

Wipers

Hallite



33

TECHNICAL DETAILS

METRIC

INCH

OPERATING CONDITIONS

MAXIMUM SPEED
TEMPERATURE RANGE

4.0 m/sec
-30°C + 100°C

12.0 ft/sec
-22°F + 212°F

SURFACE ROUGHNESS

DYNAMIC SEALING FACE $\varnothing d_1$
STATIC SEALING FACE $\varnothing D_1 \varnothing D_2$
STATIC HOUSING FACES L_1

μmRa μmRt
0.1 ↔ 0.4 4 max
2.5 max 16 max
2.5 max 16 max

$\mu inCLA$ $\mu inRMS$
4 ↔ 16 5 ↔ 18
100 max 111 max
100 max 111 max

RADII

ROD DIAMETER $\varnothing d_1$ mm
MAX FILLET RAD r_1 mm
MAX FILLET RAD r_2 mm

50	90	200	> 200
0.4	0.4	0.4	0.8
0.2	0.4	0.6	0.8

ROD DIAMETER $\varnothing d_1$ in
MAX FILLET RAD r_1 in
MAX FILLET RAD r_2 in

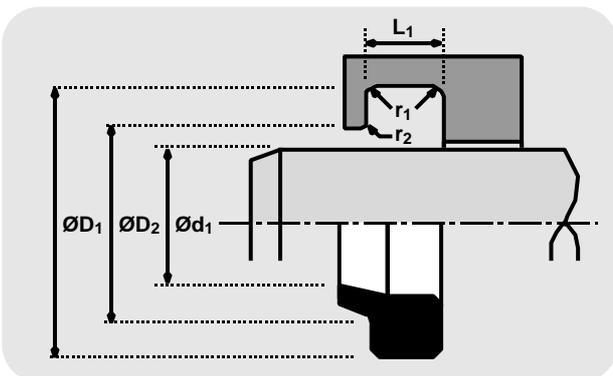
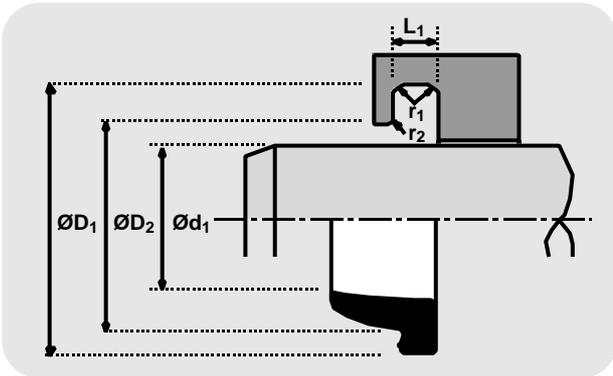
all

0.010
0.020

TOLERANCES

mm
in

$\varnothing d_1$	$\varnothing D_1$	$\varnothing D_2$	L_1
f9	H11	H11	+0.2 -0
f9	+0.020 +0.010	±0.005	+0.020 +0.010



METRIC

INCH

Hallite 33: the metric and inch profiles differ as illustrated above.

DESIGN

The Hallite 33 wiper has a lip designed to remove lightly adhered dirt from the rod i.e. mud, dust or moisture.

The wiper is manufactured from a hard nitrile rubber suitable for installing in a grooved housing. Rod diameters ($\varnothing d_1$) of 20mm and below require a two piece housing.

To prevent dirt passing the outside of the wiper and to reduce the pumping action, the outside diameter is an interference fit with the housing. Certain sizes of the standard Hallite 33 metric range are suitable for ISO 6195 Housing Type A.

It should also be noted that the Hallite 33 inch profile differs from the metric profile, and is also available in Hythane 181.

