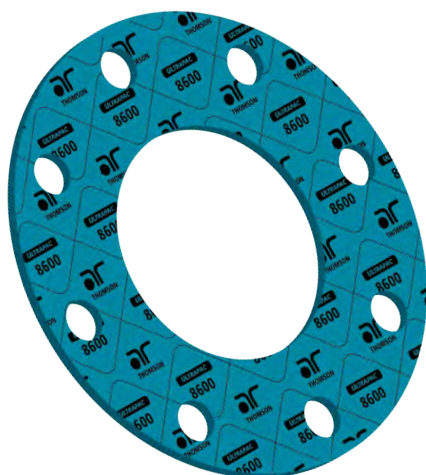


Thomson Performance Sealing

THE NEXT GENERATION OF INDUSTRIAL GASKETING



Thomson
ULTRAPAC™



Thomson
ULTRAGRAF®

**FLUID SEALING AND CONTAINMENT
SPECIALISTS SINCE 1967**

THOMSON PERFORMANCE SEALING

Thomson ULTRAPAC™

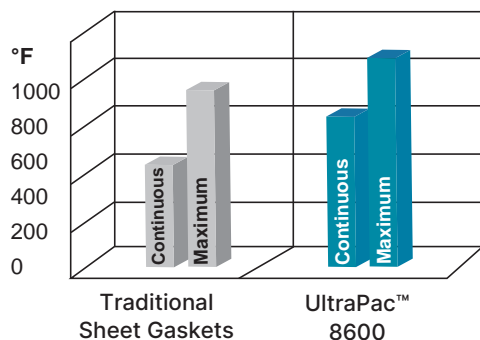
NEXT GENERATION Compressed Gasketing with a Unique Blend of Graphite fibers, Inorganic fillers and NBR binders.

*Also available with 316L SS Flemet insert.



Increased Temperature Limits

UltraPac™ 8600 can withstand peak temperatures of 825°F.



Ease of Handling

UltraPac™ is highly flexible and cuts with minimal effort, making it ideal for narrow flanges and hand-cutting irregular gaskets. This increases productivity, efficiency, and minimizes waste.



Hazard-Free

UltraPac™ is produced using a chemical-free, water-based process. It is environmentally friendly and Nitrosamine-free which is reassuring to all concerned.



Chemical Compatibility

UltraPac™ is resistant to a wider variety of chemicals and is well-suited for steam service. This helps minimize inventory and prevent misapplication of other, less versatile materials.



Anti-Stick Technology

UltraPac™ incorporates Thomson SURE-RELEASE® Anti-Stick technology for easy removal, even after long term service at high temperatures. This saves valuable time when replacing gaskets.

Styles	Colour	Construction	Description	Temperature	Pressure
8600	Teal	Graphite fibers, Inorganic fillers & NBR binders	Excellent general service sheet with outstanding flexibility, improved chemical compatibility, and higher temperature capability.	350°C / 662°F Max 250°C / 482°F Continuous	1,500 psi / 103 bar Max



	ULTRAPAC™	THERMAPAC®	
	8600	9100	9950
Construction	Graphite/Aramid/Nitrile	Carbon/Nitrile	Inorganic Fiber/Nitrile
Colour	Brick Teal w/ black branding	Grey w/ black branding	Black w/ orange branding
Features	Next Generation general service with outstanding temperature range and chemical compatibility. Exceptionally easy to handle; ideal for hand cutting and narrow flanges. Environmentally friendly.	High temperature sheet with excellent chemical and pressure capability. Improved handleability compared with typical carbon sheet materials.	Unprecedented temperature and pressure capability in a compressed sheet. Exceptional performance in steam service. API-607 Fire Safe.
Typical Service	Steam, petroleum, hydrocarbons, most refrigerants and brake fluids.	High temperature steam, hydrocarbons and heat transfer fluids.	High temperature steam, hydrocarbons, and heat transfer fluids.
Temp. Max (°C / °F)	350°C / 662°F	450°C / 842°F	550°C / 1022°F
Temp. Continuous (°C / °F)	250°C / 482°F	270°C / 518°F	430°C / 806°F
Max Pressure (PSI / Bar)	1,500 psi / 103 bar (1)	1,885 psi / 130 bar	2,150 psi / 148 bar
PXT	295,000	700,000 (1)	700,000 (1)

(1) Dependent on temperature, flange condition, installation, and gasket thickness.

