

Tires for winter and year-round

Are your tires right for where you live? We test 26 winter and touring-performance all-season tires to help you choose the ones that match your driving.

Roughly one of every 10 new vehicles roll out of the showroom on H-speed-rated all-season tires designed to handle sustained speeds of up to 130 mph. While racing may not describe your daily commute, tires with H and higher ratings offer improved handling and grip at all speeds.

Those strengths have made H-rated all-season replacement tires an attractive

upgrade for existing cars. Indeed, sales of these tires have grown by more than 40 percent since 1995 as prices drop and common sizes become more available, according to industry sources. Tires with an H or higher speed rating are also likelier than tires with lower speed ratings to pass certain tougher proposed government standards (see “Memo to Members,” page 7, for more details).

Like other all-season tires, however, H-rated versions are a compromise—good for most, though not all, driving conditions. Where winters are severe, you’ll need a winter tire’s improved snow traction and ice grip. Even those now include H-rated models designed to perform better than yesterday’s “snow” tires on drier winter days. But as we found, winter tires also involve some performance trade-offs.

How to read a tire

FOR THE P195/65R15-SIZE TIRE SHOWN HERE:

- ▶ P designates passenger-car tires (light-truck tires have an LT designation); 195 is the tire’s cross-section width in millimeters; 65 is the ratio of sidewall height to cross-section width (here, sidewall height is 65 percent of that width); R means radial-ply construction; 15 is the diameter, in inches, of the wheel the tire fits.
- ▶ 89 is a code for the maximum load the tire can safely carry (1,279 pounds for this one).
- ▶ H is the speed rating—130 mph—the maximum that the tire can safely sustain. Other common speed ratings include S, 112 mph; T, 118 mph; V, 149; and ZR, 150-plus. Tires with higher speed ratings tend to handle better at normal highway speeds.
- ▶ The tread-wear rating compares a tire’s tread life with that of a reference tire. A 440 rating (shown here) indicates a tread life of more than four times that of a tire graded at

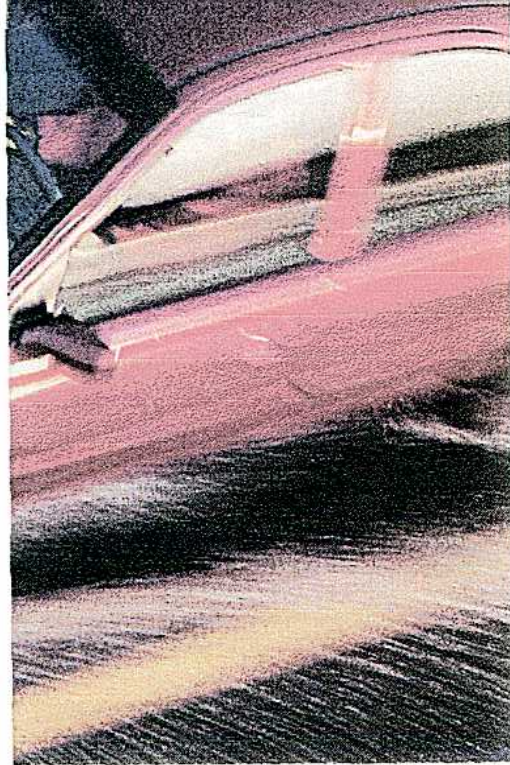
100. Winter tires aren’t required to have traction, temperature, and tread-wear ratings because they are intended for winter use only.

▶ Traction and temperature ratings are scores for government-specified tests that gauge a tire’s ability to stop on wet pavement and resist overheating, which could cause a failure. AA is the best for traction; A, for temperature.

▶ Maximum air pressure when cold—35 pounds per square inch for this tire. Stick to the air pressure recommended on the placard on the vehicle’s door jamb or in the glove compartment or fuel-filler door; underinflation can make a tire run too hot.

▶ The DOT (Department of Transportation) code tells you when and where the tire was made—important if there’s a recall. In this code, the first two characters after “DOT” indicate the plant where the tire was made. The last three or four characters give the week and year the tire was made—in this case, the 49th week of 2001.





THE RIGHT TIRES, THE RIGHT CARE

The Ratings on pages 62 and 64 show our test results for 17 winter tires and 9 touring-performance models—the industry term for high-performance all-season tires. We measured braking on wet and dry surfaces, as well as handling and cornering ability. Scores include how well these tires gripped in snow and stopped on ice, along with their ability to resist hydroplaning (where tires skim the surface of standing water, leading to loss of traction and steering control).

Which tires are best for your vehicle? Here's what to consider:

Mostly for cars. *Winter tires* (see report at right) grip best on snow and ice. Many use enhanced compounds for added cold-weather traction, though the penalty is shorter tread life and poorer dry handling. That's why winter tires should be removed at the end of the snow season, and why they lack a tread-wear warranty.

Most winter tires are Q-rated models designed for speeds of up to 99 mph. Price range: \$50 to \$85 for the models we tested. That group includes the comparable S-rated *Firestone Winterfire* (112 mph) and T-rated *Kumho Pzen Stud KW-11* (118 mph), a top performer.