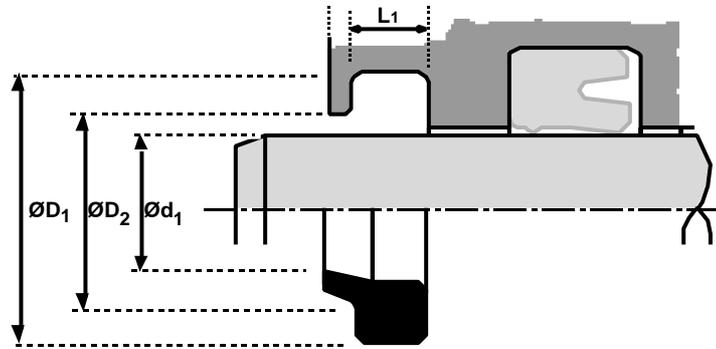
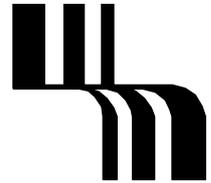
FEATURES

- GENERAL PURPOSE SEAL
- PRECISION TRIMMED SEALING LIP
- WIDE SIZE RANGES
- EFFECTIVE SEAL ON HOUSING AS WELL AS ROD

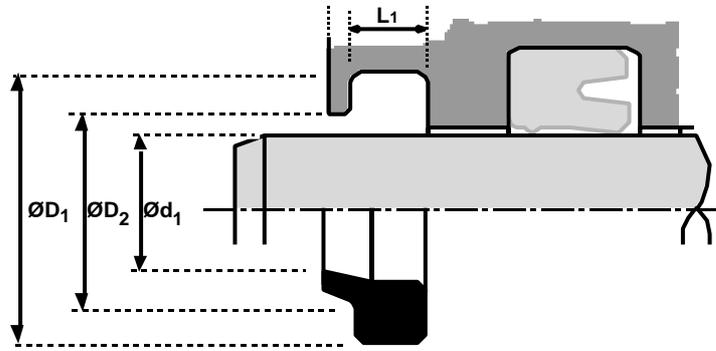
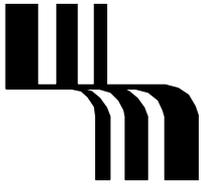
NB: Part numbers suffixed by “‡” indicate housing sizes to meet ISO6195A. Many of the metric sizes are also available as polyester wipers - see Hallite 38.

Wipers

Hallite 33 metric



Ød ₁	TOL f ₉	ØD ₁	TOL H11	ØD ₂	TOL H11	L ₁ +0.2 - 0	L ₂	PART No.
12	-0.016 -0.059	20.0	+0.13 +0.00	16.0	+0.11 +0.00	4.0	6.0	2232500
14	-0.016 -0.059	22.0	+0.13 +0.00	18.0	+0.11 +0.00	4.0	6.0	2232600
16	-0.016 -0.059	24.0	+0.13 +0.00	20.0	+0.13 +0.00	4.0	6.0	2232800
18	-0.016 -0.059	26.0	+0.13 +0.00	22.0	+0.13 +0.00	4.0	6.0	2232900
20	-0.020 -0.072	28.0	+0.13 +0.00	24.0	+0.13 +0.00	4.0	6.0	2233000
22	-0.020 -0.072	30.0	+0.13 +0.00	26.0	+0.13 +0.00	4.0	6.0	2233100
25	-0.020 -0.072	33.0	+0.16 +0.00	29.0	+0.13 +0.00	4.0	6.0	2233200
25	-0.020 -0.072	33.0	+0.16 +0.00	30.5	+0.16 +0.00	5.0	6.4	6586200‡
28	-0.020 -0.072	36.0	+0.16 +0.00	32.0	+0.16 +0.00	4.0	6.0	2233300
28	-0.020 -0.072	36.0	+0.16 +0.00	33.5	+0.16 +0.00	5.0	6.4	6586300‡
30	-0.020 -0.072	42.0	+0.16 +0.00	36.0	+0.16 +0.00	6.0	9.0	2233400
32	-0.025 -0.087	40.0	+0.16 +0.00	37.5	+0.16 +0.00	5.0	6.4	6586400‡
32	-0.025 -0.087	44.0	+0.16 +0.00	38.0	+0.16 +0.00	6.0	9.0	2233500
35	-0.025 -0.087	47.0	+0.16 +0.00	41.0	+0.16 +0.00	6.0	9.0	2233600
36	-0.025 -0.087	44.0	+0.16 +0.00	41.5	+0.16 +0.00	5.0	6.4	6586500‡
36	-0.025 -0.087	48.0	+0.16 +0.00	42.0	+0.16 +0.00	6.0	9.0	2233700
40	-0.025 -0.087	48.0	+0.16 +0.00	45.5	+0.16 +0.00	5.0	6.4	6586600‡
40	-0.025 -0.087	52.0	+0.19 +0.00	46.0	+0.16 +0.00	6.0	9.0	2233800
42	-0.025 -0.087	54.0	+0.19 +0.00	48.0	+0.16 +0.00	6.0	9.0	2233900
45	-0.025 -0.087	53.0	+0.19 +0.00	50.5	+0.19 +0.00	5.0	6.4	6586700‡
45	-0.025 -0.087	57.0	+0.19 +0.00	51.0	+0.19 +0.00	6.0	9.0	2234000
50	-0.025 -0.087	58.0	+0.19 +0.00	55.5	+0.19 +0.00	5.0	6.4	6586800‡
50	-0.025 -0.087	62.0	+0.19 +0.00	55.0	+0.19 +0.00	6.0	9.0	2234200



