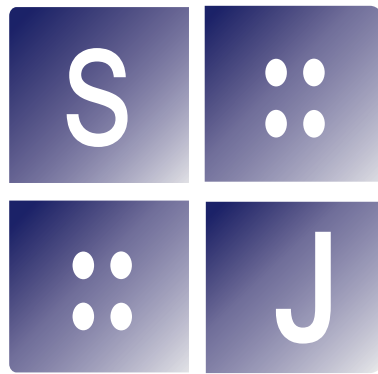


Gaskets

With World Class Quality



Superlite Jointings Private Limited

(AN ISO /TS : 16949-2009 COMPANY)



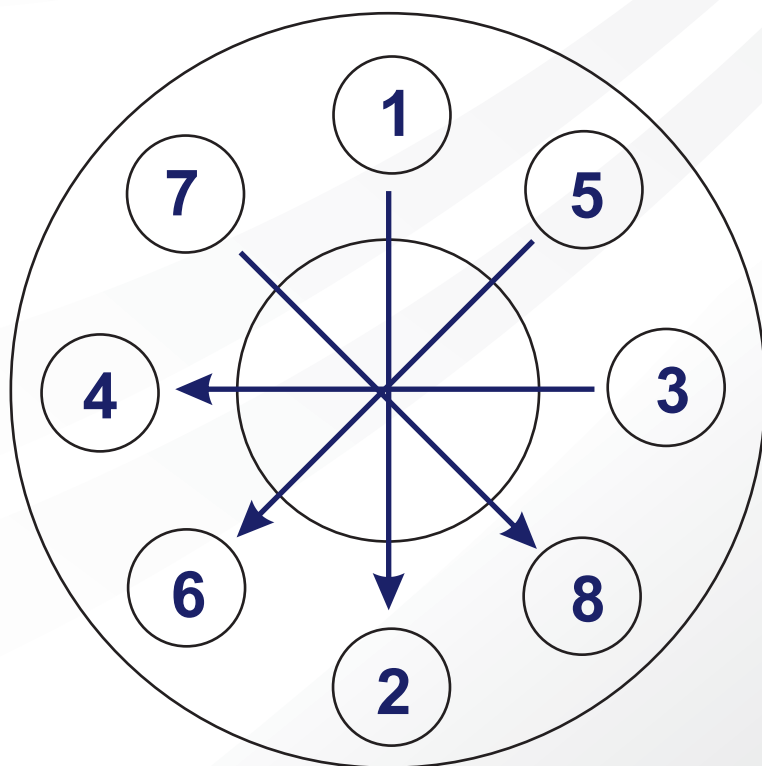
Mounting Instructions

The principle

The spiral wound function is based on the metal winding/ filler relationship and the flange surfaces. The surface roughness should be approx. $R_a 3.2 \mu m$. These gaskets can be used in flanges with larger surface roughnesses, but in this case the bolt loads should be increased so as to ensure proper function of the gasket. When the gasket is compressed during mounting, the homogeneous filler flows into the irregularities of the flange. The metal windings enclose the filler and, at the same time, ensure the strength and elasticity of the gasket. If the gasket is equipped with a PTFE filler it must have an inner ring since the PTFE permits no further compression, as is the case with other fillers. On the one hand, it prevents the gasket from springing open and on the other, penetration of the flowing PTFE in the pipeline. The larger the surface roughnesses in the flange surface, the larger the surface load required to permit a flow of the PTFE in the irregularities.

Mounting

The bolts should be free of damage and lubricated with high-temperature resistant greases before mounting. Insert the gasket and fasten bolts finger-tight. Next, tighten the bolts crosswise (see sketch) in at least 3 to 4 passes. The more passes you perform, the more uniform the force which is introduced into the flange-gasket system. In the last pass, the bolts must be tightened only clockwise.



Mounting

Flange surface condition:

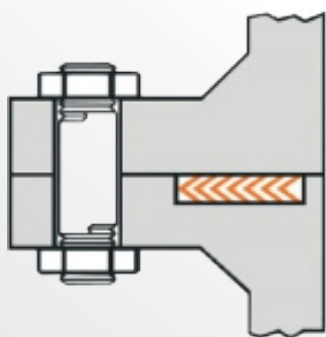
1. metallicly clean
2. plane-parallel
3. dry
4. fat free

Do not use separating agents or sealing aids!

