



Comparison of joint sheets

Product name

Features

Construction

Service range

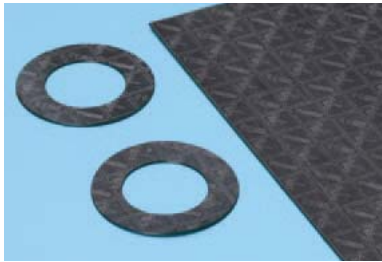
*Be sure to read the precautions concerning gas-type fluids.

Lineup

TOMBO No.

1120

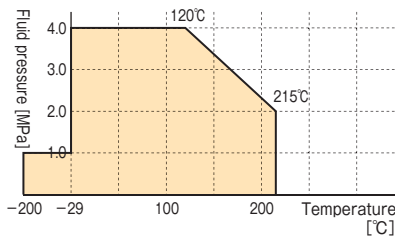
CLINSIL™ Top



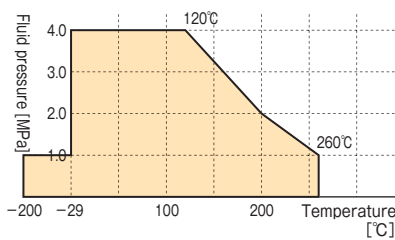
- Because the main constituent of this gasket is expanded graphite, it has excellent heat resistance, steam resistance, and corrosion resistance.
- Scratch resistant and flexible
- Can be used with relatively high temperature flanges, valves and equipment.

Main constituents: NBR, aramid fibers, expanded graphite

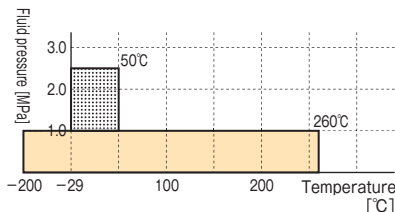
Water-type fluid



Oil-type fluid



Gas-type fluid



Regarding the shaded area, study it carefully before use.

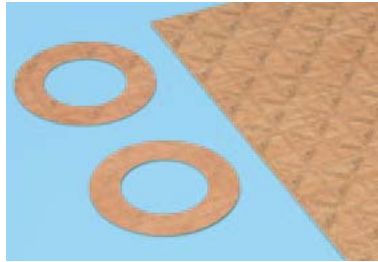
TOMBO No. 1120-LN

This gasket is intended for use with low-temperature fluids, such as LNG. It is the TOMBO No. 1120 which has been specially treated.

TOMBO No.

1995

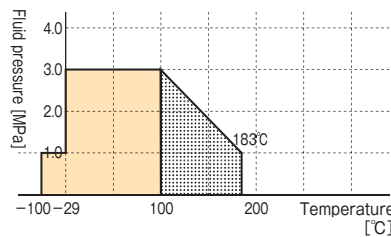
CLINSIL™ Brown



- Standard grade joint sheet
- Large-size gasket available
Can be manufactured without joints to a maximum of 3810 x 3810mm (9S size).
- Can be used with relatively low temperature flanges, valves and equipment.

Main constituents: NBR, aramid fibers, expanded graphite

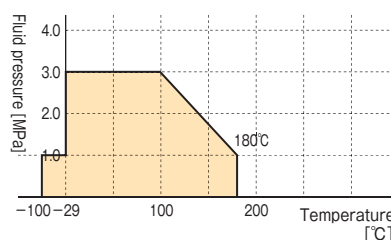
Water-type fluid



A rough guide to the service life of this gasket when it is used as a pipe gasket to seal steam of 100°C or higher is as follows.

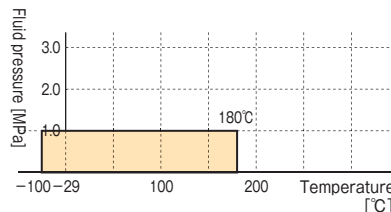
▨ area: 1-2 years

Oil-type fluid



*Do not use this gasket with aromatic fluids.

Gas-type fluid



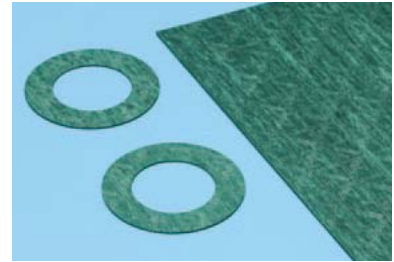
TOMBO No. 1995-W
CLINSIL™ White

This is a white joint sheet that has the same performance as the TOMBO No. 1995.

TOMBO No.

1993

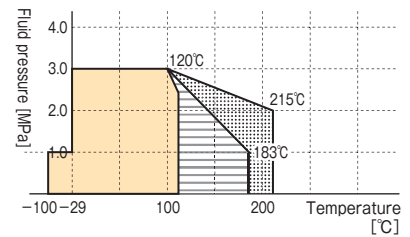
CLINSIL™ Super



- This gasket has excellent heat resistance and steam resistance, making it suitable for use in a steam line.