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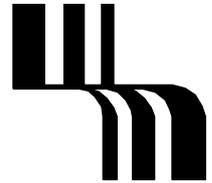
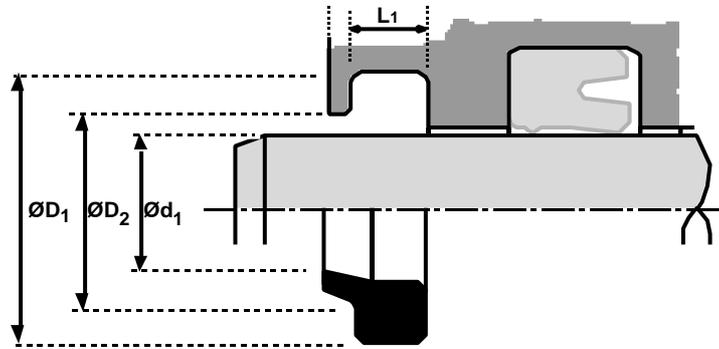
metric

Ød ₁	TOL f ₉	ØD ₁	TOL H11	ØD ₂	TOL H11	L ₁ +0.2 - 0	L ₂	PART No.
55	-0.030 -0.104	67.0	+0.19 +0.00	61.0	+0.19 +0.00	6.0	9.0	2234300
56	-0.030 -0.104	66.0	+0.19 +0.00	63.0	+0.19 +0.00	6.3	8.1	6586900‡
56	-0.030 -0.104	68.0	+0.19 +0.00	62.0	+0.19 +0.00	6.0	9.0	2234400
60	-0.030 -0.104	72.0	+0.19 +0.00	66.0	+0.19 +0.00	6.0	9.0	2234500
63	-0.030 -0.104	73.0	+0.19 +0.00	70.0	+0.19 +0.00	6.3	8.1	6587000‡
63	-0.030 -0.104	75.0	+0.19 +0.00	69.0	+0.19 +0.00	6.0	9.0	2234600
65	-0.030 -0.104	77.0	+0.19 +0.00	71.0	+0.19 +0.00	6.0	9.0	2234700
70	-0.030 -0.104	80.0	+0.22 +0.00	77.0	+0.19 +0.00	6.3	8.1	6587100‡
70	-0.030 -0.104	82.0	+0.22 +0.00	76.0	+0.19 +0.00	6.0	9.0	2234800
80	-0.030 -0.104	90.0	+0.22 +0.00	87.0	+0.22 +0.00	6.3	8.1	6587200‡
90	-0.036 -0.123	100.0	+0.22 +0.00	97.0	+0.22 +0.00	6.3	8.1	6587300‡
90	-0.036 -0.123	106.0	+0.22 +0.00	98.0	+0.22 +0.00	8.0	12.0	2235200
100	-0.036 -0.123	115.0	+0.22 +0.00	110.0	+0.22 +0.00	9.5	12.5	6587400‡
100	-0.036 -0.123	116.0	+0.22 +0.00	108.0	+0.22 +0.00	8.0	12.0	2235300
105	-0.036 -0.123	121.0	+0.25 +0.00	113.0	+0.22 +0.00	8.0	12.0	2235400
110	-0.036 -0.123	125.0	+0.25 +0.00	120.0	+0.22 +0.00	9.5	12.5	6587500‡
125	-0.043 -0.143	140.0	+0.25 +0.00	135.0	+0.25 +0.00	9.5	12.5	6587600‡
140	-0.043 -0.143	155.0	+0.25 +0.00	150.0	+0.25 +0.00	9.5	12.5	6587700‡
140	-0.043 -0.143	156.0	+0.25 +0.00	148.0	+0.25 +0.00	8.0	12.0	1222800
150	-0.043 -0.143	166.0	+0.25 +0.00	158.0	+0.25 +0.00	8.0	12.0	1222900
160	-0.043 -0.143	175.0	+0.25 +0.00	170.0	+0.25 +0.00	9.5	12.5	6587800‡
160	-0.043 -0.143	176.0	+0.25 +0.00	168.0	+0.25 +0.00	8.0	12.0	1223000
180	-0.043 -0.143	200.0	+0.29 +0.00	190.0	+0.29 +0.00	10.0	15.0	1226300