Spiral Wound Gasket

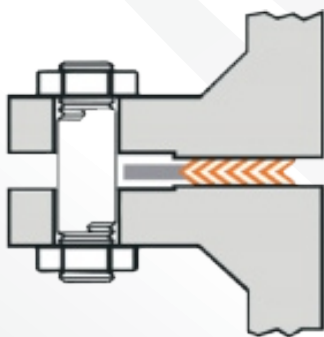


Spiral wound gaskets have proven to be the most reliable sealing element for use in difficult, critical and arduous duties. Spiral wound gaskets are widely used in Refinery, Petrochemical, Chemical, Steam lines and Process Industries.



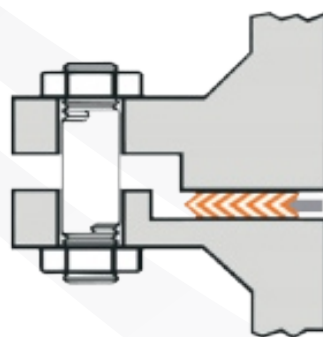
Type:- C

- » Spiral wound sealing element.
- » Wide choice of materials for filler and metal strip



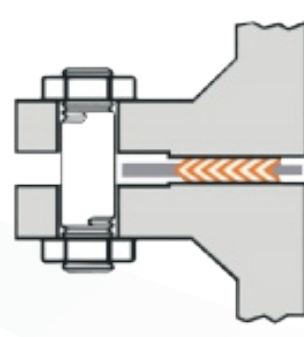
Type:- CS

- » Spiral wound sealing element.
- » Solid metal outer ring
- » Wide choice of materials for filler and metal strip



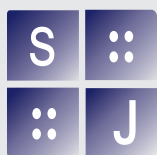
Type:- SI

- » Spiral wound sealing element.
- » Solid metal inner ring
- » Wide choice of materials for filler and metal strip



Type:- CSI

- » Spiral wound sealing element.
- » Solid metal inner and outer ring
- » Wide choice of materials for filler and metal strip



Superlite

Technical Details

Metal Winding Material	Gasket Nominal Thickness
Stainless Steel 316L,316,316TIC,394,321,310,347 Duplex	3.2mm
Monel400	4.5mm
Inconel600,625	6.4mm
Nickel200	7.2mm
Titanium,Hastelloy,Incoloy800,825	

Filler Materials	Temperature Units	Centering and Inner Ring standard materials
Non Asbestos	260°C	Carbon steel
Ceramic	800°C	Stainless Steel 316,304,410,316L,316TI,Duplex
PTFE	260°C	Nickel Incoloy
Graphite	550°C	Titanium inconel 600, 625

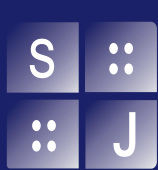
Recommended Flanges Surface Finish

Spiral Wound Gasket gaskets are capable of giving an excellent seal over a wide range of flange surface finishes, but as a general guide we offer the following:

	Micro inch	Micro Metre
General	125-200	3.2-5.1
Critical	125	3.2
Vacuum	80	2.0

Flange Suitability

- ▶ Bs1560 and ANSI B16.5 1/2 "-24" 150-2500lbs
- ▶ BS10 Tables D-T
- ▶ B4504 10-250 Bar
- ▶ MSS SP 44 26 "-60" 150-900lbs
- ▶ API 605 26 "-60" 150-900lbs DIN



Inner-Ring inside Diameters for Spiral-Wound Gaskets for Use with ASME B16.5 Flanges

(as per ASME B16.20-2007 Standard's Table 12)

