

Design

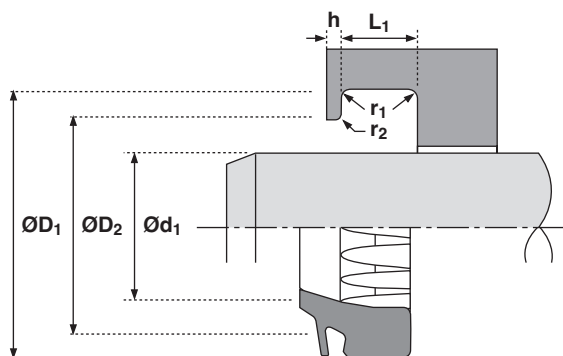
The Hallite 842 rod wiper is designed to prevent the ingress of foreign particles and moisture into the cylinder. The profile has been specially developed for harsh environments, in particular the longwall mining industry.

The special feature is the flap on the wiping lip which covers the gland housing, preventing the water/slurry trap so common with conventional wipers and thus ingress of contamination around the outside of the wiper. The internal ribs on the inside diameter prevent the possibility of pressure trapping between the gland seal and the wiper and ensure correct support and guidance of the wiping lip, even in cases of high eccentricity as can occur between the outer stage gland and the inner cylinder of a roof support leg.

The Hallite 842 is manufactured in Hallite's high performance polyurethane, Hythane® 181. The material has excellent compression set characteristics, excellent wear and abrasive resistance, proven compatibility with HFA (95/5) fluids, as used in longwall mining equipment, and with mineral oil.

A number of sizes, indicated by *, do not have an interference fit between the outside diameter of the wiper and the wiper housing bore $\varnothing D_1$. They float on the retaining lip.

NB: Part numbers suffixed by " ± " indicate housing sizes to meet ISO6195A



Technical details

Operating conditions

Maximum Speed 4.0 m/sec
Temperature Range -45°C +110°C

Inch

12.0 ft/sec
-50°F +230°F

Surface roughness

| | μmRa | μmRt | μinCLA | μinRMS |
|---|-----------------|-----------------|-------------------|-------------------|
| Dynamic Sealing Face $\varnothing d_1$ | 0.1 < > 0.4 | 4 max | 4 < > 16 | 5 < > 18 |
| Static Sealing Face $\varnothing D_1 \varnothing D_2 h$ | 1.6 max | 10 max | 63 max | 70 max |
| Static Housing Faces L_1 | 3.2 max | 16 max | 125 max | 140 max |

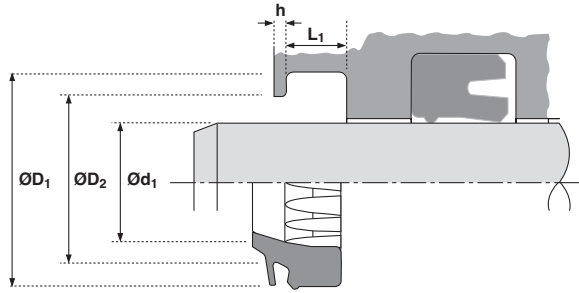
Radii

| | ≤ 50 | ≤ 90 | ≤ 200 | > 200 |
|--------------------------------|--------------|--------------|--------------|-----------|
| Rod Diameter $\varnothing d_1$ | | | | |
| Max Fillet Rad r_1 mm | 0.4 | 0.4 | 0.4 | 0.8 |
| Max Fillet Rad r_2 mm | 0.2 | 0.4 | 0.6 | 0.8 |
| Rod Diameter $\varnothing d_1$ | ≤ 2.000 | ≤ 3.500 | ≤ 7.875 | > 7.875 |
| Max Fillet Rad r_1 in | 0.016 | 0.016 | 0.016 | 0.032 |
| Max Fillet Rad r_2 in | 0.008 | 0.016 | 0.024 | 0.032 |

