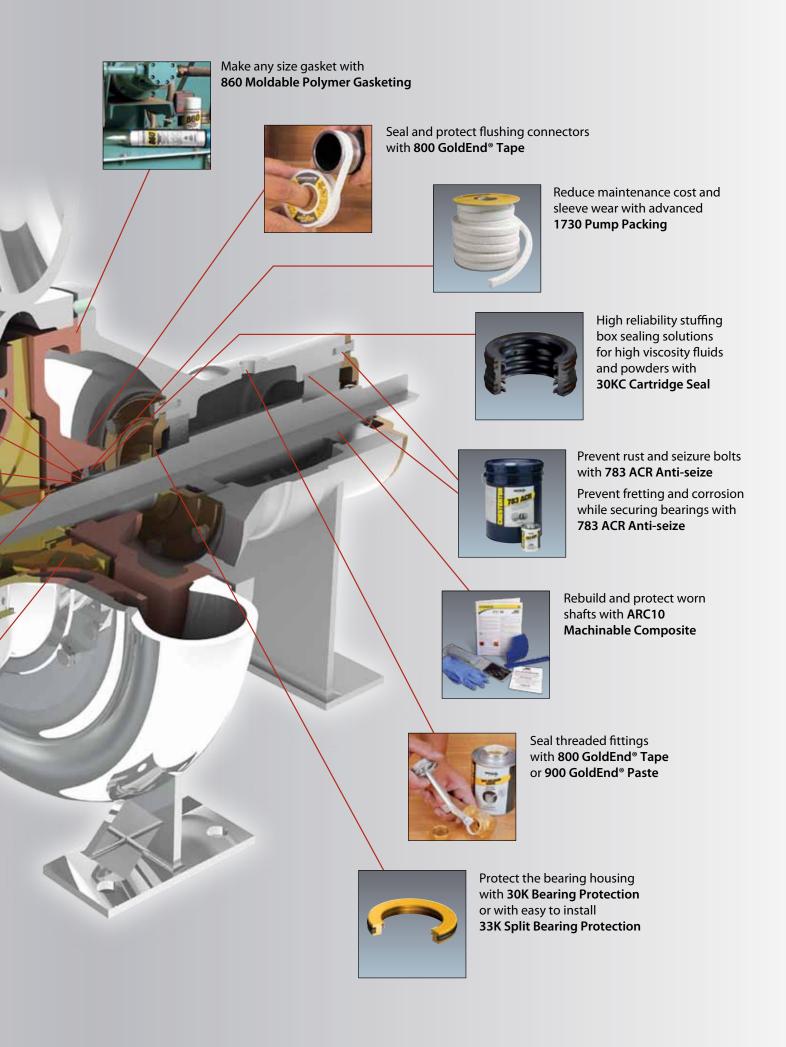


Rebuild, restore and coat impeller vanes with ARC 855 Abrasion Control Liquid Composite Coating



 $Spiral Trac^{\intercal} \text{ is a trademark of EnviroSeal Engineering Products Ltd.}$ 





# DEDICATED TO QUALITY AND RELIABILITY

### **Engineered Polymer Solutions**

Chesterton's Engineered Polymer Solutions group is a worldwide manufacturer and distributor of the highest performing polymer seals. We combine our technical expertise with state-of-the-art material technologies to provide industry-leading solutions.

- Hydraulic and pneumatic seals
- Spring-energized seals

- Custom seals
- Service programs

### **Materials and Innovation**

We utilize the full range of state-of-the-art polymer technologies to support a wide range of industrial applications.

### **Designs and Expertise**

Our engineers draw on years of experience to design value-added products with a focus on continuously improving equipment performance.

### SpeedSeal®

Chesterton offers regional service with fully integrated facilities that rely on advanced equipment, flexible tooling, and semi-finished materials. This allows us to provide you with a broad selection of product offerings—with same day delivery.

### **Solutions and Service**

Our distributors and specialists work closely with customers to provide the best service in the industry.



# Fluid Power Application Guide

Please contact your local Chesterton Representative to help you select the best product for your application.

RECIPRO	CATING MC	OTION													
Speed Types Product Profile		Description		Attributes			Friction		1	Wear	Resist	ance			
эрсси	1,9003	Troudet	Series		mold	**mach	hyd.	pne.	split	Low	Mid	High	Low	Mid	High
to 15 m/s (3 000 ft/	Cap Seals (Rod and	RCCS		Double acting, dual component seal		•	•	•		•				•	
min)	Piston)	PCCS		Double acting, dual component seal		•	•	•		•				•	
	Wipers	W5K, W21K		Positive angled profile with flange	•	•	•	•	•	•			•		
	Rod Seals,	R10K, R22KN		Single acting, positive angled profile	•	•	•	•		•			•		
	U-cups	R23K	K	Single acting, radiused sealing surface for pneumatic applications		•		•		•			•		
		R8K		Single acting, positive angled profile, multiple stacked set	•	•	•		•		•			•	
	Rod Seals,	R11K		Single acting, negative angled profile, dual stacked set	•	•	•		•		•			•	
	Stacked Sets	R28K		Single acting, positive angled profile, multiple stacked set		•	•		•		•			•	
		R28K1		Single acting, positive angled profile, multiple stacked set		•	•				•			•	
to 1 m/s (200 ft/min)	Dieter Cools	P10K, P22KN	K	Single acting, positive angled profile	•		•	•		•				•	
	Piston Seals, U-cups	P23K	K	Single acting, radiused sealing surface for pneumatic applications		•		•		•			•		
		P8K		Single acting, positive angled profile, multiple stacked set	•	•	•		•			•			•
	Piston Seals, Stacked Sets	P28K		Single acting, positive angled profile, multiple stacked set		•	•		•		•			•	
		P28K1	<b>(((</b>	Single acting, positive angled profile, multiple stacked set		•	•				•			•	
	Replaceable	18K, 19K		Metric and English size bearing bands	•		•	•	•	•			•		
	Bearings	WR		Custom bearing bands		•	•	•	•	•	•				
	Anti-extru- sion Rings	9K		Backup rings or anti-extrusion rings		•	•	•	•	•			•		
to 0,75 m/s (150 ft/min)	Compression Seals, (Rod and Piston)	R20K, P20K		Double acting, negative angled profile, low speed hydraulic applications		•	•				•			•	
Static	Valve Seals	M20K- OR		Static seal for O-Ring upgrades in hydraulic valves		•	•			•			•		

<sup>\*\*</sup>Machined product does not require tooling.



# POLYMER MATERIALS

Chesterton's exclusive thermoset polyurethanes (EU) are the most advanced seal materials that provide superior performance in hydraulic, pneumatic, and rotary equipment. This state-of-the-art polymer technology has been field-tested and proven in the most demanding applications around the world.

# **AWC800**

# **Red Polymer**

AWC800, the base of Chesterton's polymer seal program, is available in the majority of profiles.



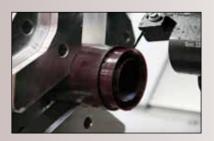
Operating Conditions	
Temperature	-50°C to +85°C
Pressure	Maximum 103,5 MPa
Fluid Compatibility	Mineral oil-based fluids, HFA-E, HFB (ISO 6743-4)
Surface Speed (continuous)	Reciprocating 1,0 m/s, rotating 0,5 m/s
Coefficient of Friction	Dry running 0,18 to 0,22
Shelf Life	>25 years

AWC800 is an EU polyether PU class material

- High sealing performance and leak-free operation
- Excellent wear and abrasion resistance for hostile environments
- Built-in lubricant and long elastic memory enable a longer service life
- Plant-wide usage



AWC800 is available for molded seals



AWC800 is in stock at all Chesterton SpeedSeal centres for rapid delivery of machined seals



# **AWC850**

# **HGT Polymer**

AWC850 High Glycol Tolerant material is a brand-new material technology that is resistant to HFC glycol-based hydraulic fluids.

# **AWC860**

# **Cherry Polymer**

Thanks to its mechanical properties, the AWC860 is best suited for highly demanding, heavy-duty applications where it helps extend equipment's mean time between repairs (MTBR).

# **AWC805**

# **Blue Polymer**

The AWC805 polymer is a softer material that conforms to uneven contact surfaces in worn or damaged equipment, delaying the need for costly repairs.

# **Operating Conditions**

	AWC805 Blue Polymer	AWC860 Cherry Polymer	AWC850 HGT Polymer	
Description and benefits	Highly elastic     Extends efficient operation in slightly worn equipment     Conforms to uneven surfaces	<ul> <li>Suitable for higher temperatures</li> <li>Robust polymer structure</li> <li>Longer service life due to excellent abrasion resistance</li> <li>Very low friction</li> </ul>	<ul> <li>Resistant to HFC glycol-based hydraulic fluids</li> <li>Longer service life due to a new material technology</li> <li>Excellent wear and abrasion resistance</li> </ul>	
Typical use	Mining equipment     Dusty environment     Presses     Old, worn hydraulic equipment cylinders	<ul><li> Mining equipment</li><li> Forging machines</li><li> Steel industry</li><li> Heavy-duty applications</li></ul>	<ul><li>Fire-risk environments</li><li>Steel industry</li><li>Forging</li><li>Die casting</li></ul>	
Temperature	-50°C to 85°C	-50°C to 120°C	-50°C to 105°C	
Pressure	Max 103,5 MPa	Max 103,5 MPa	Max 103,5 MPa	
Fluid compatibility	Mineral oil-based fluids, HFA-E, HFB (ISO 6743-4)	Mineral oil-based fluids, HFA-E, HFB (ISO 6743-4)	HFC, up to 100% glycol concentration	
Coefficient of friction	0,35 dry running	0,18 to 0,22 dry running	0,18 dry running	
Elongation at break	580%	540%	600%	

 $For additional\ information\ about\ product\ compatibility\ please\ visit\ \textbf{www.chesterton.com/ENU/Resources/ProductLiterature/linearity}. The product of the product of$ 

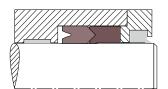


# SEALING SOLUTIONS FOR FLUID POWER - HYDRAULIC AND PNEUMATIC SEALS

# 11K

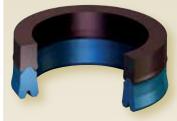
# **Split, Dual Component Hydraulic Rod Seal**

Eliminates the need for equipment disassembly during seal installation and provides sealing on worn, scored surfaces



### **SPECIFICATIONS**

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
AWC700 (FKM)	6 to 152 (1/4 to 6)	-30 to 200 (-20 to 400)	34,5 (5 000)	1,5 (300)
AWC800 (EU)	6 to 1 400 (1/4 to 55)	-50 to 85 (-60 to 185)	103,5 (15 000)	1 (200)
AWC805 (EU)	6 to 1 320 (1/4 to 52)	-50 to 85 (-60 to 185)	103,5 (15 000)	0,5 (100)
AWC830 (EU)	6 to 254 (1/4 to 10)	-35 to 75 (-30 to 165)	52,0 (7 500)	0,9 (185)
AWC850 (EU)	6 to 254 (1/4 to 10)	-50 to 104 (-60 to 220)	103,5 (15 000)	0,9 (185)
AWC860 (EU)	6 to 508 (1/4 to 20)	-50 to 120 (-60 to 250)	103,5 (15 000)	1,25 (250)



- Split design eliminates the need to disassemble eauipment
- One optimized seal concept for different press applications
- Dual material combination works in both new and worn equipment
- Design eliminates shimming and future adjustments

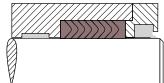
### PRODUCT PROFILES:





# **Split, Stack Set for Hydraulic Rod Applications**

Advanced stack set technology for high speed hydraulic applications and for scored, mechanically damaged rod and ram surfaces



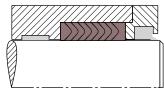
### SPECIFICATIONS

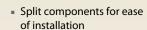
or Echi Text Tonis				<b>→</b>
Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
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AWC805 (EU)	6 to 1 320 (1/4 to 52)	-50 to 85 (-60 to 185)	103,5 (15 000)	0,5 (100)
AWC830 (EU)	6 to 254 (1/4 to 10)	-35 to 75 (-30 to 165)	52,0 (7 500)	0,9 (185)
AWC860 (EU)	6 to 508 (1/4 to 20)	-50 to 120 (-60 to 250)	103,5 (15 000)	1,25 (250)





8K





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- Light gland offers greater speed capability than conventional sets
- Pressure sensitive lip design minimizes friction and extends service life
- Material combinations designed for use in both new and worn equipment

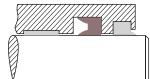


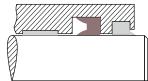
<sup>\*</sup>Please contact your Chesterton representative for larger sizes

# **10K**<sup>TM</sup>

# **Single Acting U-Cup Design for Rod and Piston Applications**

High performance U-cup design for the most demanding hydraulic and pneumatic applications







### **SPECIFICATIONS**

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
AWC700 (FKM)	6 to 152 (1/4 to 6)	-30 to 200 (-20 to 400)	34,5 (5 000)	1,5 (300)
AWC800 (EU)	6 to 1 400 (1/4 to 55)	-50 to 85 (-60 to 185)	103,5 (15 000)	1 (200)
AWC805 (EU)	6 to 1 320 (1/4 to 52)	-50 to 85 (-60 to 185)	103,5 (15 000)	0,5 (100)
AWC830 (EU)	6 to 254 (1/4 to 10)	-35 to 75 (-30 to 165)	52,0 (7 500)	0,9 (185)
AWC860 (EU)	6 to 508 (1/4 to 20)	-50 to 120 (-60 to 250)	103,5 (15 000)	1,25 (250)

- Automatic sealing for optimal sealing force with minimal frictional resistance
- Flexible lip design compensates for excessive radial space in worn equipment
- Advanced material technology withstands scored, damaged surfaces
- Positive rake lip profile wipes away contamination from mating surface

### PRODUCT PROFILES:

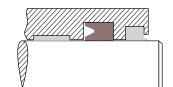






# Single Acting, U-Cup for **Rod and Piston Applications** in Hydraulics

Flexible family of high performance hydraulic seals for standard and high pressure applications





### CDECIFICATIONS

SPECIFICATIONS				$\hookrightarrow$
Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
AWC700 (FKM)	6 to 152 (1/4 to 6)	-30 to 200 (-20 to 400)	34,5 (5 000)	1,5 (300)
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AWC830 (EU)	6 to 254 (1/4 to 10)	-35 to 75 (-30 to 165)	52,0 (7 500)	0,9 (185)
AWC850 (EU)	6 to 254 (1/4 to 10)	-50 to 104 (-60 to 220)	103,5 (15 000)	0,9 (185)
AWC860 (EU)	6 to 508 (1/4 to 20)	-50 to 120 (-60 to 250)	103,5 (15 000)	1,25 (250)

Applicable standards: DIN/ISO 5597, DIN/ISO 5597-1, DIN/ISO 7425-2

# PRODUCT PROFILES:







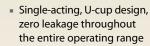












- Abrasion-resistant design, excellent performance in hydraulic applications
- Lip geometry stabilizes seal to prevent twisting and eases installation
- Application specific solutions, including anti-extrusion ring, energizer, and dynamic/static lip designs





