Flange Size (NPS)	Pressure Class						
	150	300	400(Note 1)	600	900(Note 1)	1500	2500(note1)
1/2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
3/4	20.6	20.6	20.6	20.6	20.6	20.6	20.6
1	26.9	26.9	26.9	26.9	26.9	26.9	26.9
1 1/4	38.1	38.1	38.1	38.1	33.3	33.3	33.3
1 1/2	44.5	44.5	44.5	44.5	41.4	41.4	41.4
2	55.6	55.6	55.6	55.6	52.3	52.3	52.3
2 1/2	66.5	66.5	66.5	66.5	63.5	63.5	63.5
3	81.0	81.0	81.0	81.0	78.7	78.7	78.7
4	106.4	106.4	102.6	102.6	102.6	97.8	97.8
5	131.8	131.8	128.3	128.3	128.3	124.5	124.5
6	157.2	157.2	154.9	154.9	154.9	147.3	147.3
8	215.9	215.9	205.7	205.7	196.9	196.9	196.9
10	268.2	268.2	255.3	255.3	246.1	246.1	246.1
12	317.5	317.5	307.3	307.3	292.1	292.1	292.1
14	349.3	349.3	342.9	342.9	320.8	320.8	-
16	400.1	400.1	389.9	389.9	374.7	368.3	-
18	449.3	449.3	438.2	438.2	425.5	425.5	-
20	500.1	500.1	489.0	489.0	482.6	476.3	-
24	603.3	603.3	590.6	590.6	590.6	577.9	-

Note 1:

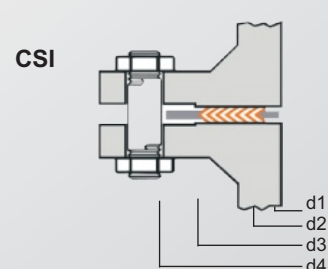
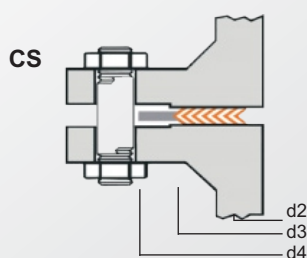
(1) There are no NPS 1/2 through NPS 3 Class 400 flanges (Use Class 600), NPS 1/2 through NPS 2 1/2 Class 900 flanges (Use Class 1500), or NPS 14 and larger 2500 flanges.

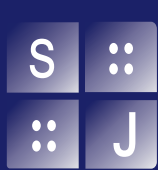
Type CS/CSI

Gaskets in accordance with ASME B16.20, flanges according ANSIB 16.5, measures in mm

Nominal Width	d3		d2							d4						
	ØA of sealing element		ØI of sealing element							ØA of sealing element						
	Press.st. [lbs]		Press.st. [lbs]							Press.st. [lbs]						
	150 300 400 600	900 1,500 2,500	150	300	400	600	900	1,500	2,500	150	300	400	600	900	1,500	2,500
1/4	22.2	-	12.7	12.7	12.7	12.7	-	-	-	44.5	44.5	44.5	44.5	-	-	-
1/2	31.8	31.8	19.1	19.1	19.1	19.1	19.1	19.1	19.1	47.8	54.1	54.1	54.1	63.5	63.5	69.9
3/4	39.6	39.6	25.4	25.4	25.4	25.4	25.4	25.4	25.4	57.2	66.8	66.8	66.8	69.9	69.9	76.2
1	47.8	47.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	66.8	73.2	73.2	73.2	79.5	79.5	85.9
1 1/4	60.5	60.5	47.8	47.8	47.8	47.8	39.6	39.6	39.6	76.2	82.6	82.6	82.6	88.9	88.9	104.9
1 1/2	69.9	69.9	54.1	54.1	54.1	54.1	47.8	47.8	47.8	85.9	95.3	95.3	95.3	98.6	98.6	117.6
2	85.9	85.9	69.9	69.9	69.9	69.9	58.7	58.7	58.7	104.9	111.3	111.3	111.3	143.0	143.0	146.1
2 1/2	98.6	98.6	82.6	82.6	82.6	82.6	69.9	69.9	69.9	124.0	130.3	130.3	130.3	165.1	165.1	168.4
3	120.7	120.7	101.6	101.6	101.6	101.6	95.3	92.2	92.2	136.7	149.4	149.9	149.4	168.4	174.8	196.9
3 1/2	133.4	133.4	114.3	114.3	104.8	104.8	104.8	104.8	-	161.9	165.1	161.9	161.9	190.5	187.3	-
4	149.4	149.4	127.0	127.0	120.7	120.7	120.7	117.6	117.6	174.8	181.1	177.8	193.8	206.5	209.6	235.0
4 1/4	165.1	165.1	139.7	139.7	134.9	134.9	134.9	134.9	-	177.8	196.9	193.7	209.6	238.1	231.8	-
5	177.8	177.8	155.7	155.7	147.6	147.6	147.6	143.0	143.0	196.9	215.9	212.9	241.3	247.7	254.0	279.4
6	209.6	209.6	182.6	182.6	174.8	174.8	174.8	171.5	171.5	222.3	251.0	247.7	266.7	289.1	282.7	317.5
8	263.7	257.3	233.4	233.4	225.6	225.6	222.3	215.9	215.9	279.4	308.1	304.8	320.8	358.9	352.6	387.4
10	317.5	311.2	287.3	287.3	274.6	274.6	276.4	266.7	270.0	339.9	362.0	358.9	400.1	435.1	435.1	476.3
12	374.7	368.3	339.9	339.9	327.2	327.2	323.9	323.9	317.5	409.7	422.4	419.1	457.2	498.6	520.7	549.4
14	406.4	400.1	371.6	371.6	362.0	362.0	355.6	362.0	-	450.9	485.9	482.6	492.3	520.7	577.9	-
16	463.6	457.2	422.4	422.4	412.8	412.8	412.8	406.4	-	514.4	539.8	536.7	565.2	574.8	641.4	-
18	527.1	520.7	474.7	474.7	469.9	469.9	463.6	463.6	-	549.4	596.9	593.9	612.9	638.3	704.9	-
20	577.9	571.5	525.5	525.5	520.7	520.7	520.7	514.4	-	606.6	654.1	647.7	682.8	698.5	755.7	-
24	685.8	679.5	628.7	628.7	628.7	628.7	628.7	616.0	-	717.6	774.7	768.4	790.7	833.2	901.7	-