Main constituents: Specially blended rubber, aramid fibers, inorganic filler

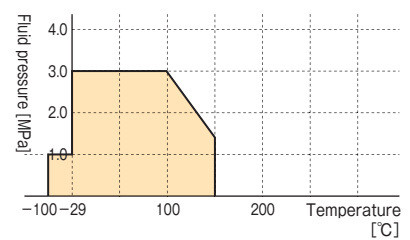
Water-type fluid



A rough guide to the service life of this gasket when it is used as a pipe gasket to seal steam of 100°C or higher is as follows.

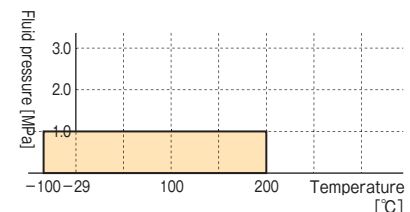
▨ area: 5-10 years ▨ area: 1-2 years

Oil-type fluid



*Do not use this gasket with aromatic fluids.

Gas-type fluid



⚠ Do not use TOMBO No. 1993 for the gas-type fluid which even a minute amount of leakage is not allowed. Even for use with the water- or oil-type fluid, be sure to use paste when carrying out an airtightness test. It is recommended to use TOMBO No. 1133 or TOMBO No. 1120 instead.



Design criteria

TOMBO No.		1120	1995	1993	
Gasket coefficient m [-]	0.8 t	3.50			
	1.5 t	2.75			
	3.0 t	2.00			
Minimum design seating stress y [N/mm ²]	0.8 t	44.8			
	1.5 t	25.5			
	3.0 t	11.0			
Minimum seating stress σ_3 [N/mm ²]	Water-type and oil-type fluids	14.7			
	Gas-type fluids	34.3 ^{*1}			
Allowable seating stress [N/mm ²]	Without paste	0.8 t	294.2		
		1.5 t	196.1		
		3.0 t	98.0	147.1	
	With paste	0.8 t	68.6 ^{*2}		
		1.5 t			
		3.0 t			

*1 : Use of gaskets with thickness of 3.0t for gas-type fluid is not recommended.

*2 : 58.8N/mm² when anti-corrosion paste is used.

Standard dimensions

TOMBO No.		1120	1995	1993	1991-NF	1938
1S (1270×1270mm)	0.4 t	●	—	—	●	—
	0.5 t	●	—	●	●	—
	0.8 t	●	●	●	●	—
	1.0 t	●	●	●	●	●
	1.5 t	●	●	●	●	●
	2.0 t	●	●	●	—	●
	3.0 t	●	●	●	—	—
3S (1270×3810mm)	0.4 t	●	—	—	●	—
	0.5 t	●	—	●	●	—
	0.8 t	●	●	●	●	—
	1.0 t	●	●	●	●	—
	1.5 t	●	●	●	●	—
	2.0 t	●	●	●	—	—
	3.0 t	●	●	●	—	—
6S (2540×3810mm)	0.8t	●	●	—	—	—
	1.0 t	●	●	—	—	—
	1.5 t	●	●	—	—	—
	2.0 t	●	●	—	—	—
	3.0 t	●	●	—	—	—
9S (3810×3810mm)	0.8 t	—	●	—	—	—
	1.0 t	—	●	—	—	—
	1.5 t	—	●	—	—	—
	2.0 t	—	●	—	—	—
	3.0 t	—	●	—	—	—
Weight [kg] per sheet of thickness 1.5t and 1S size (reference)		3.63	4.35	4.23	3.75	4.35

* The above are standard dimensions. We can also manufacture some sheets that are not marked ●. For details, please contact us.

Basic physical properties

TOMBO No.		1120	1995	1993	1991-NF	1938	
Sample thickness [mm]		1.5	1.5	1.5	1.0	1.5	
Tensile strength [N/mm ²]		27.5	24.1	14.7	26.2	21.6	
Compression ratio [%]	34.3N/mm ²	9	7	7	6	7	
Recovery [%]		70	65	52	67	55	
Oil resistance	IRM903 oil 150°C×5h	Thickness increase ratio [%]	2	3	24	1	1
		Tensile strength reduction ratio [%]	11	23	33	-1	0
	IRM903 oil 40°C×48h	Thickness increase ratio [%]	—	4	—	1	—
		Tensile strength reduction ratio [%]	—	4	—	6	—
		Compression ratio [%]	—	6	—	6	—
		Recovery [%]	—	64	—	73	—
Resistance to fuel oil	ASTM Fuel B (JIS fuel oil B) R.T.×5h	Thickness increase ratio [%]	2	4	18	3	3
		Mass increase ratio [%]	1	6	17	5	4
Stress relaxation ratio [%]		100°C×22h	25	28	20	15	26
Density [g/cm ³]		1.53	1.84	1.71	1.62	1.80	

* The above values are measured values. They are not standard values.