\*Please contact your Chesterton representative for larger sizes

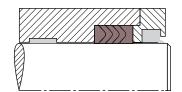


# SEALING SOLUTIONS FOR FLUID POWER - HYDRAULIC AND PNEUMATIC SEALS

# 28K/28K1

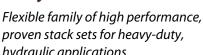
# **Stack Set for Piston** and Rod Applications in Hydraulics

proven stack sets for heavy-duty, hydraulic applications





- Split components for ease of installation
- Symmetrical lip design for use in rod and piston applications
- Flexible lips for reduced frictional load of metal components
- Manufacturing process allows flexibility to create any size



# **SPECIFICATIONS**

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
AWC700 (FKM)	6 to 152 (1/4 to 6)	-30 to 200 (-20 to 400)	34,5 (5 000)	1,5 (300)
AWC800 (EU)	6 to 1 400 (1/4 to 55)	-50 to 85 (-60 to 185)	103,5 (15 000)	1 (200)
AWC805 (EU)	6 to 1 320 (1/4 to 52)	-50 to 85 (-60 to 185)	103,5 (15 000)	0,5 (100)
AWC830 (EU)	6 to 254 (1/4 to 10)	-35 to 75 (-30 to 165)	52,0 (7 500)	0,9 (185)
AWC850 (EU)	6 to 254 (1/4 to 10)	-50 to 104 (-60 to 220)	103,5 (15 000)	0,9 (185)
AWC860 (EU)	6 to 508 (1/4 to 20)	-50 to 120 (-60 to 250)	103,5 (15 000)	1,25 (250)

### **PRODUCT PROFILES:**









# **20K**™

# **Heavy-Duty Bi-Directional Hydraulic Seal**

Robust seal design combined with high performance polymer technology for most demanding heavy-duty, high pressure applications



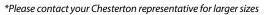
# SPECIFICATIONS

DI ECH ICATIONS				<b>→</b>
Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
AWC700 (FKM)	6 to 152 (1/4 to 6)	-30 to 200 (-20 to 400)	34,5 (5 000)	0,75 (150)
AWC800 (EU)	6 to 1 400 (1/4 to 55)	-50 to 85 (-60 to 185)	103,5 (15 000)	0,5 (100)
AWC830 (EU)	6 to 254 (1/4 to 10)	-35 to 75 (-30 to 165)	52,0 (7 500)	0,5 (100)
AWC850 (EU)	6 to 254 (1/4 to 10)	-50 to 104 (-60 to 220)	103,5 (15 000)	0,5 (100)
AWC860 (EU)	6 to 508 (1/4 to 20)	-50 to 120 (-60 to 250)	103,5 (15 000)	0,62 (125)

Applicable standards: DIN/ISO 4725-1, DIN/ISO 4725-2, DIN/ISO 6547

### PRODUCT PROFILES:







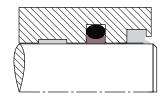
- Ideal replacement for 2-, 3-, or 4-piece cap seal assemblies
- Excellent extrusion resistance
- Abrasion-resistant design withstands demanding environments
- Outstanding resistance to shock loading and pressure spikes



# CCS

# **Rod and Piston Seals**

High performance, dual component system for bi-directional sealing in hydraulic and pneumatic applications



### **SPECIFICATIONS**

Cap Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min) Reciprocating/ <i>Rotary</i>
**AWC800 (EU)	up to 1 400 (55)	-35 to 85 (-30 to 185)	34,5 (5 000)	0,85 (185)/0,5 (100)
**AWC850 (EU)	6 to 254 (1/4 to 10)	-50 to 104 (-60 to 220)	34,5 (5 000)	0,9 (185)/0,5 (100)
**AWC860 (EU)	up to 508 (20)	-35 to 120 (-30 to 250)	34,5 (5 000)	1,25 (250)/0,75 (150)
***AWC300 (glass filled PTFE)	up to 600 (24)	-35 to 120 (-30 to 250)	34,5 (5 000)	15 (3 000)/5,0 (960)
***AWC400 (carbon filled PTFE)	up to 600 (24)	-35 to 120 (-30 to 250)	34,5 (5 000)	15 (3 000)/5,0 (960)
**AWC500 (bronze filled PTFE)	up to 600 (24)	-35 to 120 (-30 to 250)	34,5 (5 000)	15 (3 000)/5,0 (960)

Applicable standards: DIN/ISO 4725-1 and 4725-2 \*\*Buna energizer

\*\*\*FKM energizer

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- Second generation PTFE and high performance polymers offer improved performance
- Compression seal design increases sealing force with system pressure
- Dramatically reduced friction and eliminated "Stick-Slip" effect
- Excellent chemical- and heat-resistant characteristics

### **PRODUCT PROFILES:**









# W5K & W21K

# Wipers for Hydraulic and **Pneumatic Applications**

High performance protection of hydraulic and pneumatic actuators/systems



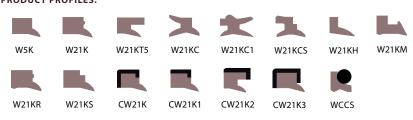




-	PECIFICATIONS			-
	Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Speed m/s (ft/min)
Ī	AWC700 (FKM)	6 to 152 (1/4 to 6)	-30 to 200 (-20 to 400)	1,5 (300)
	AWC800 (EU)	6 to 1 400 (1/4 to 55)	-50 to 85 (-60 to 185)	1 (200)
	AWC830 (EU)	6 to 254 (1/4 to 10)	-35 to 75 (-30 to 165)	0,9 (185)
	AWC850 (EU)	6 to 254 (1/4 to 10)	-50 to 104 (-60 to 220)	0,9 (185)
	AWC860 (FU)	6 to 508 (1/4 to 20)	-50 to 120 (-60 to 250)	1 25 (250)

Applicable standards: DIN/ISO 6195, ISO 3320

# PRODUCT PROFILES:



\*Please contact your Chesterton representative for larger sizes



- Positive rake lip design effectively wipes contaminants away from surface
- Prevents scoring and system contamination
- Abrasion-resistant design withstands demanding environments
- Prolongs lifetime of equipment and components

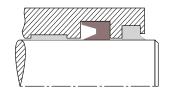


# SEALING SOLUTIONS FOR FLUID POWER - HYDRAULIC AND PNEUMATIC SEALS

# 23K

# Pneumatic Seals for Rod and Piston Applications

Unique seal design incorporated with high performance, polymer technology for low friction sealing in pneumatic applications



### **SPECIFICATIONS**

Material (designation)	Size Range* mm (inch)	Temperature °C (°F)	Pressure MPa (psi)	Speed m/s (ft/min)
AWC700 (FKM)	6 to 152 (1/4 to 6)	-30 to 200 (-20 to 400)		1,5 (300)
AWC800 (EU)	6 to 1 400 (1/4 to 55)	-50 to 85 (-60 to 185)		1 (200)
AWC830 (EU)	6 to 254 (1/4 to 10)	-35 to 75 (-30 to 165)	0,9 (125)	0,9 (185)
AWC860 (EU)	6 to 508 (1/4 to 20)	-50 to 120 (-60 to 250)		1,25 (250)

### PRODUCT PROFILES:





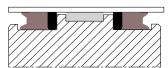


- Unique lip geometry provides optimal sealing force for pneumatic applications
- Radiused lip design ensures a continuous lubricating film, minimizing wear
- Unique design minimizes frictional heat and energy consumption
- Eliminates "Stick-Slip" effect

# 9K

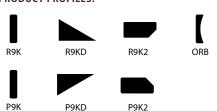
# Anti-Extrusion Rings for Hydraulic Applications

Designed to prevent seals from extruding into equipment clearances for heavy-duty, high pressure applications



SPECIFICATIONS		
Material (designation)	Size Range* mm (inch)	Temperature °C (°F)
AWC520 (Virgin PTFE)	6 to 600 (1/4 to 24)	Cryogenic to 230 (Cryogenic to 450)
AWC650 (Acetal)	6 to 381 (1/4 to 15)	-30 to 90 (-20 to 200)
AWC665 (Nylon with MoS <sub>2</sub> )	>381 to 1 450 (>15 to 57)	-40 to 105 (-40 to 212)
AWC663 (PA-6)	6 to 600 (1/4 to 24)	-40 to 105 (-40 to 212)

### PRODUCT PROFILES:





- Prevents extrusion of sealing element into equipment clearances: improves MTBR
- Machining process, allows the flexibility to create any size
- Available in various profiles and materials
- Split design for ease of installation

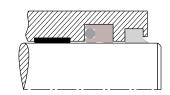


<sup>\*</sup>Please contact your Chesterton representative for larger sizes

# 18K & 19K

# **Bearing Bands for Hydraulic** and Pneumatic Applications

High performance replaceable bearing bands for cylinders



### SPECIFICATIONS

SPECIFICATIONS			C	
Material** (designation)	Size Range* mm (inch)	Temperature °C (°F)	Compressive Strength MPa (psi) ASTM D695	Speed m/s (ft/min)
AWC660 40% glass filled nylon	to 508 (to 20)	-40 to 121 (-40 to 250)	158,8 (23 000)	1,25 (250)

19K Metric Designs						
Cross section (S), mm	Height (H <sub>1</sub> ), mm	Outer Diameter range (OD), mm				
2,5	5	20 to 140				
	9	55 to 220				
	14	70 to 400				
	24	315 to 400				

19K

18K Inch Designs						
Cross section (S), inch	Height (H <sub>1</sub> ), inch	Outer Diameter range (OD), inches				
	0,375	1 to 4				
0.125	0,500	1,5 to 6				
0.125	0,750	3,5 to 8				
	1,000	4 to 20				



- Heat stabilized nylon the same carrying load as bronze
- Replaceable bearings prevent metal-to-metal contact and prolong equipment life
- Reduces radial movement, therefore extending seal life
- Split design minimizes downtime

# 18K

PRODUCT PROFILES:

# WR

# **Bearing Bands for Hydraulic** and Pneumatic Applications

Custom bearing bands for hydraulic and pneumatic applications



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# SPECIFICATIONS

or LCII ICATIONS			٣.	<b>~</b>
Material** (designation)	Size Range* mm (inch)	Temperature °C (°F)	Compression Strength MPa/psi ASTM/ISC Testing	Speed ) m/s (ft/min)
AWC630 Unfilled PEEK®	25 to 152 (1 to 6)	-45 to 175 (-50 to 350)	138,1 / 20 000 ASTM D695	1 (200)
AWC635 Glass-filled PEEK®	25 to 152 (1 to 6)	-45 to 175 (-50 to 350)	179,5 / 26 000 ASTM D695	1 (200)
AWC650 Acetal (POM)	25 to 381 (1 to 15)	-31 to 73 (-25 to 165)	55,2 / 8 000 ASTM D695	1 (200)
AWC665 Nylon with MoS <sub>2</sub>	381 to 1 450 (15 to 57)	-40 to 105 (-40 to 212)	96,7 / 14 000 ISO 604	1 (200)

Applicable standards: IDIN/ISO 10776

### PRODUCT PROFILES:



\*Please contact your Chesterton representative for larger sizes



- Replaceable bearings, a cost-effective method for improving equipment performance
- Reduces radial movement, prevents metal-to-metal contact, while extending seal life
- Custom wear rings eliminate unnecessary modifications
- Machining process allows the flexibility to create any size



<sup>\*\*</sup>Other materials are available upon request

# SEALING SOLUTIONS FOR FLUID POWER – HYDRAULIC AND PNEUMATIC SEALS

# **M20K**

# O-Ring Replacement Kits for Hydraulic Valves

Made from advanced AWC800 polymer, this Chesterton® valve seal outlasts traditional O-Rings, reducing maintenance and leakage



### STANDARD AVAILABLE KITS

Valve Size and Port	Replaced O-Ring	Quantity (pcs)	Small Kit Reorder# CLK0104	Standard Kit Reorder# CLK0105	Large Kit Reorder# CLK0155
NG6 (A,B,P,T)	OR9,25x1,78	25	√	√	√
NG10 (A,B,P,T)	OR12X2	25	√	√	√
NG10 (X,Y)	OR10,82X1,78	25	√	√	√
NG16 (A,B,P,T)	OR22X2,5	25	√	√	√
NG16 (X,Y)	OR10X2	25	√	√	√
NG25 (A,B,P,T)	OR27X3	25		√	√
NG25 (X,Y)	OR19X3	25		√	√
NG32 (A,B,P,T)	OR42X3	25			√
NG32 (X,Y)	OR19X3	25			√

Applicable standards: DIN24340, ISO 5781, ISO 4401, ISO 5263, ISO 6264, ISO 6263 & CETOP RP:121H



- High performance Chesterton polymer material AWC800 (EU)
- High resistance to compression setting and extrusion
- Long elastic memory and no aging
- Direct retrofit, no equipment modifications required

# **Ancillary Products**



# 652 – Pneumatic Lubrication and Conditioner

Cleans, protects and prolongs the life of pneumatic equipment and air operated valves. Go to page 51.



785 & 785 FG
High-performance,

High-performance, extreme pressure anti-seize compound. Go to page 54.



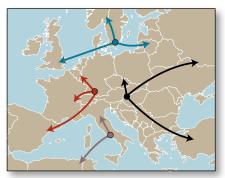
# 860 – Moldable Polymer Gasketing

Two-Part extrudable gasket material for flange and thread sealing. Go to page 56.

<sup>\*</sup> Please contact your Chesterton representative for larger sizes







# **SpeedSeal Service Centers**

- SpeedSeal Germany Ismaning
- SpeedSeal Sweden Karlshamn
- SpeedSeal Hungary Mogyorod
- SpeedSeal Italy Roma (Opening in 2014)

# SPEEDSEAL® SERVICE CENTERS

# **Fast and Flexible**

Chesterton® SpeedSeal offers same day delivery from its Service Center network for Europe and the Middle East.

Our fully-integrated facility utilizes advanced equipment and a wide range materials and designs to provide you with a broad selection of product offerings.

- Same day delivery\*
- Sizes available up to 1400 mm\*
- Engineered Solutions
- CAD hydraulic engineering
- Prototypes available
- Cylinder and equipment upgrade and repair

\*Conditions apply. Contact SpeedSeal for available service options.





# EFFICIENCY, PERFORMANCE AND PRODUCTIVITY

Chesterton offers products and total system solutions for production process, facility, and maintenance needs.

- Lubricants and greases
- Maintenance specialties

- Cleaners and degreasers
- Metalworking fluids and Corrosion control

State-of-the-art technologies, environmentally acceptable alternatives and strict quality processes contribute to fulfilling the customers' expectations:

Increased productivity

Lowered costs

Reduced disposal and labour costs

In partnership with our worldwide distribution channels and factory-trained local specialists, Chesterton offers superior value, outstanding customer service, technical support, and delivery.

In these pages, you will find an overview of our products. For in-depth, individual product information, ask your local Chesterton Specialist for further information.



# **Application Guide**

Please contact your local Chesterton Representative to help you select the best product for your application.