Subject to technical alterations.





Superlite

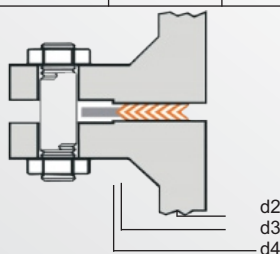
Type CS/CSI

Suitable for flanges in accordance with DIN and BS 4504,
measures in mm

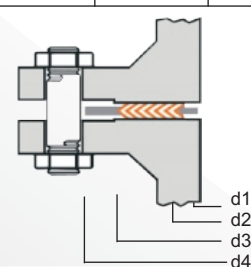
DN	IR ID	IR OD	OR I		OR/OD							
	10-320	10-320	PN10-40	PN64-320	10	16	25	40	64	100	160	250
10	18	24	36	36	46	46	46	46	56	56	56	67
15	22	28	40	40	51	51	51	51	61	61	61	72
20	27	33	47	47	61	61	61	61	74	74	74	79
25	34	40	54	54	71	71	71	71	82	82	82	82
32	43	49	65	65	82	82	82	82	90	90	90	100
40	48	54	70	70	92	92	92	92	102	102	102	108
50	57	66	84	84	107	107	107	107	112	118	118	123
65	73	82	102	104	127	127	127	127	137	143	143	153
80	86	95	115	119	142	142	142	142	147	153	153	170
100	108	120	140	144	162	162	167	167	173	180	180	202
125	134	146	168	172	192	192	193	193	210	217	217	242
150	162	174	196	200	217	217	223	223	247	257	257	284
175	183	195	221	227	247	247	253	265	277	287	284	316
200	213	225	251	257	272	272	283	292	309	324	324	358
250	267	286	307	315	327	328	340	352	364	391	388	442
300	318	337	358	366	377	383	400	417	424	458	458	538
350	363	382	405	413	437	443	457	474	486	512	-	-
400	414	433	458	466	488	495	514	546	543	572	-	-
500	518	537	566	574	593	617	624	628	657	704	-	-
600	618	637	666	674	695	734	731	747	764	813	-	-
700	718	737	770	778	810	804	833	852	879	-	-	-
800	818	837	874	882	917	911	942	974	988	-	-	-
900	910	930	974	982	1017	1011	1042	1084	1108	-	-	-
1000	1010	1030	1078	1086	1124	1128	1154	1194	1220	-	-	-
1200	1210	1230	1280	1290	1341	1342	1364	1398	1452	-	-	-
1400	1420	1450	1510	-	1548	1542	1578	1618	-	-	-	-
1600	1630	1660	1720	-	1772	1764	1798	1830	-	-	-	-
1800	1830	1860	1920	-	1972	1964	2000	-	-	-	-	-
2000	2020	2050	2120	-	2182	2168	2230	-	-	-	-	-
2200	2230	2260	2330	-	2384	2378	-	-	-	-	-	-
2400	2430	2460	2530	-	2594	-	-	-	-	-	-	-
2600	2630	2660	2730	-	2794	-	-	-	-	-	-	-
2800	2830	2860	2930	-	3014	-	-	-	-	-	-	-
3000	3030	3060	3130	-	3228	-	-	-	-	-	-	-