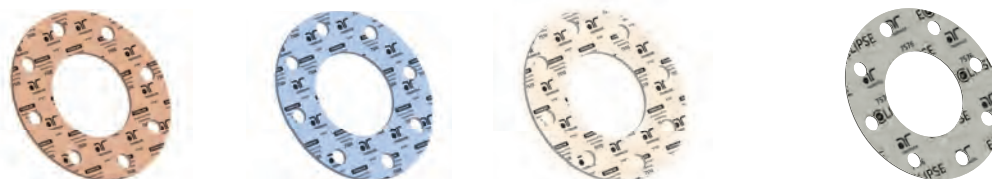


	ULTRAGRAF®	T-Therm™
	EFX	
Construction	100% Flexible Graphite and superior oxidation resistance with Flexmet® Insert.	Vermiculite & proprietary binders T-THERM™ 316L stainless tanged insert
Colour	Mauve w/ black branding	Soft Grey
Features	Formerly TGBE - has all of the TGBE attributes plus easy fabrication, safer handling and oxidation inhibitor resulting in greater volume retention and superior reliability in cycling and extreme service. API-6FB Fire Safe.	Extreme temperature and pressure in Hot Dry Gas applications. T-THERM™ has added blow out resistance due to its tanged stainless steel insert.
Typical Service	Hot hydrocarbons, super-heated steam, high pressures and cycling conditions.	Ovens, burners and exhaust systems. Chemical, Petrochemical, Automotive and Engine building industries. Heating systems and high temp. applications.
Temp. Max (°C / °F)	700°C / 1,300°F	950°C / 1740°F
Temp. Continuous (°C / °F)	450°C / 850°F	900°C / 1650°F
Max Pressure (PSI / Bar)	2,500 psi / 172 bar	Class 150 & 300lb

THOMSON PERFORMANCE SEALING



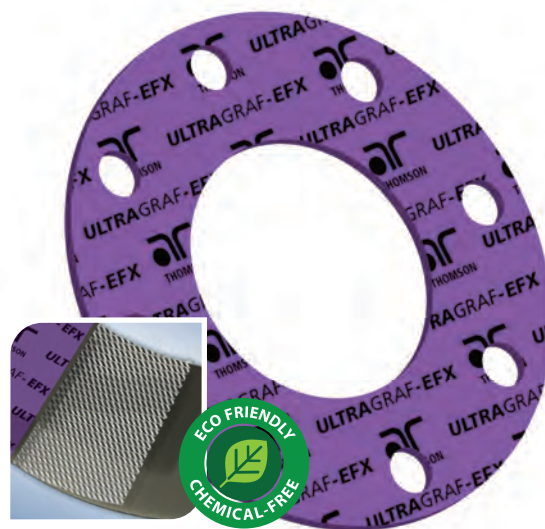
MULTIPAC™						
	6000	6101	6300	6400	6500	6700
Construction	Aramid/Nitrile	Aramid/Nitrile	Aramid/Neoprene	Aramid/SBR	Inorganic Fiber / Nitrile	Aramid/EPDM
Colour	White w/ blue branding	Blue w/ black branding	Blue / dark blue branding	Off-white / black branding	Grey w/ black branding	Off-white / emerald branding
Features	NSF Certified for potable water.	Premium General Service sheet - flexible and easy to cut with good all-around performance. Fire Safe (DVGW VP-401).	Premium sheet where a neoprene binder is required. Good handleability and dielectric strength.	Excellent sealability and good handleability.	Superior temperature capability. Good handleability. Fire Safe (DVGW VP-401).	High quality sheet material with EPDM binder. Superior resistance to caustic, hot water and steam.
Typical Service	Municipal waterworks, water treatment, food and beverage.	General service such as saturated steam, hot water and petroleum-based fluids.	Refrigerants, fuels, oils and low pressure steam.	Inert gases such as helium, nitrogen and argon.	Hot water, oils, saturated steam, most refrigerants.	Hot water, saturated steam, and mild caustics.
Temp. Max (°C / °F)	370°C / 700°F	370°C / 700°F	370°C / 700°F	370°C / 700°F	440°C / 825°F	370°C / 700°F
Temp. Continuous (°C / °F)	200°C / 400°F	260°C / 500°F	285°C / 548°F	200°C / 400°F	315°C / 600°F	200°C / 400°F
Max Pressure (PSI / Bar)	1,200 psi / 83 bar	1,450 psi / 100 bar	1,450 psi / 100 bar	1,500 psi / 103 bar	1,700 psi / 117 bar	1,450 psi / 100 bar
PXT	350,000	350,000	350,000	350,000	375,000	350,000