Lubricants		Chains	Bearings	Open Gears	Pneumatics	Wire Rope and Cable	Control Valves		High Temp.	Low Temp.	Load Carrying Ability	Water Resistance	Food Acceptance NSF Category
LIQUID LUBRICANTS		Ü	В	0	۵.	> <del>0</del>	J		I	د ا	۲ ∀ ۲	S œ	ŭΚΖ
601		<b>√</b> ++			<b>√</b> +	<b>√</b> ++			<b>√</b> +	<b>√</b> +	<b>√</b> ++		H2
610/610MT +/610HT		<b>√</b> ++	✓			<b>√</b> +		nce	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++	✓	H2
636FG	Suc	<b>√</b> ++	<b>\</b>		<b>√</b> +	<b>√</b> +		m.	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++	<b>√</b>	H1
690FG	atic	<b>√</b> ++			✓			erformance	✓	<b>\</b>	<b>√</b> +	✓	H1
715/715G	Applications	<b>√</b> +		<b>√</b> ++	<b>√</b> ++	<b>√</b> ++		_	✓	<b>√</b>	<b>√</b> +	<b>√</b> ++	H2
652	Ap	<b>√</b> +			<b>√</b> +	<b>√</b> +	✓	Relative	<b>√</b> +	<b>√</b> +	<b>√</b> ++		H2
GREASES								3ela					
615		✓	<b>√</b> +	✓		1	<b>√</b> +	_	✓	√+	<b>√</b> +	<b>√</b> ++	H2
633			<b>√</b> ++	√+					<b>√</b> ++	<b>/</b> ++	<b>√</b> ++	✓	H2
635			<b>√</b> ++				<b>√</b> ++		<b>√</b> +	<b>√</b> +	<b>√</b> ++	<b>√</b> ++	H2
625			<b>√</b> +				<b>√</b> +		✓	✓	<b>√</b> +	<b>√</b> ++	H1
630		√+ Aerosol	<b>√</b> ++	✓			<b>√</b> ++		<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> ++	H1

H1—Product may be used in areas where there is exposure of the lubricated part to edible product.

H2—Used on equipment where there is no chance of the lubricant or lubricated part contacting edible products

			Clear	ns Petrole	ater-Based um Oil, Gro d Dust, Bio	eases, Natu		Cleans R Water	ased Acid ust, Hard Scale, radable	Solv Bas	
Clea	ners a	and Degreasers	360 Phosphate-Free Cleaner	235 SSC	803 IMS II	KPC 820	218 HDP Pressure Wash	338 Super Rust Remover	346 Descaler and Chemical Cleaner	274 Industrial Degreaser	276 Electronic Component Cleaner
	<u>.</u>	Heavy Oil, Adhesives, Glues		1			✓				
	Soil/Deposit	Grease, Petroleum Oil, Dirt		<b>√</b> +	<b>√</b> ++	<b>√</b> ++	<b>√</b> +			<b>√</b> +	<b>√</b> +
	/Del	Natural Oils—Animal Fat, Vegetable Oil	<b>√</b> ++	1	<b>√</b> +	1	✓				<b>√</b> +
	)ioS	Scale, Hard Water Deposits						✓	<b>√</b> ++		
	· ·	Rust and Oxidation						<b>√</b> ++	✓		
		Manual Brush or Wipe	√+	<b>√</b> +	<b>√</b> ++	<b>√</b> ++	✓			<b>√</b> +	
	Parts Degreasing Shop	Parts Degreasing Station	✓		<b>√</b> +	<b>√</b> +				<b>√</b> ++	
	Parts greasi Shop	Dip Tank	✓	1	<b>√</b> ++	<b>√</b> +				<b>√</b> ++	
	Deg .	Steam Cleaning		<b>√</b> ++	<b>√</b> +	1	<b>√</b> +				
		Pre-Cleaning Parts/Machinery	<b>√</b> +	<b>√</b> +	<b>√</b> ++	<b>√</b> +	<b>√</b> +				
		Agitated Tank				✓	<b>√</b> ++			<b>√</b> +	
_	sing	Dip Tank	<b>√</b> +	<b>√</b> +	<b>√</b> ++	<b>√</b> +	✓			<b>√</b>	
tion	rea:	Pressure Washing		<b>√</b> +			<b>√</b> ++				
<u>ë</u>	Parts Degreasing Production	Ultrasonic				<b>√</b> ++				<b>√</b> +	
Application		Spray Booth/Spray Tunnel					<b>√</b> ++				
		Closed Circulation, Pipe Line	✓	1	<b>√</b> +	<b>√</b> +	<b>√</b> +				
	l t	Tanks and Vessels	<b>√</b> +	<b>√</b> +	<b>√</b> ++	<b>√</b> +	✓				
	/Pla	Food Processing Equipment	<b>√</b> ++	1	<b>√</b> +	<b>√</b> +	✓			✓	
	Machinery/Plant Cleaning	Building Structures, Floors, and Walls	√+	<b>√</b> ++	<b>√</b> ++	<b>√</b> ++	✓				
	ig S	Floor Scrubbers	✓	✓	1	<b>√</b> ++	<b>√</b> ++				
	Ma	Coolers, Condensers, Heat Exchangers						<b>√</b> ++	<b>√</b> ++		
		Electrical Motors—Non-energized		<b>√</b> ++	<b>√</b> ++	<b>√</b> +	1				<b>√</b> ++





# INDUSTRIAL LUBRICANTS AND MRO CHEMICALS

# **Lubricants and Greases**



Chesterton's lubrication program provides you with expertise and support for your entire production process and maintenance operations.

Chesterton® lubrication programs will:

- Extend equipment life
- Reduce costs
- Increase profitability
- Improve reliability
- Increase productivity

Key applications include:

- Chains
- **Bearings**
- Wire rope and cable
- **Pneumatics**
- Open gears
- Thread Lubrication/ Anti-seize
- Valves
- Extreme pressure applications

LIQUID LUBRICANTS

601

# **Chain Drive Pin and Bushing Lubricant—General Service**

Premium quality, light oil that penetrates between the close clearance of chain drive bushings and pins to provide critical lubrication.

### **Product Characteristics**

-23°C to 150°C (-10°F to 300°F)

Rapid penetration E.P. additives increase load carrying ability No dirt and dust build up No sticky lubricant residues Long lasting, non-drying film

Available Container Sizes: Aerosol, 3,8 l, 20 l, 208 l

NSF Registered

# **Applications**

Chain-driven machinery Convevors Packaging equipment Hoist chains Forklift trucks Chain saws



- Increases chain life
- Reduces lubricant consumption
- Reduces energy consumption

# 610/610MT Plus/610HT

# Synthetic Lubricating Fluid—High Temperature Service

Premium quality, 100% synthetic fluid that cleans as it lubricates over a wide temperature range of -25°C to 270°C (-13°F to 518°F).

### **Product Characteristics**

Low evaporation Low-carbonizing High detergency—self cleaning E.P. additives increase load carrying ability Available Container Sizes: Aerosol (610 only), 3,8 I (610/610HT only), 20 I, 208 I

NSF Registered

636FG is a Food Grade version of 610MT Plus.

### **Applications**

Equipment operating at elevated temperatures Refrigerated areas Severe environments Oven and high temperature chains **Bearings** Gearboxes



610 Primary Viscosities - ISO VG 68 - 610, ISO VG 220 - 610MT Plus, ISO VG 460+ - 610HT



- Reduces lubricant consumption
- Reduced equipment cleaning and downtime
- Reduces energy consumption
- Increases equipment life



# 690

# **FG Lubricant—Food Grade**

Cost effective, high quality, multi-purpose, non-staining penetrating lubricant; NSF authorized for incidental food contact and meets FDA standards.

Product Characterist	ıcs
Clear colourless odourles	

Clear, colourless, odourless Safe and easy to use in bulk or aerosol

-9°C to 120°C (15°F to 250°F)

Available Container Sizes: Aerosol, 3,8 l, 20 l, 208 l

NSF Registered H1

Complies with FDA 178.3620

# **Applications**

Food, beverage and pharmaceutical processing equipment, including:

chain drives pistons valves rollers pneumatics



- Safe to use
- Reduces energy consumption
- Increases equipment life

# 715

# Spraflex®/Spraflex® Gold

A surface lubricant for chain drives, open gears, and wire rope. Provides a long lasting, non-extruding "wear shield" to protect equipment operating under heavy loads.

### **Product Characteristics**

No lubricant squeeze out

Non-drip

Self-adhering, flexible lubricant

Resistant to acid fumes

Guards against rust and corrosion

Available Container Sizes: Aerosol, 3,8 l, 20 l, 208 l

# **Applications**

Chains

Open gears

Wire ropes and cables

Equipment in wet or underwater environment **Note:** Use Chesterton's 715 Spraflex® Gold where

ote: Use Chesterton's 713 Spratiex® Gold whe a clean, non-staining film is needed

NSF Registered



- Reduces lubricant consumption
- Water resistant
- Provides long-term equipment life



# **Pneumatic Lubricant and Conditioner**

High-performance, low viscosity formulation reduces up to 90% of pneumatic maintenance costs, decreases downtime and rejects. Cleans, protects, and prolongs the life of pneumatic equipment.

### **Product Characteristics**

Will not cause sludge build-up Prevents seals/O-rings from drying out

Reduces power consumption

Cleans rust, sludge, and dirt from all air tools as it lubricates

Available Container Sizes: 475 ml, 3,8 l, 20 l, 208 l

NSF Registered

# **Applications**

Air tools

Cylinders

Air line lubricators

Air impact wrenches, hammers, drills

Production air systems

**CNC** machines

Robotics

Assembly line tools



- Lowers friction and reduces air cost
- Cleans and lubricates
- Prevents corrosion



# INDUSTRIAL LUBRICANTS AND MRO CHEMICALS

**GREASES** 

615

# HTG NLGI #1, HTG NLGI #2

High-performance, corrosion inhibited grease with outstanding extreme pressure capabilities and excellent water washout resistance. Temperature limit -40°C (-40°F) to 204°C (400°F)

### **Product Characteristics**

Superior water resistance
Excellent corrosion protection
Compatible with most popular greases
Exceptional shear resistance
Anti-oxidants prevent hardening
QBT™ Quiet Bearing Technology

Available Container Sizes: 400 g, 18 kg,
55 kg, 181 kg

NSF Registered

### **Applications**

High water, temperature environment plants including:

Pulp and paper mills Mining operations

Steel, aluminum, and metal processing Marine

Power

Water and wastewater



- Extends bearing life
- Reduces downtimes
- Increases productivity
- Reduces grease consumption

# **635 SXC**

High-performance, corrosion inhibited grease with outstanding extreme pressure capabilities and excellent water washout resistance; 635 is synthetic based and offers superior high temperature stability and resistance to steam and corrosive chemicals. Temperature limit  $-40^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$ ) to  $240^{\circ}\text{C}$  ( $464^{\circ}\text{F}$ )

### **Product Characteristics**

High load carrying capability
High temperature stability
Superior water washout
resistance
Excellent corrosion protection

Available Container Sizes: 400 g, 18 kg,
55 kg, 180 kg

### **Applications**

High water, temperature environment plants including:

Pulp and paper mills Mining operations

Steel, aluminum, and metal processing

Marine

Power

Water and wastewater



- Extends bearing life
- Reduces downtimes
- Increases productivity
- Reduces grease consumption

# 625 CXF, 630 SXCF

High-performance, food grade, corrosion inhibited grease with outstanding extreme pressure capabilities and excellent water washout resistance 625 CXF—Temperature limit -30°C (-22°F) to 204°C (400°F)

630 SXCF—Temperature limit -40°C (-40°F) to 240°C (464°F)

### **Product Characteristics**

Superior water washout resistance
Excellent corrosion protection
Compatible with most popular greases
Exceptional shear resistance
Anti-oxidants prevent hardening
or crystallization

Available Container Sizes: Aerosol (630 SXCF only),

NSF Registered H1 Complies with FDA regulations 178.3570.

400 g, 18 kg, 55 kg, 180 kg

# Applications

Food, pharmaceutical, beverage industries
Processing and packaging machines
Bottling equipment
Fruit feeders
Paste and sauce fillers
Canning machinery
Meat packaging equipment
Carton filling equipment



- Extends bearing life
- Reduces downtimes
- Increases productivity
- Reduces grease consumption



### **LUBRICANT DISPENSERS**

# **Lubri-Cup™ EM**

Automatic single-point lubricator dispenses Chesterton grease to critical areas, eliminating over- and under-greasing.

# **Product Characteristics**

Microprocessor-controlled, "pulse" delivery system

Programmable—operates up to 12 months

Replaceable service packs

Lubricates up to 8 bearings—up to 6 m

(19 feet) away

Sealed microprocessor

# **Applications**

All Industries Including:

Pulp and paper mills

Mining operations

Metal fabrication

Steel mills

Marine

# **Versions Available**

Lubri-Cup™ EM SP

Battery operated

Machine synchronized and externally powered (DC power and AC power)



- Reliable lubrication system
- User-friendly
- Cost-effective

# Lubri-Cup™ OL 500 Oiler

Automatic lubricator dispenses Chesterton oils to chains and other critical areas.

### **Product Characteristics**

Microprocessor-controlled, "pulse" delivery system

Programmable—operates up to 12 months

Refillable

Lubricates up to 4 points

Sealed microprocessor

### **Applications**

All Industries Including:

Pulp and paper mills

Saw mills

Mining operations

Steel mills

Food, pharmaceutical, beverage industries

**General Industry** 

# Versions Available

Lubri-Cup™ 500cc oiler	Battery operated
Lubri-Cup™ 500cc oiler	Machine synchronized and externally powered (DC power)
Lubri-Cup™ 500cc oiler	Machine synchronized and externally powered (AC power)



- Environmentally-friendly, refillable container
- User-friendly with a large LCD
- Cost effective

# **Lubri-Cup™ VG Mini**

Automatic single-point lubricator dispenses Chesterton grease to critical areas, eliminating over- and under-greasing.

### **Product Characteristics**

A compact, convenient and sturdy design that is simple to install and operate
Preset dispensing rates—1, 3, 6, 9, 12 months
Remote operation—up to 0,3 m (1 ft)
Electrochemical operation (Nitrogen gas)
Sealed microprocessor
Ability to turn on and off

# Applications

All Industries Including:

Mining and Ore Processing

Power

Pulp and Paper

Water and Wastewater

Steel and Metal Processing



- Cost-effective
- Transparent container for lubricant inspection
- Reliable lubrication system



# INDUSTRIAL LUBRICANTS AND MRO CHEMICALS

THREAD LUBRICANTS/ANTI-SEIZE

# 785 & 785 FG

# **Parting Lubricant**

The "new generation" anti-seize compound contains a blend of ultrafine, inorganic solid lubricants in a non-carbonizing, ashless synthetic carrier. Withstands severe temperature and pressure conditions.