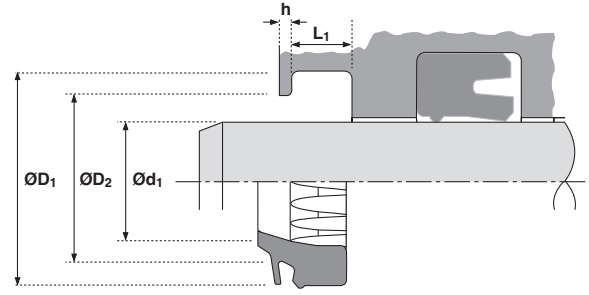
Tolerances

| | $\varnothing d_1$ | $\varnothing D_1$ | $\varnothing D_2$ | L_1 | h |
|----|-------------------|-------------------|-------------------|-----------|-----------|
| mm | f9 | H11 | H11 | +0.2 -0 | +0.10 +0 |
| in | f9 | H11 | H11 | +0.008 -0 | +0.004 +0 |

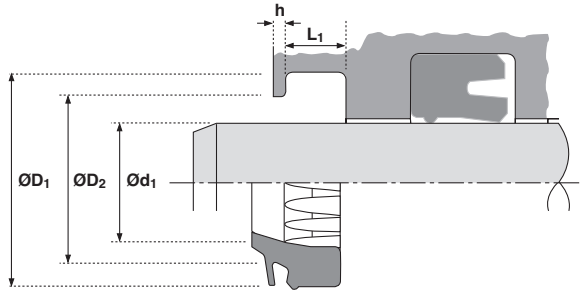




| Ød ₁ | TOL f9 | ØD ₁ | TOL H11 | ØD ₂ | TOL H11 | L ₁ +0.2 - 0 | L ₂ | h +0.1 - 0 | PART No. |
|-----------------|------------------|-----------------|----------------|-----------------|----------------|----------------------------|----------------|---------------|-------------|
| 20 | -0.025 -0.087 | 26.0 | +0.16 +0.00 | 24.0 | +0.16 +0.00 | 4.0 | 6.0 | 1.00 | 4787000 |
| 32 | -0.025 -0.087 | 40.0 | +0.16 +0.00 | 37.5 | +0.16 +0.00 | 5.0 | 8.0 | 1.50 | 4714900‡ |
| 35 | -0.025 -0.087 | 45.0 | +0.16 +0.00 | 42.0 | +0.16 +0.00 | 6.3 | 10.0 | 1.50 | 4515300 |
| 36 | -0.025 -0.087 | 44.0 | +0.16 +0.00 | 41.5 | +0.16 +0.00 | 5.0 | 8.0 | 1.50 | 4715000‡ |
| 38 | -0.025 -0.087 | 46.0 | +0.16 +0.00 | 43.0 | +0.16 +0.00 | 5.3 | 8.0 | 1.50 | 4568700 |
| 40 | -0.025 -0.087 | 48.0 | +0.16 +0.00 | 45.5 | +0.16 +0.00 | 5.0 | 8.0 | 1.50 | 4536500‡ |
| 45 | -0.025 -0.087 | 53.0 | +0.19 +0.00 | 50.5 | +0.19 +0.00 | 5.0 | 8.0 | 1.50 | 4715100‡ |
| 50 | -0.025 -0.087 | 58.0 | +0.19 +0.00 | 55.5 | +0.19 +0.00 | 5.0 | 8.0 | 1.50 | 4533600‡ |
| 55 | -0.030 -0.104 | 65.0 | +0.19 +0.00 | 62.0 | +0.19 +0.00 | 6.3 | 10.0 | 1.50 | 4764600 |
| 56 | -0.030 -0.104 | 66.0 | +0.19 +0.00 | 63.0 | +0.19 +0.00 | 6.3 | 10.0 | 1.50 | 4715200‡ |
| 60 | -0.030 -0.104 | 70.0 | +0.19 +0.00 | 67.0 | +0.19 +0.00 | 6.3 | 10.0 | 1.50 | 4557800 |
| 60 | -0.030 -0.104 | 72.0 | +0.19 +0.00 | 67.0 | +0.19 +0.00 | 4.1 | 10.0 | 2.50 | 4739300* |
| 63 | -0.030 -0.104 | 73.0 | +0.19 +0.00 | 70.0 | +0.19 +0.00 | 6.3 | 10.0 | 1.50 | 4536600‡ |
| 70 | -0.030 -0.104 | 82.6 | +0.22 +0.00 | 78.4 | +0.19 +0.00 | 8.0 | 12.0 | 2.00 | 4480800 |
| 70 | -0.030 -0.104 | 85.0 | +0.22 +0.00 | 78.0 | +0.19 +0.00 | 5.1 | 12.0 | 3.00 | 4739400* |
| 75 | -0.030 -0.104 | 90.0 | +0.22 +0.00 | 83.0 | +0.22 +0.00 | 5.1 | 12.0 | 3.00 | 4744000* |
| 80 | -0.030 -0.104 | 90.0 | +0.22 +0.00 | 87.0 | +0.22 +0.00 | 6.3 | 10.0 | 1.50 | 4715300‡ |
| 80 | -0.030 -0.104 | 95.0 | +0.22 +0.00 | 88.0 | +0.22 +0.00 | 5.1 | 12.0 | 3.00 | 4739500* |
| 85 | -0.036 -0.123 | 97.6 | +0.22 +0.00 | 93.4 | +0.22 +0.00 | 8.0 | 12.0 | 2.00 | 4521800 |
| 85 | -0.036 -0.123 | 100.0 | +0.22 +0.00 | 93.0 | +0.22 +0.00 | 5.1 | 10.0 | 3.00 | 4744100* |
| 90 | -0.036 -0.123 | 102.2 | +0.22 +0.00 | 96.0 | +0.22 +0.00 | 7.1 | 12.4 | 2.80 | 4727300 |