	CHEMLON®			ECLIPSE®
	7500	7504	7510	7576
Construction	Teflon®/Silica	Teflon®/Glass	Teflon®/Barium Sulfate	PTFE/Proprietary Filler
Colour	Fawn w/ black branding	Blue w/ black branding	Off-White w/ black branding	Grey w/ black branding
Features	Premium Silica-filled Teflon® sheet with reduced cold flow and creep in strong acids.	Premium glass-filled Teflon® sheet that is more conformable requiring less bolt load on non-metallic and fragile flanges.	Premium Barium-filled Teflon® with reduced cold flow and creep in strong caustic.	All-in-one PTFE gasket with universal chemical compatibility, low stress to seal, maximum load retention and outstanding rigidity for easy application.
Typical Service	Acids found in most industrial processing facilities.	Moderate acids and caustics, refrigerants and hydrocarbons.	Black liquor, caustic, chlorine, steam, and hydrocarbons.	Strong caustics and acids, chlorine, solvents, sodium hydroxide, cryogenics, hydrocarbon, water, saturated steam less than 100 psi, non-metallic or flanges with less bolt load available.
Temp. Max (°C / °F)	260°C / 500°F	260°C / 500°F	260°C / 500°F	260°C / 500°F
Temp. Min (°C / °F)	-268°C / -450°F	-268°C / -450°F	-268°C / -450°F	-268°C / -450°F
Max Pressure (PSI / Bar)	1,200 psi / 83 bar	800 psi / 55 bar	1,200 psi / 83 bar	1,200 psi / 83 bar
PXT	600,000	600,000	600,000	600,000

Thomson ULTRAGRAF®

NEXT GENERATION Flexible
Graphite Sheet with unique
Flexmet® 316LSS Insert.



Safer Edges

UltraGraf's unique Flexmet® insert greatly reduces the sharp edges seen with other inserts such as flat shim, wire or tanged metal. This minimizes the likelihood of cuts when handling and fabricating gaskets.



Exceptional Anti-Stick

Gasket removal is made easy with Thomson SURE-RELEASE® Anti-Stick technology saving valuable time and energy.



Easier to Cut

The Flexmet® insert is significantly easier to hand-cut compared with tanged insert saving time, effort, and material waste.



Uniform Loading

The geometry of the Flexmet® insert promotes more uniform loading and greater load retention over time.



More Durable

UltraGraf® has a unique surface finish making it less fragile and easier to handle than typical flexible graphite gasket materials.



Available in Utility, Premium & Maximum Performance Grades

See table below for information.

Styles	Colour	Description	Temperature	Pressure
EFX	Mauve (Purple)	Premium Grade - Higher purity graphite with oxidation and corrosion inhibitor for more extreme conditions and where cycling occurs (replaces Thomson TGBE). API-6FB Fire Safe.	700°C / 1,300°F Max 450°C / 850°F Continuous	2,500 psi / 173 bar Max

THOMSON PERFORMANCE SEALING

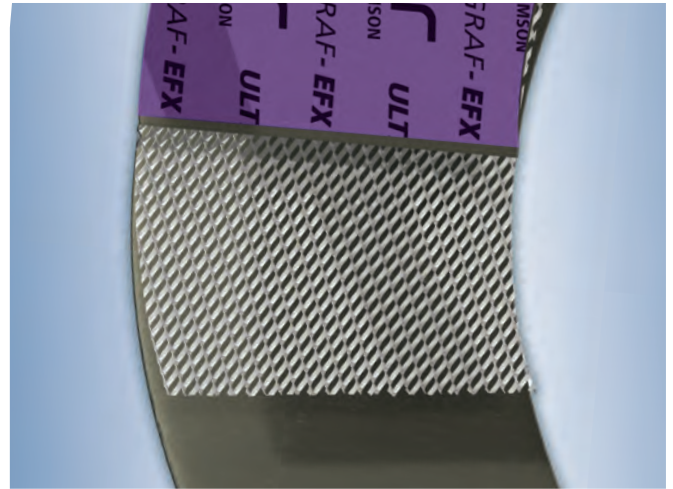
Thomson ULTRAGRAF®

Typical Properties

UltraGraf® Styles	EFX
Oxidation Rate, %	<3
Inhibitor, Y/N	YES
Sulfur Content, ppm	<300
Leachable Chloride, ppm	<30
Purity, %	>98
Ash Content, ppm	<2

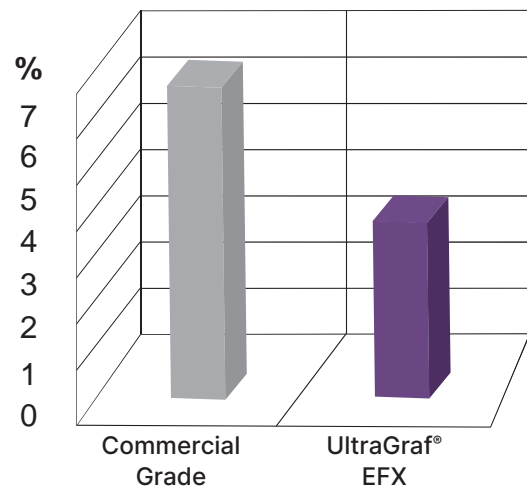
UltraGraf® EFX Superior Load Retention:

Bolted joint integrity is largely dependent on gasket volume retention over time. Loss of gasket volume results in reduced bolt load which compromises the seal and can ultimately lead to gasket failure. Oxidation is the primary cause of volume loss in flexible graphite gaskets. As such, oxidation resistance is a key measure of Flexible Graphite quality and performance. The lower the oxidation rate, the more reliable the gasket. EFX has an oxidation inhibitor, offer exceptional oxidation resistance and reliability.