### **Product Characteristics**

Eases disassembly up to 1 204°C (2 200°F) Fills in microscopic voids

No toxic heavy metals For extreme pressures up to 4 730 kg/cm<sup>2</sup> (67 570 psi)

Available Container Sizes:

785: 200 g, 250 g, 500 g, Aerosol, 24 kg

785FG: 200 g, 500 g

NSF Registered

# **Applications**

Covers all industries

Bolts Screws Studs Pipe threads Press fits

Pump sleeves

Note: FG designates a Food Grade Product



- Lubricates for assembly and disassembly
- Protects against corrosion
- No need for torque tension recalculation

# **783**

### **ACR**

783 combines high performance industrial anti-seize performance with extreme corrosion protection and water washout resistance. 783 is ideal where the primary cause of bolt seizure is corrosion.

# **Product Characteristics**

Eases disassembly up to 900°C (1 652°F)
Fills in microscopic voids
No toxic heavy metals
For extreme pressure
up to 8 928 kg/cm² (127 000 psi)

For extreme pressure up to 8 928 kg/cm<sup>2</sup> (127 000 psi) Safer than traditional metallic based anti-seizes **Available Container Sizes:** 250 g, 500 g, 24 kg

# **Applications**

Covers all industries

Bolts Screws Studs Pipe threads Press fits Pump sleeves



- Extreme corrosion protection and water washout resistance
- Lubricates for assembly and disassembly

# **725**

# **Nickel Anti-Seize Compound**

A high-performance, nickel based anti-seize. Combines the extreme pressure, corrosion resistant anti-seize abilities of colloidal nickel, in an oil suspension that can withstand temperatures up to  $1\,425^{\circ}\text{C}$  ( $2\,597^{\circ}\text{F}$ ).

### **Product Characteristics**

Ultra fine particles
Guards against galling and corrosion
Protects against self-welding
Withstands extreme pressure
Up to 1 425°C (2 597°F)

Available Container Sizes: 250 g, 500 g, Aerosol, 20 l

### **Applications**

Covers all industries

Mechanical assembly of: bolts, studs, flanges, press fits valve stems, pump sleeves, screws, bushings, gaskets, bearings

Meets MIL-A-907D NSF Registered

772 Premium Anti-Seize—Nuclear certifiable



- Lubricates for assembly and disassembly
- Protects against corrosion
- No need for torque tension recalculation



# **Maintenance Specialities**



Our high performance technologies are chemical tools designed to:

- Reduce the non-value added, repetitive maintenance functions
- Reduce the volume of chemicals used
- Reduce time for mechanical maintenance operations
- Improve the reliability of equipment
- Improve worker safety

# Applications include:

- Thread sealing
- Rust penetrants
- Flange and casing sealing
- Cleaners and degreasers
- Metalworking fluids
- Corrosion control

PENETRATING OIL

706

# Rustsolvo®

High-quality, fast acting, penetrating oil that reaches inaccessible areas and frees frozen nuts, bolts, and fittings without damaging the base metal.

# **Product Characteristics**

Safe on plastic and painted surfaces
Contains no glycols, alcohols, DMSO
(dimethylsulfoxide) or chlorinated solvents
Pleasant odour

Creeps into microscopic spaces

Available Container Sizes: 1 I, 20 I, 208 I

NSF Registered

# **Applications**

Use on all corroded or seized threaded assemblies in the harshest industrial environments



- Single function—optimizes performance
- Fast acting
- Safe to use

# 723 & 723 FG

# **Sprasolvo®**

Fast acting, penetrating oil in a convenient, non-flammable propellant aerosol can. Excellent for hard to reach areas where rust, tar, grease, and dirt may prevent easy removal of nuts, bolts, and fittings.

### **Product Characteristics**

Pinpoint spray
Safe on plastic and painted surfaces
Contains no acids or chlorinated solvents
Creeps into microscopic spaces
Available Container Sizes: Aerosol

NSF Registered 723FG—Conforms to FDA standard 21CFR 172.884, 178.3620, 178.3650

# Applications

Use on all corroded or seized threaded assemblies in the harshest industrial environments

Note: FG designates a Food Grade Product



- Single function—optimizes performance
- Fast acting
- Safe to use



# INDUSTRIAL LUBRICANTS AND MRO CHEMICALS

THREAD SEALING

# 800

# **GoldEnd® Tape**

Heavy-duty, high density, tear resistant, mouldable, dry PTFE sealant tape for use on metal or plastic threads, pipes, or bolts.

### **Product Characteristics**

-240°C (-400°F) to 260°C (500°F) Seals tightly and opens easily Non-aging, non-hardening Chemically resistant Requires fewer wraps Resists tearing and breakage Won't clog lines

### **Applications**

Liquids: Steam, water, salt water, air, fuels, refrigerants, acids, alkalis, all solvents Gases: Hydrogen, ammonia, oxygen, propane, butane, nitrogen Other: Pneumatic and hydraulic fittings up to 690 bar (10 000 psi) UL listed. Meets MIL-T-27730A. NSF Registered. DVGW approval No. 96.01e907. Acceptable for oxygen use



- Seals with 1 ½ to 2 wraps virtually all chemicals
- Adjustable by 90°, no leakage
- No waste

### **FLANGE SEALING**

860

# **Moldable Polymer Gasketing**

Two-part, extrudable gasketing material allows for the creation of ultra-thin gaskets in any size, any shape. Never sticks to surfaces.

### **Product Characteristics**

Resistance to oils, water, chemicals, and solvents Never sticks to surfaces Fills voids and scratches, up to 6 mm (1/4 inch) deep Remains elastic

Temperatures up to 260°C (500°F)

Steam to 6,8 kg/cm<sup>2</sup> (100 psi) and 170°C (338°F)

### **Applications**

For sealing complex mechanical assemblies Gear boxes, inspection covers, bearing housings, fittings, oil sumps and reservoirs, turbine casings, electrical boxes, vacuum systems

NSF Registered. Conforms to FDA standard 21CFR 175.300 and 177.2600. Caution: Not for use in contact with concentrated acids or hot concentrated caustics



- Economical
- Creates gaskets any size and shape
- Ease of application speeds up maintenance

# WATER-BASED ALKALINE CLEANERS

803

# **Industrial and Marine Solvent II**

A powerful, non-solvent based degreaser. Its advanced surfactant technology offers maximum efficiency in soil removal, especially applications where solvent use is required.

### **Product Characteristics**

Cleaning dust, dirt, carbon black, petroleum based oils

Phosphate-free, no EDTA or toxic solvents No irritating fumes

Compatible with pressure washers and steam cleaners

**Available Container Sizes:** 3,8 l, 20 l, 208 l, 1 000 l

### **Applications**

# Covers all Industries

Cleaning production equipment, facilities, floors, walls and steel structures

### NSF Registered

Caution: Should not be used on aluminum or metals sensitive to high alkalinity. When using on painted surfaces, test small area for compatibility.



- Cost effective—highly concentrated—dilute with water to use
- Strong, fast acting
- Improves worker safety
- Biodegradable



# 360

# **Phosphate-Free Cleaner**

Especially effective on animal fats and vegetable oils for the food industry; a versatile, industrial cleaner for environmentally sensitive areas.

<b>Product</b>	Chara	cteristics
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Highly effective on animal fat and vegetable oil High stable foam Solvent-free

Available Container Sizes: 20 I, 208 I, 1 000 I

NSF Registered

Caution: Do not use on aluminum

820

### **Applications**

Food, Pharmaceutical, and Beverage Industry

Meat and poultry plants

Bottling, canning, packaging machines

Waste water treatment

Floors, pump stations Sludge and fungi removal

Marine

Decks, hulls, bilges

Industrial

Floors, walls, tiles, concrete

Machines



- Cost effective—highly concentrated—dilute with water to use
- Strong, fast acting
- Improves worker safety
- Environmentally friendly biodegradable

# **KPC**

Balances powerful performance with environmental compliance and worker safety—the ideal choice for process degreasing.

# **Product Characteristics**

# Effective on:

Oil deposits

Soot and exhaust residue

Lubricants and metal working fluids

Animal and vegetable fats

Low residue

No phosphates, harsh alkalis or EDTA Available Container Sizes: 20 I, 208 I, 1 000 I

NSF Registered

### Applications

Ideal for manual, dip tank, and ultrasonic cleaning Effective for dip tank cleaning when heated to 82°C (180°F)



- Cost effective—highly concentrated—dilute with water to use
- Strong, fast acting, yet moderate pH
- Improves worker safety
- Environmentally friendly biodegradable

**218** 

# **HDP**

Heavy-duty, concentrated, virtually non-foaming, liquid alkaline degreaser. Designed with the environment in mind, yet it handles tough degreasing applications.

# **Product Characteristics**

Excellent rinsability

Corrosion inhibited

No silicones, toxic solvents, phosphates, or EDTA Dye and fragrance free

Available Container Sizes: 20 l, 208 l, 1 000 l

NSF Registered

# Applications

Spray booth washers Floor scrubbers High pressure washers

Steam cleaning equipment Can be used in food plants

**Note:** Chesterton's 218 HDP can be used up to 82°C (180°F)



- Cost effective—highly concentrated—dilute with water to use
- Long lifetime in washing equipment
- Improves worker safety no hazardous powder dust
- Environmentally friendly biodegradable



# INDUSTRIAL LUBRICANTS AND MRO CHEMICALS

# 235

# SSC

Powerful cleaner removes oily and greasy deposits, waxes, loose paint, and heavy soils. Specially formulated for steam cleaning equipment.

**Applications** 

Equipment (all types)

General

Concrete

Masonry

### **Product Characteristics**

### Additives retard scale build-up and clogging of steam cleaning equipment Contains strong alkalis, emulsifiers, and surfactants No irritating fumes

Available Container Sizes: 20 I, 208 I

NSF Registered

Caution: Should not be used on aluminum or metals sensitive to high alkalinity. When using on painted surfaces, test small area for compatibility.

# WATER-BASED ACID CLEANERS

338

# **Super Rust Remover**

Removes rust from ferrous metals, corrosion from aluminum, brightens copper, brass, stainless steel, and zinc—quickly and safely.

### **Product Characteristics**

Removes metal oxide layer Brightens non-ferrous metals Leaves metal paint ready Rinses clean with water Short term corrosion protection Available Container Sizes: 20 I, 208 I

### **Applications**

Metal prefinishing of Machined parts and

### Maintenance

Threaded assemblies, Internal corrosion

346

### General

# metalwork

# Restores rusted inventories, Nuts/Bolts

Shafts, Cast housings



Cost effective—highly

with water to use

concentrated—dilute



- Cost effective—highly concentrated—dilute with water to use
- Inhibited to protect base metals
- Biodegradable

# **Descaler and Chemical Cleaner**

Strong, acid based, multi-use liquid, formulated with metal protecting inhibitor for a wide range of applications.

# **Product Characteristics**

Dissolves rust and scale while protecting base surface Concentrated hydrochloric base and additives

Available Container Sizes: 20 I, 208 I

### Applications

Steam boiler tubes Condenser water systems Water circulating equipment Etches concrete

**NSF** Registered

Caution: Not effective on grease, oil, and common soil.

Not for use on aluminum, painted enamel, stainless steel, or decorative metals.



- Cost effective—highly concentrated—dilute with water to use
- Saves on labour, maintenance costs, and fuel consumption in heat transfer equipment
- Inhibited to protect base metals
- Biodegradable



# **SOLVENT-BASED CLEANERS**

274

# **Industrial Degreaser**

A hard surface degreaser for industrial and marine environments.

### **Product Characteristics**

Dissolves petroleum oil, grease, tar and other inorganic soils

Low odour, aromatic content

Does not attack metal, most paints, and plastics

Fast, penetrating action

Available Container Sizes: Aerosol, 3,8 l, 20 l, 208 l

**Applications** 

Maintenance shops Dip tanks Hard surfaces Machined parts

Recirculating and agitated parts washers



- Cost-effective
- Low evaporation, long lifetime, reduced consumption
- Improve worker safety
- High flash point

**CONTACT CLEANERS** 

276

NSF Registered

# **Electronic Component Cleaner**

Fast evaporating, high performance, solvent based degreaser that does not contain ozone depleting solvents

# **Product Characteristics**

Low residue

Non chlorinated

No ozone depleting materials

Available Container Sizes: Aerosol, 20 I, 208 I

NSF Registered

## **Applications**

Spray cleaning

Switches, controllers, panel meters Circuit boards, contacts, levers

Control panels

Hard surface degreasing

Equipment, motors

Non-energized electrical equipment

Parts in process



- Cleans quickly with a fast evaporation rate
- Does not attack plastic or metal

RECIRCULATING METALWORKING FLUIDS

**372** 

# **Opticool Emulsified Oils**

Opticool fluids are the newest line of emulsifiable machinery coolants. Emulsified coolants are ideal where lubrication is important and operations are severe.

# **Product Characteristics**

Unique base oil technology Extreme pressure capability Minimizes rancidity and odours Corrosion protection

Virtually eliminates adverse skin effects *Available Container Sizes:* 20 I, 208 I, 1 000 I

# **Applications**

Broaching, drilling, reaming Tapping, threading, milling Turning, grinding, stamping



- Long sump life
- Reduced purchases, disposal, and downtime costs
- Improves part finish and tool life



# INDUSTRIAL LUBRICANTS AND MRO CHEMICALS

NON-RECIRCULATING METALWORKING FLUIDS

388

# **Synthetic Tapping Fluid**

Safe, pure synthetic formula for machining operations performed at high-speed and feed rates, as well as manual or automatic single-shot cutting tool applications.

Product Characteristics	Applications
Ready to use	Tapping
Metal fines do not stick	Boring
Can be used with aluminum, and aluminum alloys	Reaming Threading
Does not smoke, fume or mist Essentially odourless Excellent lubricity and heat dissipation <i>Available Container Sizes:</i> 475 ml, 20 l, 208 l	Drilling Milling May be used in mist applications



- Fluid, penetrates tight tolerances
- Improves part finish and tool life
- Biodegradable, contains no oil or solvents

**CORROSION CONTROL** 

775

# **Moisture Shield**

An efficient, clear, moisture-displacing and anti-corrosion protective film that protects metal parts and equipment for months.

Product Characteristics	Applications
Transparent film	Parts in process, transit, or storage
Excellent corrosion protection	Electrical systems
Penetrates fine tolerances	Marine industry
High dielectric strength	Drying out of wet electrical parts
Protects new metal from corrosion	Note: Where long term protection is desired use
Available Container Sizes: Aerosol, 20 I, 208 I	Chesterton's 740 Heavy Duty Rust Guard

Conforms to MIL-C-16173D corrosion preventative, Grade 3



- Short term corrosion protection
- Easily removable with Chesterton's water-based or solvent-based cleaners

740

# **Heavy Duty Rust Guard**

This long-term, corrosion preventative coating provides heavy-duty metal protection for all areas constantly exposed to humidity and corrosive fumes—without critical surface preparation.

Product Characteristics	Applications
Self-healing, if scratched	Metal tools
Transparent brown	Parts in process
Available Container Sizes: Aerosol, 3,8 l, 20 l, 208 l	Parts in storage
	Pumps
	Indoor structural steel
	<b>Note</b> : Product can be easily removed with Chesterton's 276 Electronic Component
Conforms to MIL-C-16173D, Grade 1 and 4	Cleaner or 274 Industrial Degreaser



- Provides up to two years corrosion protection under sheltered outdoor conditions
- Does not peel or flake
- Excellent resistance to acid, alkali, and salt air fumes





# NSF Registered Products, A.W. Chesterton Company

This table provides general guidelines. For the most current listings and full descriptions of the category codes please visit www.NSF.org/usda/psnclistings.asp.