Subject to technical alterations.

CS



CSI



Camprofile Gaskets

Graphite Layers on both sides of the Grooved area

Grooved metal Core Material can be selected from various types

Metal guide ring can be either integral or floating

Camprofile gaskets consist of a metal core (generally in Stainless Steel, but can be provided in other alloys also like Duplex, DSS, Inconel, Monel etc) with concentric grooves on either side with sealing materials. The sealing layers (depending on the service duty) can be Graphite, Mica, PTFE, CAF, CNAF.

Expanded graphite is the most common facing material used for Camprofile gaskets. However, other materials can be used, such as PTFE for chemically aggressive duties or mica for high temperature duties.

Facing Material	Maximum Temperature
Graphite	550°C
PTFE	260°C
Mica	1000°C
SuperliteCNAF	260°C

Camprofile gaskets can also be manufactured form a range of core materials according to media compatibility and temperature considerations.

Core Material	Maximum Temperature	Core Material	Maximum Temperature
316L Stainless Steel	800°C	Inconel 600	1000°C
304 Stainless Steel	650°C	Inconel 625	1000°C
Duplex UN S31803	800°C	Incloy 825	600°C
347 Stainless Steel	870°C	Zirconium	500°C
321 Stainless Steel	870°C	Super Duplex	600°C
Monel 400	800°C	254 SMO	600°C
Nickel 200	600°C	Titanium Gr7	500°C
Titanium Gr2	500°C	Hastelloy C-22	700°C
Hastelloy B-2/B-3	700°C	Hastelloy G-31	800°C
Hastelloy C-276	700°C	Alloy20	600°C

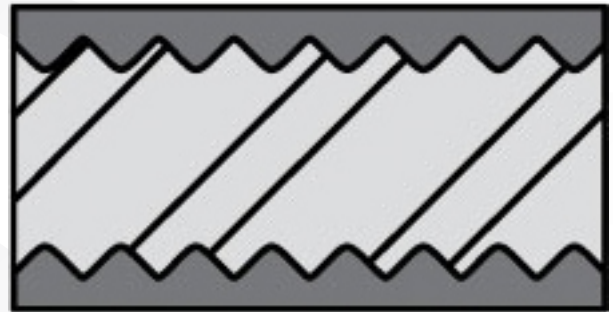
Advantages/Uses

The very wide seating stress range (minimum to maximum stress) of the Camprofile gasket makes it

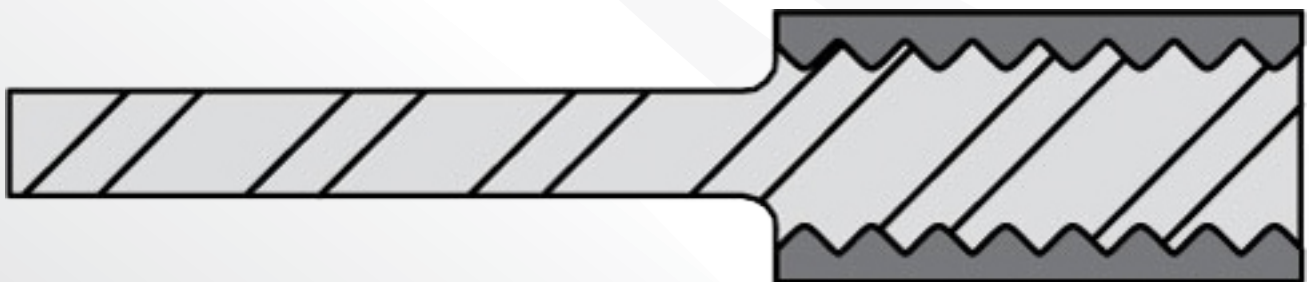
- ◆ Highly suitable for varying temperatures and pressures.
- ◆ Less sensitive to assembly faults (inaccurate bolt tensioning).
- ◆ Suitable for light and heavily constructed flanges.
- ◆ Depending on core & layer material Camprofile gaskets are resistant to temperatures up to 1000 °C.
- ◆ Resistant to media pressures up to 250 bar.