Unique Flexmet® Insert

The unique design of the Flexmet® insert makes UltraGraf® easier and safer to handle compared with other types of inserts. The open, grid-like geometry results in a high percentage of solid graphite through the cross section of the gasket which allows it to fill larger voids in the flange surface. The Flexmet® insert design is also more concentric than perforated or tanged metal resulting in more uniform loading and greater load retention over time.



**Oxidation rates based on FSA-G-604-07 Test Method.*

Gasket removal made easy with Thomson SURE-RELEASE® Anti-Stick technology.

In addition to temperature and pressure capability, a gasket's performance must also be measured by how well it can be removed from a flange after its service life. Removing gaskets can be a tedious and labour-intensive process. Excessive adhesion and residue removal can also result in flange damage. The extra time spent cleaning flanges can be significant and costs can multiply due to lost production time. To avoid these problems, A.R. Thomson Group applies SURE-RELEASE® anti-stick treatment to all UltraPac™ and UltraGraf® products.

Thomson SURE-RELEASE® anti-stick treatment eliminates the need for other anti-stick pastes or coatings that often impact the performance of the gasket. Media contamination and gasket compatibility are concerns when additional anti-seize coatings are applied. This is no longer an issue when using Thomson UltraPac™ and UltraGraf® products.

- All Thomson UltraPac™ and UltraGraf® products come standard with Sure-Release® anti-stick treatment.
- Thomson Sure-Release® does not affect gasket compatibility or contaminate media unlike other anti-stick compounds.

Limitation of liability: actual performance may vary and is determined by factors unique to a given application. It is recommended that care be taken in the selection and application of materials for hazardous services and controlled testing be undertaken to determine suitability for a specific application. A.R. Thomson Group does not make or imply any warranty of suitability for a particular purpose and is not liable for any damages arising from the use of the information in this sheet.

Thomson SURE-RELEASE® Anti-Stick



Figure 1:
Gasket in 550°F steam treated with Thomson SURE-RELEASE® anti-stick treatment.

Competitor Anti-Stick

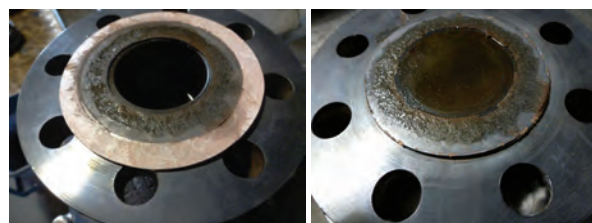


Figure 2:
Gasket in 550°F steam with competitor's anti-stick treatment.

Other Products



METALLIC GASKETS

Thomson CANFLEX® spiral wound, cammprofile, high temperature, heat exchanger and ring joint gaskets. We manufacture gaskets from all common metals, exotic alloys and filler materials in all configurations for the most extreme applications.



FASTENERS

All thread studs – ASTM 193 Grade B7, B7M, B8, B8M, B16, ASTM A320 L7, L7M; heavy hex nuts – ASTM A194 Grade 2H, 2HM, 4, L7, L7M, 8 and 8M; Through hardened washers – ASTM F-436; custom coatings; specialty fabricated and machined studs; CANFLEX® approved thread lubricant.



SUPERLOK CANADA

Instrumentation Tube, Pipe, JIC and DIN Fittings. Instrumentation Ball, Bleed, Check, Double Block and Bleed, Needle, Plug, and Purge Relief Valves. Quick Connects and Filters. Flexible Metal Hose, Tubing and Accessories.



MECHANICAL SEALS

Advanced cartridge and component seals for pumps, mixers, compressors and other rotating equipment. Seal replacements for major brands such as John Crane, Flowserve, AES and more.



The A.R. Thomson Group was established in 1967 as a regional manufacturer & distributor of gaskets and other fluid containment products. With the rapid growth of oil and gas production, petrochemical, oil refining and pulp and paper industries, our manufacturing facilities expanded to meet increased demand for these products. Since 1967, we have developed our expertise and know-how to become the leader in solving fluid containment and control problems. No matter what your control or containment needs, we can help.



Fluid Containment And Control Specialists Since 1967