218 HDP	133943	A1	636 FG SLF220	147202	H1
235 SSC	133964	A4	651 Detergent Lubricating Oil (aerosol)	133928	H2
273 Electric Motor Cleaner	133975	K2	651 Detergent Lubricating Oil (bulk)	133946	H2
273 Electric Motor Cleaner (aerosol)	133976	K2	652 Pneumatic Lubricant and Conditioner	133944	H2
274 Industrial Degreaser	133955	C1, K1, K2	660 Silicone Lubricant (aerosol)	133970	H1
274 Industrial Degreaser (aerosol)	133949	C1, K1, K2	660 Silicone Lubricant (bulk)	133932	H1
276 Electronic Component Cleaner (aerosol)	133973	K2	662 FG Barrier Fluid 22	143837	H1
276 Electronic Component Cleaner (bulk)	133974	K2	690 FG Lubricant (aerosol)	133933	H1
277 Metal Surface Degreaser (aerosol)	134008	C1, K1	690 FG Lubricant (bulk)	133969	H1
277 Metal Surface Degreaser (bulk)	134007	C1, K1	706 Rustsolvo®	133942	H2
279 PCS	134012	K2	710 Anti-Seize Compound (bulk)	133958	H2
292 Precision Degreasing Solvent	134003	K1, K2, K3	715 Spraflex®	133938	H2
292 Precision Degreasing Solvent (aerosol)	134004	K1, K2, K3	715 Spraflex® (aerosol)	133934	H2
294 CSD	143867	C1, K1, K3	715 Spraflex® Gold	133930	H2
346 Descaler and Chemical Cleaner	133962	A3	715 Spraflex® Gold (aerosol)	133931	H2
3500 Valvelon®	134013	P1	723 FG Sprasolvo®	134006	H1
360 Phosphate-Free Cleaner	133961	A1, A4	723 Sprasolvo®	133939	H2
390 Cutting Oil (aerosol)	134947	H2, P1	725 Nickel Anti-Seize Compound	133959	H2
395 Tapping Lubricant	133935	H2	730 Spragrip®	133947	P1
438 PTFE Coating (aerosol)	133950	H2	775 Moisture Shield (aerosol)	134015	H2
601 Chain Drive Pin and Bushing	133927	H2	785 FG Parting Lubricant	132237	H1
Lubricant (aerosol)			785 Parting Lubricant	133960	H2
601 Chain Drive Pin and Bushing	133979	H2	787 Sliding Paste	133956	H2
Lubricant (bulk)	122072	ш	800 GoldEnd® Tape	134016	H1, P1
610 Synthetic Lubricating Fluid (aerosol)	133972	H2	801 Industrial and Marine Solvent	133965	A1, A4, A8
610 Synthetic Lubricating Fluid (bulk)	133971	H2	803 Industrial and Marine Solvent II	133966	A1
615 High Temperature Grease	133940	H2	860 Moldable Polymer Gasketing	134017	P1
615 HTG #1	133941	H2	(cartridge)		
622 White Grease	133929	H1	860 Moldable Polymer Gasketing	134018	P1
625 CXF Corrosion Resistant, Extreme Pressure Food Grade Grease	138414	H1	Curing Agent 900 GoldEnd® Paste	133957	H2, P1
629 High Temperature White Grease	133936	H1	KPC 820	133963	A1
630 SXCF	142462	H1			
630 SXCF Synthetic Extreme Pressure Corrosion Resistant Food Grade Grease	138415	H1			



# A WORLD OF PROTECTION

Industry faces adverse environmental conditions that attack components and structures which can result in compromised plant reliability, safety, and lost profits. Chesterton's ARC coatings provide superior performance against erosion, corrosion, abrasion, and chemical attack to both metal and concrete surfaces. You can rely on Chesterton's low VOC, 100% solids ARC protective linings to protect these surfaces in your industrial environment.

ARC Metal Composite Systems repair, rebuild, and protect all types of industrial process equipment and structures from abrasive, corrosive, and chemically aggressive environments.

- Provide long-term protection
- Extend equipment life
- Cut downtime
- Reduce the need for spare parts
- Simplify maintenance procedures

ARC Concrete Composite Systems repair, rebuild, and protect all concrete structures from abrasive, corrosive, and chemically aggressive environments.

- Provide long-term protection
- Avoid costly structural rebuild
- Reduce safety and environmental hazards
- Simplify maintenance procedures
- Cut downtime



# **Composite Coatings Application Guide**

These tables provide general guidelines for ARC composite product selection. Detailed product performance data can be found on product-specific data sheets and ARC chemical resistance guides.

# **Metal Composite Systems**

√+	= Best Choice	✓	= Good Choice
<b>√</b> +	= Best Choice	✓	= Good Choice

	Specialty Erosion Composites Resistant					Corrosion, Erosion, and Chemical Attack							Abrasion Resistant				
<50°C (<120°F)  50 to 70°C (120 to 160°F)  70 to 90°C (160 to 195°F)  90 to 110°C (195 to 230°F)  110 to 130°C (230 to 265°F)  130 to 180°C (265 to 355°F)	Patching/Repair/Rebuild	Machinable	Erosion/Corrosion Aqueous Solution	Erosion/Corrosion Mild Chemical	Erosion/Corrosion Elevated Temperature	Corrosion/Moderate Chemical	Corrosion/Harsh Chemical (Acid) Inorganic	Corrosion/Harsh Chemical (Acid) Organic and Bleaching Chemicals	Corrosion/Harsh Chemical (Alkalines)	Corrosion Flue Gasses	Potable Water Low Flow	Potable Water High Flow	Mild Sliding Abrasion	Moderate Sliding Abrasion	Severe Sliding Abrasion	Severe Sliding Abrasion/ Harsh Chemical	Impact Abrasion
855			<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +					✓	<b>√</b> +	<b>√</b>				
858	<b>√</b> +	✓	<b>√</b> +	<b>√</b> +	✓								<b>√</b>				
HT-T/HT-S			<b>√</b> +	✓	<b>√</b> +				<b>√</b> +				4				
S1/S1HB			✓	✓		<b>√</b> +	1										
S2			<b>√</b> +	<b>√</b> +	✓	<b>√</b> +	1				<b>√</b>	<b>√</b> +	<b>\</b>				
S4+						<b>+</b>	<b>√</b> +		1								
982							✓			<b>√</b> +							
S7						<b>\</b>	<b>√</b> +	<b>√</b> +		<b>√</b> +							
890													<b>&gt;</b>	<b>√</b> +			✓
IBX1													>	<b>√</b> +			<b>√</b> +
897													<b>√</b> +	✓			✓

# **Concrete Composite Systems**

		. 10 0 0		,,,,,															
	Pitching Grout	Grading Grout	Forming Grout	Chemical Process Spill Areas	Machine/Mechanical Room Floors	Clean Room Floors	Plating Rooms	Traffic Aisles	Food Processing/Packaging	Interior Chemical Containment	Exterior Chemical Containment	Floor Drains	Battery Charger Rooms	Locker/Shower Rooms	Broadcastable, Non-Slip Surfaces	Bottling Lines	Pump Bases	Fabrication/Manufacturing Floors	Manholes/Septic Systems
791*	<b>√</b> +	<b>√</b> +		<b>√</b> +	1		<b>√</b> +	✓	✓	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +			<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +
988*				<b>√</b> +	<b>√</b> +		<b>√</b> +	<b>√</b>	✓	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +				<b>√</b> +	<b>√</b> +	
NVE*				<b>√</b> +	<b>√</b> +		<b>√</b> +	1	✓	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +				<b>√</b> +	<b>√</b> +	
CS2**				<b>√</b> +	<b>√</b> +	<b>√</b>	<b>√</b> +	1	✓	<b>√</b> +	✓	<b>\</b> +	<b>√</b> +	<b>√</b>	1	1	<b>√</b> +	1	✓
CS4**				<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +		<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>/</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	
NVE VC**				<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +		<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	<b>√</b> +	

<sup>\*</sup>Are resurfacing composites for mechanical and chemical exposures

Moderate Chemical

Severe Chemical



<sup>\*\*</sup>Are thin film composites for chemical protection

# **COMPOSITE COATINGS – METAL COMPOSITE SYSTEMS**

# **EROSION RESISTANT COMPOSITES FOR METALS**

# **ARC 855**

# **Abrasion Control Liquid**

An advanced liquid, ceramic composite that is formulated to protect equipment from aggressive chemical attack, corrosion, and erosion.

Product Characteristics	Applications
Two-coat system	Fans and housings
Easily applied by brush or roller	Heat exchangers
Minimum thickness of 250 μm (10 mils)	Waterboxes
per coat	Pump casings and impellers
	Screws
	Condensers
	Tanks and vessels
	Valves

Technical Data	
Dry Temperature (Min/Max)	-29°C (-20°F) to 120°C (250°F)
Wet Temperature (Min/Max)	-29°C (-20°F) to 65°C (150°F)
Tensile Adhesion - kg/cm <sup>2</sup> - MPa (psi)	Greater than 140 - 14 (2 000)
Salt Fog	>10 000 hrs
Available Sizes	1 kg, 4,5 kg, 15 l (25,6 kg)



- Improves fluid flow efficiency
- Extends equipment life
- Cuts downtime
- Reduces the need for spare parts

# **ARC 858**

# **Abrasion Control Compound**

An advanced, trowelable ceramic composite for the repair and protection of all metal surfaces subjected to erosion, corrosion, and chemical attack.

Product Characteristics	Applications				
Applied by trowel or spatula	Pump casings and impellers				
Normally applied at a thickness of 1,5 mm	Fans and housings				
(60 mils) or more	Pipe elbows				
	Screws				
	Pitted tanks and pipes				
	Heat exchangers				
	Valves				

Technical Data	
Dry Temperature (Min/Max)	-29°C (-20°F) to 160°C (320°F)
Wet Temperature (Min/Max)	-29°C (-20°F) to 70°C (160°F)
Tensile Adhesion - kg/cm <sup>2</sup> - MPa (psi)	Greater than 140 - 14 (2 000)
Available Sizes	250 g, 400 cc, 1 kg, 4,5 kg, 15 l (24,8 kg)



- Rebuilds damaged equipment
- Repairs and smooths pitted surfaces
- Able to be top coated with other ARC Composites



# **ARC HT-T, HT-S**

HT-T—Spark-Testable, High-Temperature, Trowelable Abrasion Control Compound.

HT-S—Spark-Testable, High-Temperature, Sprayable Abrasion Control Liquid.

An advanced ceramic composite that is formulated to protect equipment from corrosion and erosion in elevated temperature immersion of aqueous solutions.

# **Product Characteristics**

- HT-T Applied at a nominal thickness of 900 to 1150 µm (35 to 45 mils) by trowel or plastic applicator
- HT-S Easily applied by spray, brush, or roller Minimum thickness of 250 μm (10 mils) per coat

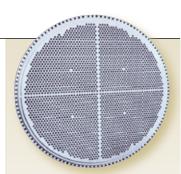
# **Applications**

Hydrocyclones Heat exchangers Pump volutes and impellers Condensate pumps

Tanks Valves

Offshore equipment

Technical Data	
Dry Temperature HT-T (Min/Max)	-29°C (-20°F) to 150°C (302°F)
Wet Temperature HT-T (Min/Max)	-29°C (-20°F ) to 110°C (230°F)
Dry Temperature HT-S (Min/Max)	-29°C (-20°F) to 175°C (347°F)
Wet Temperature HT-S (Min/Max)	-29°C (-20°F) to 150°C (302°F)
Tensile Adhesion - kg/cm <sup>2</sup> - MPa (psi)	Greater than 140 - 14 (2 000)
Available Sizes	41,161



- Extends equipment life
- Spark testable for pinhole free verification
- Reduces downtime
- Cures in service

COMPOSITES FOR CORROSION, EROSION, AND CHEMICAL ATTACK

# **ARC S1/S1HB**

# General Purpose, Sprayable, Corrosion Protection Coating

An advanced, liquid composite formulated to protect metal surfaces from corrosion and chemical attack.

### **Product Characteristics**

### ARC S1

Two-coat system

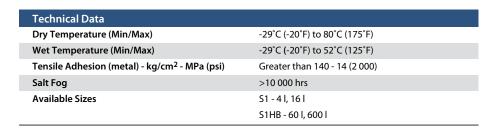
Easily applied by spray, brush or roller Minimum thickness of 250 μm (10 mils) per coat

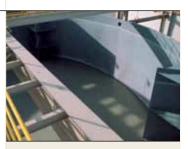
# ARC S1HB—High Build System

Easily applied by spray, brush, or roller at a thickness of 1 to 2 mm (40 to 80 mils) per coat. May be applied to concrete.

### **Applications**

Structural steel
Cooling water systems
Pipeline coatings
Service water systems
Wastewater structures
Tanks





- Low permeability provides long-term protection
- Spark testable for pinhole free verification
- Sprayable viscosity for rapid installation



# **COMPOSITE COATINGS – METAL COMPOSITE SYSTEMS**

COMPOSITES FOR CORROSION, EROSION, AND CHEMICAL ATTACK FOR METALS

# ARC S2

# Ceramic-Reinforced, Sprayable, Erosion-Resistant Coating

An advanced, liquid ceramic reinforced composite for the protection of all metal surfaces subject to erosive, corrosive, and severe fluid flow conditions.

Product Characteristics	Applications					
Two-coat system	Fans and housings					
Easily applied by spray, brush, or roller	Heat exchangers					
Minimum thickness of 250 μm (10 mils)	Cooling water systems					
per coat	Hoppers					
	Tank linings					
	Scrubber systems					
	Pump and valve assemblies					
	Pipeline coatings					

Technical Data	
Dry Temperature (Min/Max)	-29°C (-20°F) to 80°C (175°F)
Wet Temperature (Min/Max)	-29°C (-20°F) to 52°C (125°F)
Tensile Adhesion - kg/cm <sup>2</sup> - MPa (psi)	Greater than 140 - 14 (2 000)
Salt Fog	>20 000 hrs
Available Sizes	1125 ml (cartridge), 2 kg, 12 kg, 15 l (22,9 kg)



- Improves fluid flow efficiency
- Extends equipment life
- Sprayable viscosity for rapid installation
- Spark testable for pinhole free verification

# ARC S4+

# 100% Solids, Mineral-Reinforced, Epoxy Novolac, Acid Resistant Coating

An advanced, liquid polymer composite formulated to protect equipment from extreme chemical attack and corrosion.