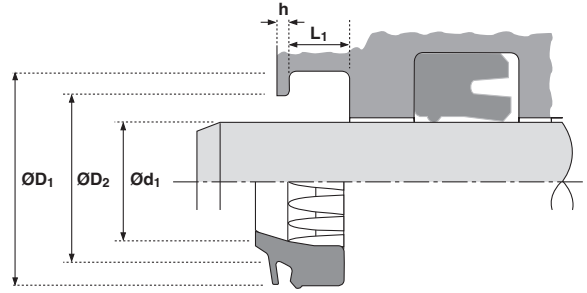


| Ød ₁ | TOL f9 | ØD ₁ | TOL H11 | ØD ₂ | TOL H11 | L ₁ +0.2 - 0 | L ₂ | h +0.1 - 0 | PART No. |
|-----------------|------------------|-----------------|----------------|-----------------|----------------|----------------------------|----------------|---------------|-------------|
| 90 | -0.036 -0.123 | 102.6 | +0.22 +0.00 | 98.4 | +0.22 +0.00 | 8.0 | 12.0 | 2.00 | 4512500 |
| 90 | -0.036 -0.123 | 105.0 | +0.22 +0.00 | 98.0 | +0.22 +0.00 | 5.1 | 10.0 | 3.00 | 4744600* |
| 95 | -0.036 -0.123 | 110.0 | +0.22 +0.00 | 105.0 | +0.22 +0.00 | 9.5 | 14.0 | 2.80 | 4536900 |
| 100 | -0.036 -0.123 | 112.2 | +0.22 +0.00 | 106.0 | +0.22 +0.00 | 7.1 | 12.4 | 2.80 | 4727400 |
| 100 | -0.036 -0.123 | 114.0 | +0.22 +0.00 | 109.9 | +0.22 +0.00 | 8.0 | 12.0 | 1.50 | 4536000 |
| 100 | -0.036 -0.123 | 115.0 | +0.22 +0.00 | 108.0 | +0.22 +0.00 | 5.1 | 12.0 | 3.00 | 4584800* |
| 100 | -0.036 -0.123 | 115.0 | +0.22 +0.00 | 110.0 | +0.22 +0.00 | 9.5 | 14.0 | 2.00 | 4589500‡ |
| 105 | -0.036 -0.123 | 120.0 | +0.22 +0.00 | 115.0 | +0.22 +0.00 | 9.5 | 14.0 | 2.50 | 4532100 |
| 110 | -0.036 -0.123 | 125.0 | +0.25 +0.00 | 118.0 | +0.22 +0.00 | 5.1 | 12.0 | 3.00 | 4739600* |
| 110 | -0.036 -0.123 | 125.0 | +0.25 +0.00 | 120.0 | +0.22 +0.00 | 9.5 | 14.0 | 2.00 | 4715400‡ |
| 120 | -0.036 -0.123 | 135.0 | +0.25 +0.00 | 130.0 | +0.25 +0.00 | 9.5 | 14.0 | 2.00 | 4580800 |
| 125 | -0.043 -0.123 | 137.2 | +0.25 +0.00 | 131.0 | +0.25 +0.00 | 7.6 | 12.9 | 2.80 | 4727500 |
| 125 | -0.043 -0.143 | 140.0 | +0.25 +0.00 | 133.0 | +0.25 +0.00 | 5.1 | 12.0 | 3.00 | 4748300* |
| 125 | -0.043 -0.143 | 140.0 | +0.25 +0.00 | 135.0 | +0.25 +0.00 | 9.5 | 14.0 | 2.00 | 4715500‡ |
| 130 | -0.043 -0.143 | 145.0 | +0.25 +0.00 | 140.0 | +0.25 +0.00 | 9.5 | 14.0 | 2.25 | 4491700 |
| 140 | -0.043 -0.143 | 152.2 | +0.25 +0.00 | 146.0 | +0.25 +0.00 | 7.6 | 12.9 | 2.80 | 4727600 |
| 140 | -0.043 -0.143 | 155.0 | +0.25 +0.00 | 150.0 | +0.25 +0.00 | 9.5 | 14.0 | 2.00 | 4555900‡ |
| 145 | -0.043 -0.143 | 160.0 | +0.25 +0.00 | 155.0 | +0.25 +0.00 | 9.5 | 14.0 | 2.25 | 4570200 |
| 150 | -0.043 -0.143 | 169.0 | +0.25 +0.00 | 159.0 | +0.25 +0.00 | 6.1 | 14.0 | 4.00 | 4748400* |
| 155 | -0.043 -0.143 | 170.0 | +0.25 +0.00 | 165.0 | +0.25 +0.00 | 9.5 | 12.0 | 2.25 | 4535200 |
| 170 | -0.043 -0.143 | 189.0 | +0.29 +0.00 | 179.0 | +0.25 +0.00 | 6.1 | 14.0 | 4.00 | 4749200* |