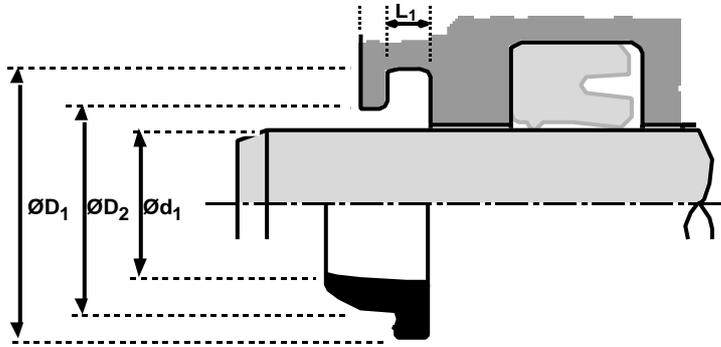
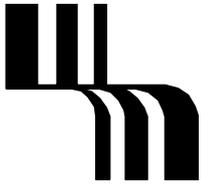
Wipers

Hallite 33

metric



$\varnothing d_1$	TOL f9	$\varnothing D_1$	TOL H11	$\varnothing D_2$	TOL H11	L_1 +0.2 - 0	L_2	PART No.
190	-0.050 -0.165	210.0	+0.29 +0.00	200.0	+0.29 +0.00	10.0	15.0	1226400
200	-0.050 -0.165	215.0	+0.29 +0.00	210.0	+0.29 +0.00	9.5	12.5	6588000‡
200	-0.050 -0.165	220.0	+0.29 +0.00	210.0	+0.29 +0.00	10.0	15.0	1226500
220	-0.050 -0.165	240.0	+0.29 +0.00	233.5	+0.29 +0.00	12.5	16.6	6588100‡
250	-0.056 -0.186	270.0	+0.32 +0.00	263.5	+0.32 +0.00	12.5	16.6	6588200‡



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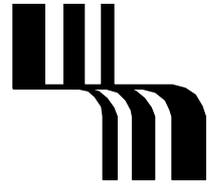
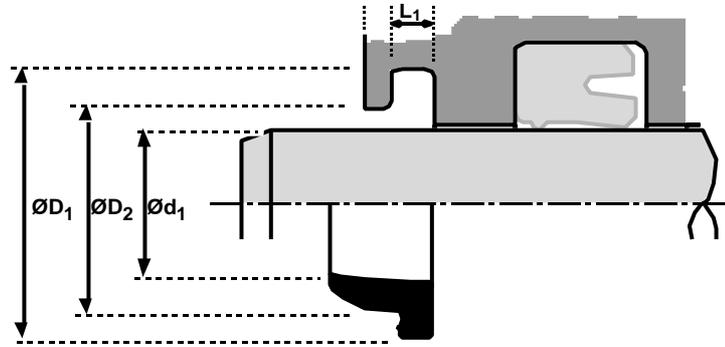
inch