Product Characteristics	Applications	
Two-coat system	Chemical storage tanks	
Easily applied by spray, brush, or roller	Chimneys and stacks	
Minimum thickness of 375 μm (15 mils)	Exhaust gas ductwork	
per coat	Fans and housings	
	Heat exchangers	
	Tank linings	
	Structural steel	

Technical Data	
Dry Temperature (Min/Max)	-29°C (-20°F) to 150°C (300°F)
Wet Temperature (Min/Max)	-29°C (-20°F) to 60°C (140°F)
Tensile Adhesion - kg/cm² - MPa (psi)	Greater than 140 - 14 (2 000)
Salt Fog	>10 000 hrs
Available Sizes	1125 ml (cartridge), 4 l, 16 l



- Provides long term protection
- Low permeability for immersion conditions
- Sprayable viscosity for rapid installation
- Spark testable for pinhole free verification



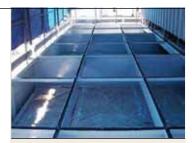
# **ARC 982**

# 100% Solids, Epoxy Novolac, Acid Resistant Coating

An advanced polymer composite formulated to protect equipment from extreme chemical attack and corrosion.

Product Characteristics	Applications	
Two-coat system	Chemical storage tanks	
Easily applied by spray, brush or roller	Chimneys and stacks	
Minimum thickness of 375 μm (15 mils)	Exhaust gas ductwork	
per coat	Fans and housings	
	Heat exchangers	
	Tanks and piping	
	Reaction vessels	

Technical Data	
Dry Temperature (Min/Max)	-29°C (-20°F) to 175°C (350°F)
Wet Temperature (Min/Max)	-29°C (-20°F) to 70°C (160°F)
Tensile Adhesion - kg/cm <sup>2</sup> - MPa (psi)	Greater than 193 - 19 (2 750)
Salt Fog	>7 500 hrs
Available Sizes	1 kg, 15 l (17,9 kg)



- Provides long-term protection
- Extends equipment life
- Resists elevated temperature exposures
- Spark testable for pinhole free verification

# ARC S7

# High-Temperature and Chemical-Resistant, Epoxy Novolac Vinyl Ester Coating

A low VOC, epoxy novolac vinyl ester-based coating intended for high temperature exposures in chemically aggressive applications where the risk for thermal cycling and shock may be present.

Product Characteristics	Applications
Two-coat system	Flue gas ducts
Applied via conventional airless spray systems,	Heat exchangers
brush, or roller Wet film thickness of 0,25 to 0,5 mm (10 to 20 mils) per coat	Quench zones
	Flue gas particulate filters
	Chemical reactors
	Chemical storage and process tanks
brush, or roller Wet film thickness of 0,25 to 0,5 mm	Quench zones Flue gas particulate filters Chemical reactors

Technical Data	
Dry Temperature (Min/Max)	-29°C (-20°F) to 180°C (355°F)
Wet Temperature (Min/Max)	-29°C (-20°F) to 135°C (275°F)
Tensile Adhesion - kg/cm <sup>2</sup> - MPa (psi)	Greater than 140 - 14 (2 000)
Available Sizes	141



- Extends asset life
- Provides long-term protection
- Easily applied for rapid installation
- Spark testable for pinhole free verification



# **COMPOSITE COATINGS – METAL COMPOSITE SYSTEMS**

ABRASION RESISTANT COMPOSITES FOR METALS

# **ARC 890/897**

# 890—Coarse Grade, Sliding Wear Compound 897—Fine Grade, Sliding Wear Compound

An advanced, ceramic-reinforced composite for the repair and protection of all metal surfaces subjected to severe abrasion and erosion/corrosion.

Prod	uct	Char	acter	istics

High volumetric ceramic particle loading Applied by trowel or plastic applicator tool 890 - Applied at a nominal thickness of

6 mm (1/4 in) or more

**897 -** Applied at a nominal thickness of 3 mm (1/8 in) or more

### **Applications**

Separators and cyclones Hoppers/Chutes Coal pulverizers Hydro pulpers Wear plates Slurry pumps Pipe elbows Pulverized fuel lines

Technical Data	
Dry Temperature (Min/Max)	-29°C (-20°F) to 205°C (400°F)
Wet Temperature (Min/Max)	-29°C (-20°F) to 95°C (205°F)
Tensile Adhesion - kg/cm <sup>2</sup> - MPa (psi)	Greater than 123 - 12 (1 750)
Available Sizes	ARC 890: 2 kg, 6 kg, 15 l (34,6 kg) ARC 897: 1 kg, 6 kg, 15 l (33 kg)

Screws



- Reduces the need for spare parts
- Simplifies maintenance procedures
- Extends equipment life
- Improves safety by reducing hotwork

# **ARCIBX1**

# Impact and Wear Resistant Epoxy Composite

I BX1 is a urethane modified amine cured epoxy composite, highly reinforced with ceramic beads and flakes for resistance to severe sliding abrasion where impact forces or rapid vibration is a concern.

### **Product Characteristics**

High volumetric ceramic particle loading Applied by trowel or plastic applicator tool Applied at a nominal thickness of 6 mm (1/4 inch) or more

### **Applications**

Hoppers and chutes Slurry pumps Pipes and pipe elbows Pneumatic conveyors Pulverizers and impact zones

Technical Data	
Dry Temperature (Min/Max)	-29°C (-20°F) to 205°C (400°F)
Wet Temperature (Min/Max)	-29°C (-20°F) to 95°C (205°F)
Tensile Adhesion - kg/cm <sup>2</sup> - MPa (psi)	Greater than 140 – 13,7 (2 000)
Available Sizes	20 kg, 12 x 20 kg



- High impact resistance
- Reduces the need for spare parts
- Simplifies maintenance procedures
- Extends equipment life
- Improves safety by reducing hotwork





# When your critical equipment and structures are subject to abrasion, erosion, corrosion and chemical attack, Chesterton ARC Composite Coatings are there to protect them



Equipment and structures in today's power plants have to operate in environmental conditions that aggressively attack metallic and cementitious surfaces, resulting in compromised performance, run time as well as safety. When your power plant's operation is at stake you need to rely on the company that understands the strength of a great product line is only as good as the knowledge and capability of the sales and service organization behind it.

For more information visit at www.chesterton.com/arc





# **COMPOSITE COATINGS – CONCRETE COMPOSITE SYSTEMS**

# RESURFACING COMPOSITES FOR CONCRETE

# **ARC 791**

# 100% Solids, Novolac Resin Blend, Trowel-Applied, Quartz Reinforced Concrete Resurfacer

A quartz reinforced composite that is designed to resurface and restore concrete surfaces, to protect new concrete, and to repair concrete damaged by chemical and physical abuse.

# **Product Characteristics**

Trowelable overlayment
Applied at minimum thickness of 6 mm (1/4")
Can be applied to damp concrete
Non-shrinking, no solvents, 100% solids
Colours: Grey

### **Applications**

Chemical containment Floor drains and sumps Process floor Equipment bedding Pump bases/grouting Structural support columns

Technical Data	
Dry Temperature (Min/Max)	-29°C (-20°F) to 93°C (200°F)
Wet Temperature (Min/Max)	-29°C (-20°F) to 65°C (150°F)
Compressive Strength - kg/cm <sup>2</sup> - MPa (psi)	760 - 75 (10 800)
Tensile Adhesion to Concrete - kg/cm <sup>2</sup> - MPa (psi)	Greater than 28 - 2,8 (400)
Available Sizes	System Kit, Bulk Kit



- Low maintenance overlayment
- Provides long term protection
- Avoids costly structural rebuild
- Easily applied to vertical surfaces/non-sagging

# **ARC 988**

# Highly Chemically Resistant, 100% Solids, Pure Novolac Resin Based, Trowel Applied, Quartz Reinforced Concrete Resurfacer

A high-performance, quartz reinforced composite that is designed to resurface and restore concrete surfaces, to protect new concrete, and to repair concrete damaged by severe chemical and physical abuse.

### **Product Characteristics**

Trowelable overlayment
Applied at minimum thickness of 6 mm (1/4")
Can be applied to damp concrete
Non-shrinking, no solvents, 100% solids
Colours: Grey, Red

### **Applications**

Chemical containments
Equipment bases
Secondary containment areas
Sumps, trenches and neutralization tanks

# Technical Data Dry Temperature (Min/Max) -29°C (-20°F) to 93°C (200°F) Wet Temperature (Min/Max) -29°C (-20°F) to 65°C (150°F) Compressive Strength - kg/cm² - MPa (psi) Tensile Adhesion to Concrete - kg/cm² - MPa (psi) Available Sizes System Kit, Bulk Kit



- Low maintenance overlayment
- Provides long term protection
- Avoids costly structural rebuild
- Reduces safety hazard caused by damaged concrete
- Easily applied to vertical surfaces/non-sagging



# **ARC CS2/CS4**

# CS2—General Purpose, Thin Film, Novolac Blend, Epoxy Coating CS4—Highly Chemically Resistant, 100% Novolac Resin, Epoxy Coating

Thin film, advanced composites that are formulated to protect concrete surfaces CS2 is used for mild chemical attack, and CS4 for harsh chemical attack.

### **Product Characteristics**

Easily applied by notched squeegee, brush, roller, or spray equipment Can be applied to damp concrete High gloss surface Non-shrinking, no solvents, 100% solids Minimum thickness of 250 to 375 µm (10 to 15 mils) per coat Colors: CS2 grey, CS4 red

# **Applications**

Concrete tanks, Chemical tanks Water intakes and dams Secondary containment Process floor areas Cooling towers Chemical plant floors Floor drains, sumps Drainage troughs **Equipment bases** 



- Provides long term protection
- Avoids costly structural rebuild
- Reduces safety hazard caused by damaged concrete

# **Technical Data**

Dry Temperature (Min/Max) -29°C (-20°F) to 80°C (175°F) Wet Temperature (Min/Max) CS2: -29°C (-20°F) to 52°C (125°F) CS4: -29°C (-20°F) to 40°C (105°F) Compressive Strength - kg/cm<sup>2</sup> - MPa (psi) CS2: 680 - (9 650), CS4: 970 - (13 750) Tensile Adhesion to Concrete - kg/cm<sup>2</sup> - MPa (psi) CS2: Greater than 28-2,8 (400) CS4: Greater than 28-2,8 (400) **Available Sizes** 

# **ARC NVE System**

# High-Temperature and Chemical Resistant, Epoxy Novolac Vinyl **Ester Coating**

A modified novolac vinyl ester lining system intended for high temperature exposures ion chemically aggressive applications. The product may be applied as a high build system or thin film system.

# **Product Characteristics**

Thin film - NVE VC (Veil Coat) Applied at minimum thickness of 250-375 µm Colors: Red

High build - NVE TC (Top Coat) Applied at minimum thickness of 3 mm (1/8") - 6 mm (1/4")

Color: Red

# **Applications**

**Process floors** Secondary containments Trenches, drains and sumps Tanks **Pipelines** 



Compressive Strength - kg/cm<sup>2</sup> - MPa (psi) Tensile Adhesion to Concrete - kg/cm<sup>2</sup> - MPa (psi)

Available Sizes

NVE TC (High Build System): 446 - 44 (6 360)

Greater than 28 - 2,8 (400)

System Kit



- Provides long term protection
- Avoids costly structural rebuild
- Reduces safety hazard caused by damaged concrete



# omposite Coatings

# **Ancillary Products**



# 803 Powerful water-based alkaline cleaner to remove oil and grease from metal and concrete surfaces. Go to page 56.



277 – Metal Surface Degreaser

A fast-acting, low residue, non-chlorinated industrial strength degreaser designed to remove oils, greases, dirt and dust. Go to www.chesterton.com.



ARC High Solids Spray System

Simple and efficient way to reliably spray selected ARC composites. Go to www.chesterton.com.