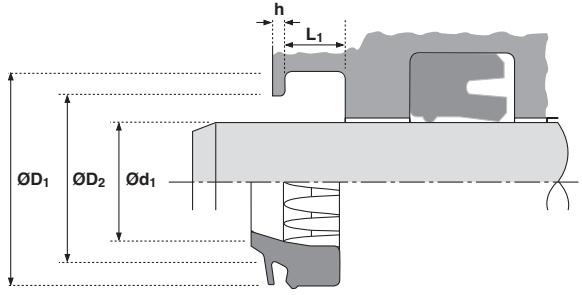


| Ød ₁ | TOL f9 | ØD ₁ | TOL H11 | ØD ₂ | TOL H11 | L ₁ +0.2 - 0 | L ₂ | h +0.1 - 0 | PART No. |
|-----------------|------------------|-----------------|----------------|-----------------|----------------|----------------------------|----------------|---------------|-------------|
| 175 | -0.043 -0.143 | 190.0 | +0.29 +0.00 | 185.0 | +0.29 +0.00 | 9.5 | 14.0 | 2.25 | 4552100 |
| 180 | -0.043 -0.143 | 195.0 | +0.29 +0.00 | 190.0 | +0.29 +0.00 | 9.5 | 14.0 | 2.25 | 4491300‡ |
| 190 | -0.050 -0.165 | 209.0 | +0.29 +0.00 | 199.0 | +0.29 +0.00 | 6.1 | 14.0 | 4.00 | 4749300* |
| 200 | -0.050 -0.165 | 223.0 | +0.29 +0.00 | 211.0 | +0.29 +0.00 | 8.3 | 20.0 | 4.80 | 4748700* |
| 215 | -0.050 -0.165 | 230.0 | +0.29 +0.00 | 225.0 | +0.29 +0.00 | 9.5 | 14.0 | 2.00 | 4705500 |
| 230 | -0.050 -0.165 | 250.0 | +0.29 +0.00 | 240.0 | +0.29 +0.00 | 10.2 | 18.0 | 3.80 | 4750500 |
| 250 | -0.050 -0.165 | 270.0 | +0.32 +0.00 | 260.0 | +0.32 +0.00 | 10.2 | 18.0 | 3.80 | 4725100 |
| 320 | -0.062 -0.202 | 340.0 | +0.36 +0.00 | 330.0 | +0.36 +0.00 | 10.2 | 18.0 | 3.80 | 4750400 |
| 350 | -0.062 -0.202 | 370.0 | +0.36 +0.00 | 360.0 | +0.36 +0.00 | 10.2 | 18.0 | 3.80 | 4725200 |

*These wipers do not have an interference fit between the outside diameter of the wiper and the wiper housing bore ØD₁, they float on the retaining lip.