Ød ₁	TOL f ₉	ØD ₁	TOL +0.020 +0.010	ØD ₂	TOL ±0.005	L ₁	L ₂	PART No.
0.500	-0.0006 -0.0023	0.900	+0.020 +0.010	0.700	+0.005 -0.005	0.125	0.250	1464100
0.625	-0.0006 -0.0023	1.025	+0.020 +0.010	0.828	+0.005 -0.005	0.125	0.250	1470700
0.750	-0.0008 -0.0028	1.150	+0.020 +0.010	0.950	+0.005 -0.005	0.125	0.250	1347700
0.875	-0.0008 -0.0028	1.275	+0.020 +0.010	1.075	+0.005 -0.005	0.125	0.250	1056700
1.000	-0.0008 -0.0028	1.400	+0.020 +0.010	1.200	+0.005 -0.005	0.125	0.250	1456300
1.125	-0.0008 -0.0028	1.625	+0.020 +0.010	1.425	+0.005 -0.005	0.125	0.375	1476700
1.250	-0.0010 -0.0034	1.750	+0.020 +0.010	1.550	+0.005 -0.005	0.125	0.375	1453100
1.375	-0.0010 -0.0034	1.875	+0.020 +0.010	1.675	+0.005 -0.005	0.125	0.375	1471800
1.500	-0.0010 -0.0034	2.000	+0.020 +0.010	1.800	+0.005 -0.005	0.125	0.375	0696900
1.625	-0.0010 -0.0034	2.125	+0.020 +0.010	1.925	+0.005 -0.005	0.125	0.375	0269600
1.750	-0.0010 -0.0034	2.250	+0.020 +0.010	2.050	+0.005 -0.005	0.125	0.375	0266400
1.875	-0.0010 -0.0034	2.375	+0.020 +0.010	2.175	+0.005 -0.005	0.125	0.375	0230700
2.000	-0.0012 -0.0041	2.500	+0.020 +0.010	2.300	+0.005 -0.005	0.125	0.375	0228100
2.250	-0.0012 -0.0041	2.750	+0.020 +0.010	2.550	+0.005 -0.005	0.125	0.375	0851100
2.500	-0.0012 -0.0041	3.000	+0.020 +0.010	2.800	+0.005 -0.005	0.125	0.375	1450000
2.750	-0.0012 -0.0041	3.250	+0.020 +0.010	3.050	+0.005 -0.005	0.125	0.375	2222400
3.000	-0.0012 -0.0041	3.500	+0.020 +0.010	3.300	+0.005 -0.005	0.125	0.375	0951300
3.250	-0.0014 -0.0048	4.000	+0.020 +0.010	3.650	+0.005 -0.005	0.187	0.500	1472500
3.375	-0.0014 -0.0048	4.125	+0.020 +0.010	3.775	+0.005 -0.005	0.187	0.500	1474200
3.500	-0.0014 -0.0048	4.250	+0.020 +0.010	3.900	+0.005 -0.005	0.187	0.500	1445000
4.000	-0.0014 -0.0048	4.750	+0.020 +0.010	4.400	+0.005 -0.005	0.187	0.500	1453300
4.500	-0.0014 -0.0048	5.250	+0.020 +0.010	4.900	+0.005 -0.005	0.187	0.500	1613600
5.000	-0.0017 -0.0056	5.750	+0.020 +0.010	5.400	+0.005 -0.005	0.187	0.500	0258600

Wipers

Hallite 33

inch



$\varnothing d_1$	TOL f9	$\varnothing D_1$	TOL +0.020 +0.010	$\varnothing D_2$	TOL ± 0.005	L_1 +0.020 +0.010	L_2	PART No.
5.500	-0.0017 -0.0056	6.250	+0.020 +0.010	5.900	+0.005 -0.005	0.187	0.500	0223500
6.000	-0.0017 -0.0056	6.750	+0.020 +0.010	6.400	+0.005 -0.005	0.187	0.500	0222500
6.500	-0.0017 -0.0056	7.500	+0.020 +0.010	7.000	+0.005 -0.005	0.250	0.625	1613100
7.000	-0.0017 -0.0056	8.000	+0.020 +0.010	7.500	+0.005 -0.005	0.250	0.625	1614600
8.000	-0.0020 -0.0065	9.000	+0.020 +0.010	8.500	+0.005 -0.005	0.250	0.625	0786500