# PACKING AND GASKETS ORDERING INFORMATION

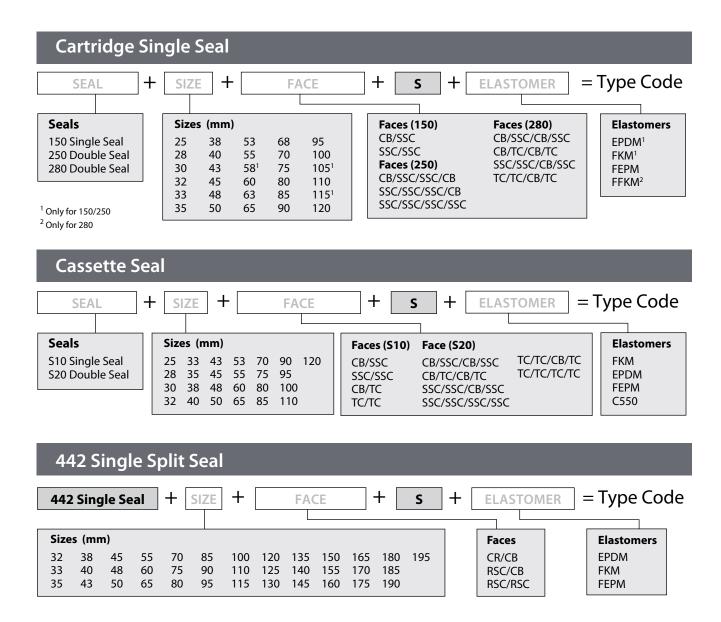
553 Environmental Gasket (Dim; T)****		14,3 mm; 4,54 kg*; 15,54 m	052618	10 mm; 2,27 kg*; 13,72 m	00837
1 500 x 1 500 mm; 0.5 mm	290234	15,9 mm; 4,54 kg*; 11,28 m		11,1 mm; 0,91 kg*; 4,27 m	00836
1 500 x 1 500 mm; 1 mm		17,5 mm; 4,54 kg*; 9,75 m		11,1 mm; 2,27 kg*; 10,67 m	
1 500 x 1 500 mm; 1,5 mm		19,1 mm; 4,54 kg*; 8,23 m		12 mm; 0,91 kg*; 3,96 m	
1 500 x 1 500 mm; 2 mm		20,0 mm; 4,54 kg*; 7,62 m 20,6 mm; 4,54 kg*; 7,32 m		12 mm; 2,27 kg*; 9,75 m	
1 500 x 1 500 mm; 3 mm		22,2 mm; 4,54 kg*; 7,01 m		12,7 mm; 0,91 kg*; 3,66 m 12,7 mm; 2,27 kg*; 9,45 m	
455EU General Service Gasket Sheet (Dim; T)*		23,8 mm; 4,54 kg*; 6,10 m		12,7 mm; 4,54 kg*; 18,59 m	
1 500 x 1 500 mm; 0.5 mm		25,4 mm; 4,54 kg*; 5,18 m		14,3 mm; 2,27 kg*; 6,1 m	
1 500 x 1 500 mm; 1 mm		1622 Low Emissions Valve Packing (CS; Valves/boxes; W; Ø)***		15,9 mm; 4,54 kg*; 9,14 m	00838
1 500 x 1 500 mm; 1,5 mm		3,2 mm; 83 Valves/boxes; 0,45 kg; 12,7 Ø stem mm	054700	17,5 mm; 4,54 kg*; 8,53 m	00838
1 500 x 1 500 mm; 2 mm 1 500 x 1 500 mm; 3 mm		4 mm; 121 Valves/boxes; 0,91 kg; 15 Ø stem mm		19,1 mm; 4,54 kg*; 8,23 m	
	270204	4,8 mm; 59 Valves/boxes; 0,91 kg; 15,9 Ø stem mm		20,6 mm; 4,54 kg*; 7,01 m	
557 Performance Gasket Sheet (Dim; T)****	200205	6 mm; 31 Valves/boxes; 0,91 kg; 25 Ø stem mm		22,2 mm; 4,54 kg*; 5,18 m	
1 500 x 1 500 mm; 0,5 mm 1 500 x 1 500 mm; 1 mm		6,4 mm; 73 Valves/boxes; 2,27 kg; 22,2 Ø stem mm		25,4 mm; 4,54 kg*; 3,05 m	00037
1 500 x 1 500 mm; 1,5 mm		8 mm; 39 Valves/boxes; 2,27 kg; 31,8 Ø stem mm 9,5 mm; 22 Valves/boxes; 2,27 kg; 41,3 Ø stem mm		1765 White Chemical Packing for Rotating	
1 500 x 1 500 mm; 2 mm		10 mm; 24 Valves/boxes; 2,27 kg; 40 Ø stem mm		<b>Equipment (CS;W;L)**</b> 6,4 mm; 0,91 kg*; 15,43 m	05117
1 500 x 1 500 mm; 3 mm	290209	11,1 mm; 14 Valves/boxes; 2,27 kg; 50,8 Ø stem mm		6,4 mm; 2,27 kg*; 38,57 m	
1400R Carbon Reinforced Graphite Packing (C	S: W: L)**	12 mm; 9 Valves/boxes; 2,27 kg; 70 Ø stem mm		7,9 mm; 0,91 kg*; 10,06 m	
3,2 mm; 0,91 kg*; 57,91 m		12,7 mm; 8 Valves/boxes; 2,27 kg; 69,9 Ø stem mm	054716	7,9 mm; 2,27 kg*; 25,15 m	
4,8 mm; 0,91 kg*; 18,29 m	000926	14,3 mm; 6 Valves/boxes; 2,27 kg; 82,6 Ø stem mm		9,5 mm; 0,91 kg*; 7,07 m	
6 mm; 0,91 kg*; 15,85 m		15,9 mm; 4 Valves/boxes; 2,27 kg; 101,6 Ø stem mm		9,5 mm; 2,27 kg*; 17,68 m	
6,4 mm; 0,91 kg*; 14,02 m		17,5 mm; 3 Valves/boxes; 2,27 kg; 127 Ø stem mm	054/22	10,0 mm; 0,91 kg*; 5,73 m	
6,4 mm; 2,27 kg*; 35,05 m		1724 PTFE Valve Packing (CS; W; L)**		10,0 mm; 2,27 kg*; 14,33 m 11,1 mm; 2,27 kg*; 11,4 m	
8 mm; 0,91 kg*; 11,28 m 8 mm; 2,27 kg*; 28,04 m		3,2 mm; 0,91 kg*; 46,94 m		12,0 mm; 2,27 kg , 11,4111	
9,5 mm; 0,91 kg*; 8,23 m		4 mm; 0,91 kg*; TBD m		12,7 mm; 0,91 kg*; 3,9 m	
9,5 mm; 2,27 kg*; 20,42 m		6 mm; 0,91 kg*; 15,24 m		12,7 mm; 2,27 kg*; 9,76 m	
9,5 mm; 3,18 kg*; 28,65 m		6,4 mm; 0,91 kg*; 11,58 m		12,7 mm; 4,54 kg*; 19,51 m	05118
10 mm; 0,91 kg*; 7,92 m	000947	6,4 mm; 0,91 kg*; 28,96 m		14,3 mm; 2,27 kg*; 8,08 m	
10 mm; 2,27 kg*; 20,12 m		8 mm; 0,91 kg*; 8,23 m		15,9 mm; 4,54 kg*; 9,76 m	
11,1 mm; 0,91 kg*; 6,4 m		8 mm; 2,27 kg*; 20,73 m		19,1 mm; 4,54 kg*; 7,77 m	
11,1 mm; 2,27 kg*; 15,85 m 12 mm; 0,91 kg*; 5,79 m		9,5 mm; 0,91 kg*; 5,79 m		20,6 mm; 4,54 kg*; 7,47 m 22,2 mm; 4,54 kg*; 6,4 m	
12 mm; 2,27 kg*; 14,63 m		9,5 mm; 2,27 kg*; 14,63 m		25,4 mm; 4,54 kg*; 3,81 m	
12,7 mm; 0,91 kg*; 5,18 m		9,5 mm; 4,54 kg*; 29,26 m 10 mm; 0,91 kg*; 5,18 m			
12,7 mm; 2,27 kg*; 12,8 m		10 mm; 2,27 kg*; 13,41 m		1830 Advanced Expanded Graphite PTFE Packing (CS, 4,8 mm; 0,91 kg*; 26,52 m	
12,7 mm; 3,18 kg*; 17,68 m	000959	11,1 mm; 0,91 kg*; 4,57 m		6,4 mm; 0,91 kg*; 12,19 m	
14,3 mm; 2,27 kg*; 10,06 m		11,1 mm; 2,27 kg*; 11,28 m		6,4 mm; 2,27 kg*; 30,78 m	
14,3 mm; 3,18 kg*; 14,02 m		12 mm; 0,91 kg*; 3,96 m		8 mm; 0,91 kg*; 9,14 m	
15,9 mm; 3,18 kg*; 10,67 m		12 mm; 2,27 kg*; 9,75 m		8 mm; 2,27 kg*; 22,86 m	17591
17,5 mm; 3,18 kg*; 10,06 m 19,1 mm; 3,18 kg*; 8,23 m		12,7 mm; 0,91 kg*; 3,35 m		9,5 mm; 0,91 kg*; 5,79 m	
20,6 mm; 3,18 kg*; 6,71 m		12,7 mm; 2,27 kg*; 8,23 m		9,5 mm; 2,27 kg*; 14,33 m	
22,2 mm; 3,18 kg*; 6,1 m		12,7 mm; 4,54 kg*; 16,46 m 14,3 mm; 2,27 kg*; 6,71 m		9,5 mm; 4,54 kg*; 28,35 m 10 mm; 0,91 kg*; 5,24 m	
23,8 mm; 3,18 kg*; 4,27 m		14,3 mm; 4,54 kg*; 13,41 m		10 mm; 2,27 kg*; 13,11 m	
25,4 mm; 3,18 kg*; 3,96 m	001096	15,9 mm; 4,54 kg*; 10,36 m		11,1 mm; 0,91 kg*; 4,57 m	
1600 Advanced Valve Stem Packing (CS; W; L)	**	17,5 mm; 4,54 kg*; 9,14 m	003286	11,1 mm; 2,27 kg*; 11,58 m	
3,2 mm; 0,91 kg*; 40,23 m	035002	19,1 mm; 4,54 kg*; 7,62 m		12 mm; 0,91 kg*; 3,84 m	
4 mm; 0,91 kg*; 27,74 m		20,6 mm; 4,54 kg*; 6,71 m		12 mm; 2,27 kg*; 9,60 m	
4,8 mm; 0,91 kg*; 19,81 m		22,2 mm; 4,54 kg*; 6,1 m		12,7 mm; 0,91 kg*; 3,35 m	
6 mm; 0,91 kg*; 15,85 m 6,4 mm; 0,91 kg*; 12,19 m		23,8 mm; 4,54 kg*; 5,79 m 25,4 mm; 4,54 kg*; 5,18 m		12,7 mm; 2,27 kg*; 8,23 m 12,7 mm; 4,54 kg*; 16,46 m	
6,4 mm; 2,27 kg*; 30,48 m		-	003274	14,3 mm; 2,27 kg*; 6,86 m	
8 mm; 0,91 kg*; 8,53 m		1730 General Service Packing (CS; W; L)**	000637	14,3 mm; 4,54 kg*; 13,72 m	
8 mm; 2,27 kg*; 21,64 m		6 mm; 0,91 kg*; 18,29 m		15,9 mm; 4,54 kg*; 11,58 m	
9,5 mm; 0,91 kg*; 5,79 m		6,4 mm; 2,27 kg*; 38,1 m		17,5 mm; 4,54 kg*; 9,45 m	
9,5 mm; 2,27 kg*; 14,94 m		8 mm; 0,91 kg*; 9,75 m		19,1 mm; 4,54 kg*; 7,92 m	
9,5 mm; 4,54 kg*; 29,57 m		8 mm; 2,27 kg*; 24,38 m		20 mm; 4,54 kg*; 7,29 m	
10 mm; 0,91 kg*; 5,49 m		9,5 mm; 2,27 kg*; 17,07 m	000694	22,2 mm; 4,54 kg*; 5,79 m	
10 mm; 2,27 kg*; 13,72 m 11,1 mm; 0,91 kg*; 4,27 m		9,5 mm; 4,54 kg*; 34,14 m		23,8 mm; 4,54 kg*; 5,18 m 25,4 mm; 4,54 kg*; 4,27 m	
11,1 mm; 2,27 kg*; 10,36 m		10 mm; 0,91 kg*; 6,1 m			
12 mm; 2,27 kg*; 9,14 m		10 mm; 2,27 kg*; 15,54 m 11,1 mm; 2,27 kg*; 12,5 m		Duragraf F Expanded Graphite Sheet (Dim; T)****	20021
12,7 mm; 0,91 kg*; 3,35 m	035028	12 mm; 0,91 kg*; 4,27 m		1 500 x 1 500 mm; 1 mm 1 500 x 1 500 mm; 1,5 mm	
12,7 mm; 2,27 kg*; 8,53 m		12 mm; 2,27 kg*; 10,67 m		1 500 x 1 500 mm; 2 mm	
12,7 mm; 4,54 kg*; 17,07 m		12,7 mm; 2,27 kg*; 9,75 m		1 500 x 1 500 mm; 3 mm	
14,3 mm; 2,27 kg*; 7,01 m		12,7 mm; 4,54 kg*; 19,51 m	000705	Duragraf T Expanded Graphite Sheet (Dim; T)***	r.
14,3 mm; 4,54 kg*; 13,72 m 15,9 mm; 4,54 kg*; 10,97 m		14,3 mm; 2,27 kg*; 7,01 m		1 500 x 1 500 mm; 1 mm	
17,5 mm; 4,54 kg*; 9,45 m		14,3 mm; 4,54 kg*; 13,72 m		1 500 x 1 500 mm; 1,5 mm	
19,1 mm; 4,54 kg*; 7,92 m		15,9 mm; 4,54 kg*; 11,28 m 17,5 mm; 4,54 kg*; 10,36 m		1 500 x 1 500 mm; 2 mm	
22,2 mm; 4,54 kg*; 5,79 m		19,1 mm; 4,54 kg*; 8,53 m		1 500 x 1 500 mm; 3 mm	29022
25,4 mm; 4,54 kg*; 4,57 m		20,6 mm; 4,54 kg*; 6,4 m		ECS-T PTFE Sheet Gasket (Dim; T)****	
1830-SSP Slurry Packing (CS; W; L)*		22,2 mm; 4,54 kg*; 5,49 m		1 200 x 1 200 mm; 1 mm	
9,5 mm; 0,91 kg*; 7,01 m	052605	25,4 mm; 4,54 kg*; 4,27 m		1 500 x 1 500 mm; 1,5 mm	
9,5 mm; 2,27 kg*; 17,37 m		1760 Chemical Packing (CS; W; L)**		1 500 x 1 500 mm; 2 mm	
9,5 mm; 4,54 kg*; 34,75 m		3,2 mm; 0,91 kg*; 35,66 m	008360	1 500 x 1 500 mm; 3 mm	29023
10,0 mm; 0,91 kg*; 5,18 m		4,8 mm; 0,91 kg*; 21,34 m	008362		
10,0 mm; 2,27 kg*; 13,41 m		6 mm; 0,91 kg*; 14,94 m		* Weights are given for informational purpose	s only.
11,1 mm; 0,91 kg*; 4,57 m 11,1 mm; 2,27 kg*; 11,58 m		6,4 mm; 0,91 kg*; 12,8 m		Weights are not contractual.	
12,0 mm; 0,91 kg*; 4,27 m		6,4 mm; 2,27 kg*; 32 m 8 mm; 0,91 kg*; 9,45 m		** CS: Cross section; W: Weight; L: Length.	
12,0 mm; 2,27 kg*; 10,67 m		8 mm; 2,27 kg*; 23,47 m		*** CS: Cross section; Valves/boxes; Average num	nber of
12,7 mm; 0,91 kg*; 3,96 m	052614	9,5 mm; 0,91 kg*; 6,4 m		valves per box; W: Weight; Ø: Stem diamete	r.
12,7 mm; 2,27 kg*; 10,06 m		9,5 mm; 2,27 kg*; 16,15 m		**** Dim; Lxl; T: Thickness.	
12,7 mm; 4,54 kg*; 19,81 m		9,5 mm; 4,54 kg*; 32 m	008381	• • • • • • • • • • • • • • • • • • • •	
14,3 mm; 2,27 kg*; 7,62 m	05261/	10 mm; 0,91 kg*; 5,49 m	008367		



# **MECHANICAL SEAL ORDERING INFORMATION**

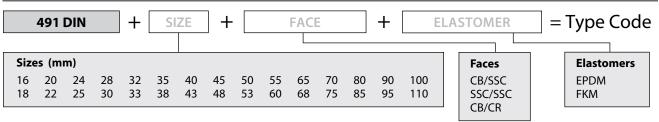
To place an order please fill out the white boxes with the appropriate information and supply the type code to your Chesterton representative. Use the chart on the right for your reference.

Component	Chesterton	EN12756	Description
Faces	СВ	В	Carbon Graphite, Resin Impregnated
	SSC	Q1	Silicon Carbide, Sintered Pressureless
	RSC	Q2	Silicon Carbide, Reaction Bonded
	TC	U2	Tungsten Carbide, Ni-Binder
	CR	V	Aluminum Oxide, 99.5%
Metals	316	G	CrNiMo Steel (1.4401)
	Alloy-20	M3	20 Cb3 (2.4660)
	Ti	T2	Titanium (3.7035)
	HC	M5	Hastelloy® C-276 (2.4819)
	НВ	M1	Hastelloy® B2 (2.4617)
	Monel®	M4	Alloy K500 (2.4375)
Elastomers	FKM	V	Fluorocarbon
	EPDM	E	Ethylene Propylene Rubber
	FEPM	Χ	Tetra-ethylene Propylene Rubber
	FFKM	K	Perfluoroelastomer
	C550	K1	Chemlast™ 550
	C250	K2	Chemlast™ 250



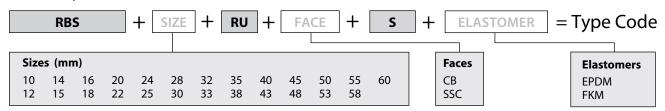


# 491 DIN Component Seal

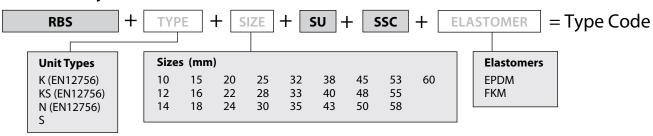


# **RBS Seal**

# Rotary Unit<sup>3</sup>

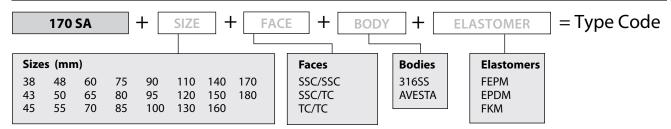


# Stationary Unit<sup>3</sup>

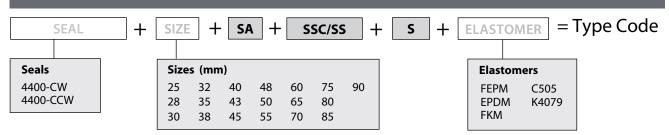


 $<sup>^{\</sup>rm 3}$  To order a complete RBS Seal, please order both rotary and stationary units.