Styles

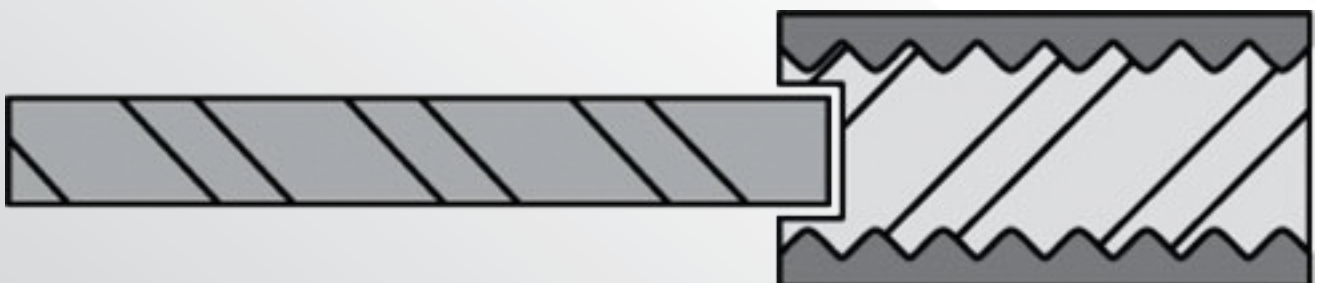
Superlite Style SG1 is manufactured without a guide ring for tongue and groove, or recessed flange applications such as Male and Female. It is typically used in heat exchanger applications and applied as an upgrade to double jacketed gaskets especially when lower load is needed.



Superlite Style SG2 is constructed with an integral guide ring for aligning purposes.

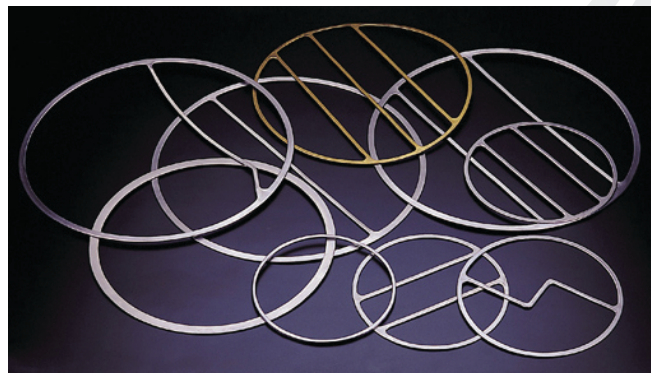


Superlite Style SG3 is constructed with a loose fitting guide ring. This popular design is preferred to be used for nominal pipe size and pressure class raised face flanges and is used in equipment with excessive radial shear characteristics, thermal cycling, and expansions.



Metal Jacketed

Metal Jacketed Gaskets are used mainly on boiler and heat exchanger applications when ample bolting is available to correctly seat the gasket. Metallic gaskets can come in different styles like : double jacket, single jacket or solid metal. The metal jacketed gaskets also may be designed & manufactured in different shapes and the styles with either integral or welded pass partition bars, in a variety of configurations as shown in the chart.



