

# 820

## WIPER

*Single-Lipped  
Polyurethane with Umbrella Design Technology™  
for American D Wiper Housings*

### DESIGN

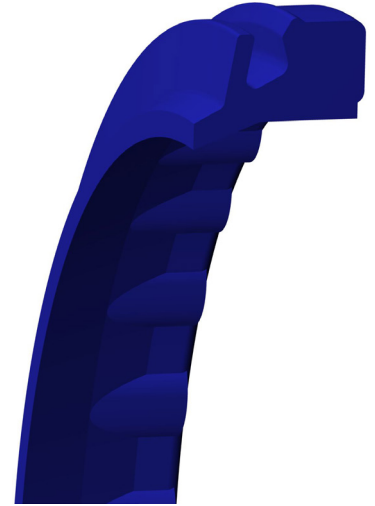
The Hallite 820 single-lipped, snap-in rod wiper is designed to fit North American D-style housings and has been developed specifically for use in harsher environments with heavy contamination, such as in agriculture, off-highway, and forestry equipment.

The unique feature of the Hallite 820 is the Umbrella Wiper Technology™, which is a protective debris guard flap on the wiping lip that entirely covers the gland housing and prevents the water/slurry trap that is common with conventional wipers. This feature offers added protection to the integrity of the hydraulic system by reducing corrosion and preventing the ingress of contamination into the wiper housing groove and hydraulic cylinder gland which will result in increased system life.

The molded ribs on the internal diameter provide extra stability to the wiper and help prevent the possibility of blow-out due to pressure trapping between the wiper and the main rod seal.

Another advantage of the Hallite 820 is that it is easy to install without the use of special tooling, as in the case of the metal press-in wipers normally specified for harsh environments.

The standard Hallite 820 is molded in Hythane® 251, Hallite's high-performance polyurethane, for easy installation and excellent low temperature performance. The Hallite 820 is also offered in a number of other high-performance polyurethanes, such as Hythane® 361 and the Hythane® 371, a very aggressive scraping material with proven track record in forestry, mining, and aggregate industries.



### FEATURES

- Precision trimmed wiping lip
- Retrofits most 'D' wiper housings
- Especially effective in vertically mounted cylinders
- Designed to follow the rod deflection caused by side loads
- Interchangeable with Hallite 520 wiper
- Sharp wiping lip scrapes heavy contamination from rod protecting sealing system
- Umbrella Wiper Technology™ protects housing from contamination and reduces moisture ingress

### MATERIALS

This product comes in a number of material options to extend operating conditions. Contact your local Hallite technical team to decide which is best for your application. Use the part designator in the table below as the last digit of the part number to specify material choice when ordering. For further material details, please refer to the Hallite Material Table.

MATERIAL OPTIONS	Name	Type	Color	Part Designator
Standard	Hythane® 251	Polyurethane	Dark Blue	0
Optional	Hythane® 371	Polyurethane	Dark Green	7
Optional	Hythane® 361	Polyurethane	Orange	6

## TECHNICAL DETAILS

OPERATING CONDITIONS	METRIC	INCH
Maximum Speed	4.0 m/sec	12.0 ft/sec
Temperature Range	-45°C +110°C	-50°F +230°F

**NOTE**

Data given are maximum values and can apply depending on specific application. Maximum ratings of temperature, pressure, or operating speeds are dependent on fluid medium, surface, gap value, and other variables such as dynamic or static service. Maximum values are not intended for use together at the same time, e.g. max temperature and max pressure. Please contact your Hallite technical representative for application support.

SURFACE ROUGHNESS	$\mu\text{mRa}$	$\mu\text{mRz}$	$\mu\text{mRt}$	$\mu\text{inRa}$	$\mu\text{inRz}$	$\mu\text{inRt}$
Dynamic Sealing Face $\text{Ø}d_1$	0.1 - 0.4	1.6 max	4 max	4 - 16	63 max	157 max
Static Sealing Face $\text{Ø}D_1, \text{Ø}D_2, h$	1.6 max	6.3 max	10 max	63 max	250 max	394 max
Static Housing Faces $L_1$	3.2 max	10 max	16 max	125 max	394 max	630 max

RADII	
Max Fillet Rad $r_1$ in	0.016
Max Fillet Rad $r_2$ in	0.016

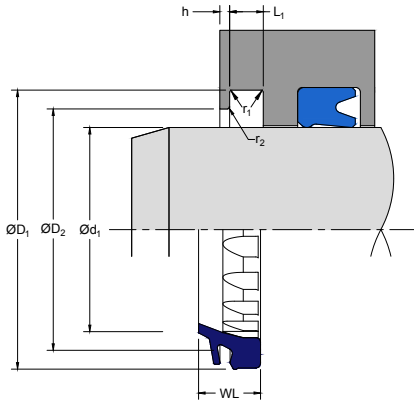
**NOTE**

Assembly chamfers are governed by the associated rod seal.

TOLERANCES	$\text{Ø}d_1$	$\text{Ø}D_1$	$\text{Ø}D_2$	$L_1$	$h$
in	f9	$\pm 0.003$	$\pm 0.005$	+0.004 -0	+0.004 -0

**NOTE**

Customer should verify the  $h$  and the  $\text{Ø}D_2$  dimensions before purchasing.



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### PART NUMBER RANGE

INCH							
$\varnothing d_1$	TOL f9	$\varnothing D_1$ $\pm 0.003$	$\varnothing D_2$ $\pm 0.005$	$L_1$ $+0.004-0$	$h$ $+0.004-0$	WL	PART No.
1.125	-0.001 -0.003	1.500	1.375	0.187	0.094	0.350	4855600
1.250	-0.001 -0.003	1.625	1.500	0.187	0.094	0.350	4855700
1.375	-0.001 -0.003	1.750	1.625	0.187	0.094	0.350	4855800
1.500	-0.001 -0.003	1.875	1.750	0.187	0.094	0.350	4855900
1.750	-0.001 -0.003	2.125	2.000	0.187	0.094	0.350	4856000
2.000	-0.001 -0.004	2.500	2.332	0.250	0.125	0.450	4837800
2.250	-0.001 -0.004	2.750	2.582	0.250	0.125	0.450	4856100
2.500	-0.001 -0.004	3.000	2.832	0.250	0.125	0.450	4856200
3.000	-0.001 -0.004	3.500	3.332	0.250	0.125	0.450	4856300
3.500	-0.001 -0.005	4.000	3.832	0.250	0.125	0.450	4856400
4.000	-0.001 -0.005	4.500	4.332	0.250	0.125	0.450	4856500
4.500	-0.001 -0.005	5.250	4.998	0.375	0.187	0.674	4856600
5.000	-0.002 -0.006	5.750	5.498	0.375	0.187	0.674	4856700
6.000	-0.002 -0.006	6.750	6.498	0.375	0.187	0.674	4856800

**NOTE** Customer should verify the  $h$  and the  $\varnothing D_2$  dimensions before purchasing.