| Ød ₁ | TOL f9 | ØD ₁ | TOL H11 | ØD ₂ | TOL H11 | L ₁ +0.008 - 0 | L ₂ | h +0.004 - 0 | PART No. |
|-----------------|--------------------|-----------------|------------------|-----------------|------------------|------------------------------|----------------|-----------------|-------------|
| 1.750 | -0.0010 -0.0034 | 2.125 | +0.007 +0.000 | 1.995 | +0.007 +0.000 | 0.220 | 0.362 | 0.079 | 4543300 |
| 2.000 | -0.0012 -0.0041 | 2.375 | +0.007 +0.000 | 2.245 | +0.007 +0.000 | 0.220 | 0.362 | 0.079 | 4543200 |
| 2.500 | -0.0012 -0.0041 | 2.875 | +0.007 +0.000 | 2.745 | +0.007 +0.000 | 0.220 | 0.362 | 0.079 | 4708200 |
| 2.750 | -0.0012 -0.0041 | 3.125 | +0.007 +0.000 | 2.995 | +0.007 +0.000 | 0.220 | 0.362 | 0.079 | 4554600 |
| 3.000 | -0.0012 -0.0041 | 3.375 | +0.009 +0.000 | 3.245 | +0.009 +0.000 | 0.220 | 0.362 | 0.079 | 4543400 |
| 3.125 | -0.0012 -0.0041 | 3.500 | +0.009 +0.000 | 3.370 | +0.009 +0.000 | 0.220 | 0.362 | 0.079 | 4543100 |
| 3.250 | -0.0014 -0.0048 | 3.625 | +0.009 +0.000 | 3.495 | +0.009 +0.000 | 0.220 | 0.362 | 0.079 | 4721400 |
| 3.375 | -0.0014 -0.0048 | 3.750 | +0.009 +0.000 | 3.620 | +0.009 +0.000 | 0.220 | 0.362 | 0.079 | 4554700 |
| 3.500 | -0.0014 -0.0048 | 3.875 | +0.009 +0.000 | 3.745 | +0.009 +0.000 | 0.220 | 0.362 | 0.079 | 4818700 |
| 3.625 | -0.0014 -0.0048 | 4.000 | +0.009 +0.000 | 3.870 | +0.009 +0.000 | 0.220 | 0.362 | 0.079 | 4543000 |
| 3.750 | -0.0014 -0.0048 | 4.125 | +0.009 +0.000 | 3.995 | +0.009 +0.000 | 0.220 | 0.362 | 0.079 | 4708300 |
| 3.875 | -0.0014 -0.0048 | 4.250 | +0.009 +0.000 | 4.120 | +0.009 +0.000 | 0.220 | 0.362 | 0.079 | 4523600 |
| 4.000 | -0.0014 -0.0048 | 4.375 | +0.009 +0.000 | 4.245 | +0.009 +0.000 | 0.220 | 0.362 | 0.079 | 4708400 |