Advantages

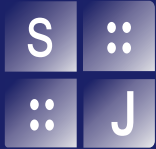
- The metal jacket covering the filler material prevents contamination
- Ensures high elasticity and recovery
- Nearly any dimension and shape can be made
- Easy to Install & handle
- Suitable for high Temperatures & Pressures
- Suitable for narrow flanges

Metal Jacketed Gaskets can be manufactured to suit a range of chemical environments by selection of a suitable jacketing metals & fillers, the following materials are available:

Jacketing Metal Options			Jacketing Filler Options
Soft Iron	Inconel	Nickel	Flexible Graphite
Soft Steel	Incoloy	Brass	PTFE
Monel	Brass	Copper	Asbestos/Non Asbestos
Stainless Steel 304,316,316L,321,410	Copper Aluminium Titanium		

STANDARD VESSEL AND HEAT EXCHANGER PROFILES

A		B		B1		C		D	
E		E1		F		F1		G	
H		J		J1		K		L	
L1		M		N		N1		P	
S		T		Y		Z		Z1	



Superlite

Certificates


भारत सरकार
GOVERNMENT OF INDIA
वाणिज्य एवं उद्योग मंत्रालय
MINISTRY OF COMMERCE & INDUSTRY
विदेश व्यापार महानिदेशालय
DIRECTORATE GENERAL OF FOREIGN TRADE

मान्यता प्रमाण पत्र
Certificate of Recognition
एक सितारा निर्यात सदन
ONE STAR EXPORT HOUSE 050115000105

मैसर्स. SUPERLITE JOINTINGS PVT. LTD.
VILLAGE GALAND, DIBARSI ROAD JINDAL NAGAR
(आई ई सी GHAZIABAD (UP)-201301 और आयकर पैन AAICS6244B)
को विदेश व्यापार नीति, 2015-2020 के प्रावधानों के अनुसार एक सितारा निर्यात सदन का स्तर
प्रदान किया जाता है। यह प्रमाण पत्र, प्रक्रिया पुस्तक (2015-2020) के पैरा 3.20 (बी) में दी गयी
शर्तों के निहित FIVE वर्षों की अवधि के लिए दिनांक 22.03.2016 से 21.03.2021 तक वैध होगा।

M/s SUPERLITE JOINTINGS PVT. LTD.
VILLAGE GALAND, DIBARSI ROAD JINDAL NAGAR
(IEC GHAZIABAD (UP)-201301 and Income Tax PAN AAICS6244B)

are hereby accorded the status of One Star Export House in accordance with the provisions
of the Foreign Trade Policy, 2015-2020. This Certificate is valid for a period of FIVE years
effective from 22.03.2016 to 21.03.2021 subject to the conditions prescribed in
Para 3.20(b) of the Handbook of Procedures (2015-2020).

सं./No. A/ 2088
तारीख/Date : 30.03.2016
स्थान/Place : New Delhi

अपर/संयुक्त/उप महानिदेशक,
विदेश व्यापार/रिकॉस ऑफिस (एआई.ओ.ए.)
Additional Joint/ Deputy
Director General of Foreign Trade/
Development Commissioner (SEZ)

SEAL

(फाइल सं./File No.) 05/21/058/80194/AM16/ तारीख/Date : 22.03.2016

DNV GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No.: CERT-11218-2006-AQ-HOU-IATF

Valid until:
20 April, 2015 - 20 April, 2018

IATF Certificate No.: 0207963

This is to certify that the management system of

Superlite Jointings Pvt. Ltd

Village - Galand, Dibarsi, Jindal Nagar, Ghaziabad 201 002, U.P, India
and, if applicable, the remote support locations as mentioned in the Appendix
accompanying this Certificate

has been found to conform to quality management system standard:
ISO/TS 16949:2009

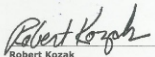
This certificate is valid for the following Scope:

MANUFACTURING OF JOINTING SHEETS

EXCLUSION: 7.3 PRODUCT DESIGN

Place and date:
Katy, TX. 20 April 2015



For the issuing office:
DNV GL - Business Assurance
New Delhi, India

Robert Kozak
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV GL - Business Assurance, 1400 Ravelle Drive, Katy, TX 77450, Tel.: 281-396-1000, www.dnvglcert.com



Superlite

(AN ISO / TS : 16949 - 2009 COMPANY)

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GASKETS & GASKET MATERIAL

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