# 170 SA Cartridge Seal



# 4400 Gas Seal





# INDUSTRIAL LUBRICANTS AND MRO CHEMICALS ORDERING INFORMATION

218 HDP	
20	
1 000 l	
208 I	083002
235 SSC	
201	080033EH
208	
	000033L0
274 Industrial Degreaser	
20	081006EU
208	081013EU
Aerosol 350g - EUR	087848
276 Electronic Component Cleaner	
	001633
201	
208	
Aerosol 250g - EUR	08/851
338 Super Rust Remover	
201	085904
208	
346 Descaler and Chemical Cleaner	
201	
208 I	088407
360 Phosphate-Free Cleaner	
201	083603
208	
1 000 l	
	000302
388 Synthetic Tapping Fluid	
475 ml	081491
20	081492
208	081194
200 Cutting Oil	
390 Cutting Oil	007060
Aerosol 411g - EUR	
Aerosol 411g - EUR 601 Chain Drive Pin and Bushing Lubrica	nt
Aerosol 411g - EUR	nt
Aerosol 411g - EUR 601 Chain Drive Pin and Bushing Lubrica	n <b>t</b> 081904
Aerosol 411g - EUR 601 Chain Drive Pin and Bushing Lubrican 1 gal/3,8 I	<b>nt</b> 081904 081910EU
Aerosol 411g - EUR	nt 081904 081910EU 081907EU
Aerosol 411g - EUR	nt 081904 081910EU 081907EU
Aerosol 411g - EUR	081904 081910EU 081907EU 087864
Aerosol 411g - EUR	081904 081910EU 081907EU 087864 089415
Aerosol 411g - EUR	081904 081910EU 081907EU 087864 089415
Aerosol 411g - EUR	081904 081910EU 081907EU 087864 089415 089414
Aerosol 411g - EUR	081904 081910EU 081907EU 087864 089415 089414
Aerosol 411g - EUR	081904 081910EU 081907EU 087864 089415 089414
Aerosol 411g - EUR	

625 CXF Grease, Corrosion Resistant,	
Extreme Pressure, Food Grade	
400 g	
18 kg	
55 kg181 kg	
3	
630 SXCF Grease, Synthetic, Corrosion Resistar Extreme Pressure, Food Grade	nt,
400 g	082713
18 kg	
55 kg	
181 kg	082712
Synthetic, Aerosol, 350g, EUR	082865
635 SXC Grease, Synthetic, Corrosion Resistan	t,
Extreme Pressure	
400 g	
18 kg	
55 kg	
181 kg	
636 FG Food Grade Synthetic Lubricating Fluid	
2012081	
	004127
<b>652 Pneumatic Lubricant and Conditioner</b> 475 ml	006000
1 gal/3,8 l	
201	
208	
690FG Lubricant, Food Grade	
1 gal/3,8 l	082703
201	
208	
Aerosol 397g - EUR	087870
715 Spraflex®	
201	
2081	
Aerosol 350g - EUR	08/8/2
715 Spraflex® Gold	001006
1 gal/3,8 l	
2012081	
Aerosol 300g - EUR	
723 Sprasolvo®, Aerosol 350g - EUR	
723FG Sprasolvo®, Aerosol 350g - EUR	08/8/3
725 Nickel Anti-Seize Compound	001366
250 g Brush Top500 g Brush Top	
20 l	
Aerosol 350g - EUR	
740 Heavy Duty Rust Guard	
1 gal/3,8 l	087705
201	
208	087707
Aerosol 300g - EUR	087877
775 Moisture Shield	
20	
208	
Aerosol 350g - EUR	087880

/8	3 ACK High Performance Anti-Seize	
	250 g Brush Top	082805
	500 g Brush Top	
	500 g Open Top	
	20 l, 24kg	088654
78	5 Parting Lubricant	
	200 g EN/GER	086907
	200 g SW/NW	
	250 g Brush Top	
	500 g Brush Top	
	24 kg	080748
	Aerosol 350g - EUR	087881
78	5FG Parting Lubricant, Food Grade	
	200 g - FWNGDA	
	200 g - IRSEUDU	088503
	500 g Brush Top	080788
80	0 GoldEnd® Tape	
	1/4 x 540 in/6,4 mm x 13,72 m	000805
	1/2 x 180 in/12,7 mm x 4,57 m	
	1/2 x 540 in/12,7 mm x 13,72 m	
	1/2 x 1 296 in/12,7 mm x 32,92 m	
	3/4 x 540 in/19,1 mm x 13,72 m	
	1 x 540 in/25,4 mm x 13,72 m	000806
ደበ	3 Industrial and Marine Solvent II	
00	1 gal/3,8	086774
	201	000774
	2081	
	1 000 l	
		0007 0020
86	0 Moldable Polymer Gasketing Kit	004003
	2 aerosol and 2 cartridges, plus a tool box	
	2 aerosol and 2 cartridges	0803 10
KP	C 820	
	201	
	208 l	
	1 000 l	083555EU
Lu	bri-Cup™	
	EM 250cc Electronic Dispenser	981100
	EM-X 250cc Electronic Dispenser ATEX	
	MSP 250cc Electronic Dispenser DC Power	981101
	MSP 250cc Electronic Dispenser AC Power	981102
	EM Service Pack 615 #1 250cc	981068
	EM Service Pack 615 #2 250cc	981069
	EM Service Pack 625 250cc	
	EM Service Pack 630 250cc	981073
	EM Service Pack 633 250cc	
	EM Service Pack 635 250cc	981075
Lu	bri-Cup™ VG Mini	
	With 630 SXCF Grease	084473
^		00 + 1/ J
Op	ticool™ 372 Emulsified Oils	002245
	201	
	208	
	1 000 l	08231/



# COMPOSITE COATINGS ORDERING INFORMATION

### **ARC Metal Composite Systems** ARC 855 Abrasion Control Liquid (P; T; C)\* 1 kg; 0,8 mm (30 mils); 0,78 m<sup>2</sup> (8,4 ft<sup>2</sup>) Black 082143 Grey .082140 4,5 kg; 0,8 mm (30 mils); 3,52 m<sup>2</sup> (37,9 ft<sup>2</sup>) Black. .082142 ....082139 15 I (25,6 kg); 0,8 mm (30 mils); 20,0 m<sup>2</sup> (215,6 ft<sup>2</sup>) Grey... ARC 858 Abrasion Control Compound (P; T; C)\* 250 g (QP); 3 mm (125 mils); 521 cm2 (0,53 ft2) .086194 Grev 400 CC Caulk Tube; 3 mm (125 mils); 1 333 cm<sup>2</sup> (195 in<sup>2</sup>) Grey ..083346 1 kg; 3 mm (125 mils); 2 083 cm<sup>2</sup> (2,11 ft<sup>2</sup>) Grey. .082137 4,5 kg; 3 mm (125 mils); 0,94 m2 (9,5 ft2) .082134 15 I (24.8 kg); 3 mm (125 mils); 5 m<sup>2</sup> (50,9 ft<sup>2</sup>) ...084161 ARC 890 Coarse Grade, Sliding Wear Compound (P; T; C)\* 2 kg; 6 mm (250 mils); 1 515 cm<sup>2</sup> (223 in<sup>2</sup>) ..082133 Grey. 6 kg; 6 mm (250 mils); 4 545 cm<sup>2</sup> (669 in<sup>2</sup>) .082132 Grev. 15 I (34.6 kg); 6 mm (250 mils); 2,5 m<sup>2</sup> (27 ft<sup>2</sup>) Grey. ARC 897 Fine Grade, Sliding Wear Compound (P; T; C)\* 1 kg; 3 mm (125 mils); 1515 cm<sup>2</sup> (1,5 ft<sup>2</sup>) Grey. .082131 6 kg; 3 mm (125 mils); 9 090 cm2 (9,2 ft2) 082128 15 I (33,0 kg); 3 mm (125 mils); 5 m<sup>2</sup> (53,8 ft<sup>2</sup>) ARC 982 100% Solids, Epoxy Novolac, Acid Resistant Coating (P; T; C)\* $1\ kg;375\ \mu m$ (15 mils) ; 2,2 $m^2$ (24 ft²) 082127 Light Grey ... Medium Grev ..082124 15 l (17,9 kg); 375 $\mu m$ (15 mils) ; 39,8 $m^2$ (426 ft²) Light Grey .... Medium Grey. ARC HT-S Sprayable Abrasion Control Liquid (P; T; C)\* 4 I; 900 μm (35 mils); 4,5 m<sup>2</sup> (48,4 ft<sup>2</sup>) Blue .. ....082741 Grev. 16 l; 900 µm (35 mils); 18,0 m<sup>2</sup> (193,75 ft<sup>2</sup>) Blue .082736

ARC HT-T Trowelable Abrasion Control	
Compound (P; T; C)*	
4 l; 900 μm (35 mils) ; 4,5 m <sup>2</sup> (48,4 ft <sup>2</sup> )	
Black	.082719
Green	.082720
16 l; 900 μm (35 mils) ; 18,0 m² (193,75 ft²)	
Black	
Green	.082727
ARC I BX1 Impact and Wear Resistant	
Epoxy Composite (P; T; C)*	
20 kg; 6 mm (250 mils); 1,5 m <sup>2</sup> (15 ft <sup>2</sup> )	
Grey	.081948
12 x 20 kg; 6 mm (250 mils) ; 18 m <sup>2</sup> (180 ft <sup>2</sup> )	
Grey	.081946
ARC S1 General Purpose Sprayable,	
Corrosion Protection Coating (P; T; C)*	
4 l; 250 μm (10 mils) ; 16 m² (170 ft²)	
Blue	
Grey(10 mile) (470 ft)	.080629
16 l; 250 µm (10 mils) ; 64 m² (678 ft²) Blue	004160
Grey	
Grey	.004100
ARC S1HB General Purpose Sprayable, Corrosion	1
Protection Coating High Build System (P; T; C)* 60 l; 250 µm (10 mils); 240 m² (2 550 ft²)	
Grey	088664
600 l; 250 µm (10 mils) ; 2 400 m² (25 500 ft²)	.000004
Grev	.088665
6.5)	
ARC S2 Ceramic-reinforced, Sprayable,	
Erosion-resistant Coating (P; T; C)*	
2 kg; 375 μm (15 mils) ; 3,56 m <sup>2</sup> (37,7 ft <sup>2</sup> )	
Grey	.090359
Green	
12 kg; 375 μm (15 mils) ; 21,33 m² (226,0 ft²)	
Grey	.090349
Green	
15 I (22,9 kg); 375 μm (15 mils) ; 40,0 m² (423,8 ft²)	
<b>C</b>	004175

# ARC S4+ 100% Solids, Mineral-Reinforced, Epoxy Novolac, Acid Resistant Coating (P; T; C)\* 115 pt (catridge) 275 up (15 pile) 2 pt (23 ft)

1125 ml (cartridge); 375 μm (15 mils); 3 m<sup>2</sup> (32 ft<sup>2</sup>)

Green...

082743

1125 ml (cartridge); 375 μm (15 mils); 3 m <sup>2</sup> (32 ft <sup>2</sup> )	
Grey	084177
Red	
4 l; 375 μm (15 mils); 10,7 m <sup>2</sup> (113 ft <sup>2</sup> )	
Grey	080774
Red	080765
16 l; 375 μm (15 mils); 42,7 m <sup>2</sup> (452 ft <sup>2</sup> )	
Grey	084177
Red	084178

.084176

084496

# ARC S7 High-Temperature and Chemical-Resistant, Epoxy Novolac Vinyl Ester Coating (P; T; C)\*

14 I ; 500 μm (20 mils) WFT**; 28 m² (300 ft²)	
Off White 0	82700EU
Red 0	82694EU

# **ARC Concrete Composite Systems**

ARC 791 100% Solids, Novolac Resin Blend,	
Trowel-Applied, Quartz Reinforced Concrete	
Resurfacer (P; T; C)*	
System Kit; 6 mm (250 mils); 4,1 m <sup>2</sup> (45 ft <sup>2</sup> )	
Grey	082195
Bulk Kit; 6 mm (250 mils); 16,7 m <sup>2</sup> (180 ft <sup>2</sup> )	
Grey	089537

### ARC 988 Highly Chemically Resistant, 100% Solids, Pure Novolac Resin Based, Trowel Applied, Quartz Reinforced Concrete Resurfacer (P; T; C)\*

System Kit; 6 mm (250 mils) ; 4,1 m² (45 ft²)	
Grey	082197
Red	
Bulk Kit; 6 mm (250 mils); 16,7 m <sup>2</sup> (180 ft <sup>2</sup> )	
Grey	089539
Red	089540

# ARC CS2 General Purpose, Thin Film, Novolac Blend, Epoxy Coating (P; T; C)\*

on,	
l; 0,5 mm (20 mils); 31,5 m <sup>2</sup> (339 ft <sup>2</sup> )	
Grey	084186

# ARC CS4 Highly Chemically Resistant, 100% Novolac Resin, Epoxy Coating (P; T; C)\*

4 I; 0,5 mm (20 mils); 7,9 m² (84,8 ft²)	
Red	081572
16 l; 0,5 mm (20 mils); 31,5 m <sup>2</sup> (339 ft <sup>2</sup> )	
Red	084187

# ARC NVE VC High-Temperature and Chemical Resistant, Epoxy Novolac Vinyl Ester Coating, Veil Coat (P; T; C)\*

### ARC NVE TC High-Temperature and Chemical Resistant, Epoxy Novolac Vinyl Ester Coating, Top Coat (P; T; C)\* System kit; 6 mm (250 mils); 9,7 m² (104 ft²)

Grey

Technical data notes: 1) Coverage values are theoretical, based on no waste factor or surface profile effects. In practice, 10–20% extra product should be added for waste factor assuming brush, roller, or trowel application. 2) Waste factor for products applied by spray could vary significantly depending on spray equipment, substrate geometry, and environmental conditions. 3) All coverage values based on product temperature of 21°C (70°F).



<sup>\*</sup> P: Pack Size; T: Thickness; C: Coverage

<sup>\*\*</sup> WFT: Wet Film Thickness

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170 Slurry Cartridge Single Seal14
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Piston Applications	4
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