| 4.375 | -0.0014 -0.0048 | 4.875 | +0.010 +0.000 | 4.715 | +0.009 +0.000 | 0.312 | 0.472 | 0.080 | 4707800 |
| 4.750 | -0.0016 -0.0056 | 5.250 | +0.010 +0.000 | 5.090 | +0.010 +0.000 | 0.312 | 0.472 | 0.080 | 4547300 |
| 5.000 | -0.0016 -0.0056 | 5.500 | +0.010 +0.000 | 5.340 | +0.010 +0.000 | 0.312 | 0.472 | 0.080 | 4708500 |
| 5.250 | -0.0016 -0.0056 | 5.750 | +0.010 +0.000 | 5.590 | +0.010 +0.000 | 0.312 | 0.472 | 0.080 | 4707900 |
| 5.750 | -0.0016 -0.0056 | 6.250 | +0.010 +0.000 | 6.090 | +0.010 +0.000 | 0.312 | 0.472 | 0.080 | 4547400 |
| 6.000 | -0.0016 -0.0056 | 6.500 | +0.010 +0.000 | 6.340 | +0.010 +0.000 | 0.312 | 0.472 | 0.080 | 4708600 |
| 6.250 | -0.0016 -0.0056 | 7.000 | +0.010 +0.000 | 6.745 | +0.010 +0.000 | 0.500 | 0.740 | 0.100 | 4708000 |
| 6.750 | -0.0016 -0.0056 | 7.250 | +0.012 +0.000 | 7.090 | +0.010 +0.000 | 0.312 | 0.472 | 0.080 | 4547500 |
| 7.000 | -0.0016 -0.0056 | 7.500 | +0.012 +0.000 | 7.340 | +0.012 +0.000 | 0.312 | 0.472 | 0.080 | 4708700 |



| Ød_1 | TOL f9 | ØD_1 | TOL H11 | ØD_2 | TOL H11 | L_1 +0.008 - 0 | L_2 | h +0.004 - 0 | PART No. |
|---------------|--------------------|---------------|------------------|---------------|------------------|---------------------|-------|-------------------|-------------|
| 7.000 | -0.0016 -0.0056 | 7.750 | +0.012 +0.000 | 7.495 | +0.012 +0.000 | 0.500 | 0.740 | 0.100 | 4588400 |
| 7.000 | -0.0016 -0.0056 | 8.000 | +0.012 +0.000 | 7.625 | +0.012 +0.000 | 0.500 | 0.740 | 0.125 | 4774100 |
| 7.750 | -0.0020 -0.0065 | 8.250 | +0.012 +0.000 | 8.090 | +0.012 +0.000 | 0.312 | 0.472 | 0.080 | 4547600 |
| 8.000 | -0.0020 -0.0065 | 8.500 | +0.012 +0.000 | 8.340 | +0.012 +0.000 | 0.312 | 0.472 | 0.080 | 4708800 |
| 8.750 | -0.0020 -0.0065 | 9.250 | +0.012 +0.000 | 9.090 | +0.012 +0.000 | 0.312 | 0.472 | 0.080 | 4536700 |