H-rated winter tires (130 mph) grip better on dry and wet roads, but sometimes sacrifice snow traction. Price range: about \$116 to \$155 for those we tested.

Touring-performance all-season tires (see page 63) are mostly H-rated and

combine some of the handling and cornering grip of *performance tires* (H-rated and higher; about \$70 to \$120) with the all-weather grip of *regular all-season tires* (mostly S- and T-rated; about \$35 to \$85). Price range: \$60 to \$120 for the touring-performance all-season models we tested this year (see "Other Good Choices," page 64, for other tires from our 2001 test). But they tend to offer shorter tread-wear warranties than regular all-season tires.

For SUVs and pickups. *All-terrain tires* have a more aggressive tread for off-pavement use, while *all-season tires* for trucks emphasize on-road comfort. Price range: \$60 to \$110 for the size tested. Most car owners can choose tire types. Carmakers usually advise SUV owners to buy the type the factory supplied, since switching can compromise stability.

Keeping tires safe. Make sure the new tires you want are the right size for your vehicle (check the placard on the door jamb or inside the glovebox or fuel-filler door). Also be sure the tires have the right speed and load rating (see "How to Read a Tire," opposite). Then follow these steps:

▶ Check air pressure monthly with the tires cold, following the vehicle manufacturer's recommendations on the door-jamb placard. Underinflated tires can overheat, which can lead to failure. A 10-degree drop in outside temperature lowers pressure by about 1 pound per square inch (psi). Tires also tend to leak over time. We inflated 108 all-season tires to 30 psi and checked them over one year. Pressure loss averaged 6.6 psi, and some lost nearly 13 psi—enough to risk your safety (see www.ConsumerReports.org).

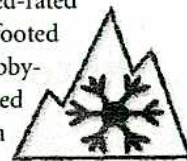
▶ Check for uneven wear. And replace tires that have cuts, bubbles, or bulges.

▶ Consider replacing tires before they reach the legal minimum depth of $\frac{1}{8}$ inch—where the wear bars are flush with the tread and you can see the top of Lincoln's head when you push a penny headfirst into a groove. We bought three all-season models and removed enough rubber to simulate half-worn tread. We'll have the full results in time for a later issue, but initial findings indicate a loss in wet-weather performance with half the tread depth.

▶ Stay within your vehicle's weight capacity, usually listed on the door-jamb label. Overloading makes tires run hotter.

Winter tires

You'll recognize winter tires by the mountain-and-snowflake graphic (below) on their sidewalls. Even Q-speed-rated winter tires are more surefooted than yesterday's noisy, knobby-treaded snow tires. H-rated winter models offer even better handling and braking, thanks largely to stiffer sidewalls and improved tread designs. And all of the winter tires we tested outgripped our top-rated all-season model in snow. But even the best-braking winter tire can't stop as quickly on dry roads as a good all-season tire, despite the improvements.



WHAT WE TESTED, WHAT WE FOUND

The 17 winter tires in this report include 6 H-rated models and 11 Q-rated models that include S- and T-rated equivalents. We bought Q-rated tires in size 195/70R14 to fit our 2000 *Chevrolet Cavalier* test car and H-rated tires in size P225/55R16 to fit our 2001 *BMW 530i*. You can use our overall judgments as a yardstick for other 14-, 15-, and 16-inch sizes of those models, however.

We put a premium on safety-related performance on dry and wet roads as well as on ice. Better dry braking helped the new T-rated *Kumho Pzen Stud KW-11* edge out the *Michelin Arctic Alpin*, the top performer in our 1998 winter-tire test. True to its name, the *Kumho Pzen Stud* accepts studs for added bite on ice and hard snow (we tested all winter tires without them). But studs may compromise dry grip on some surfaces and cause damage to roads—a key reason why some states ban metal studs and most limit their use to winter months.

Better wet braking also helped the H-rated *Goodyear Eagle Ultra Grip GW-2* outscore the *Dunlop SP Winter Sport M2*.

RECOMMENDATIONS

Use the overall scores as a guide. Then choose a tire that matches your driving.

▶ If your vehicle takes an H-rated tire, consider the top-scoring *Goodyear Eagle Ultra Grip GW-2*, \$132, *Dunlop SP Winter Sport M2*, \$126, *Pirelli Winter 210 SnowSport*, \$155, and *Bridgestone Blizzak LM-22*, \$130. For less snowy areas, choose the *Dunlop*, *Pirelli*, or *Bridgestone*.

- ▶ The H-rated *Nokian Hakkapeliitta NRW All Weather Plus*, \$157, excelled in snow-traction but not in our wet-weather braking and cornering tests.
- ▶ Within the Q-rated category, top scores

in a variety of conditions helped put the *Kumho I'zen Stud KW-11*, \$50, and *Michelin Arctic Alpin*, \$85, out in front.

- ▶ Consider the Q-rated *Dunlop Graspic DS-1*, \$55, for more-severe winter driv-

ing. While it involves some compromises, it's a good choice for snow-belt areas.

- ▶ The *Nokian Hakkapeliitta Q*, \$85, is the obvious choice where winters include lots of snow and rain.

Winter tires



H-speed-rated *Goodyear Eagle Ultra Grip GW-2*, \$132.



H-speed-rated *Dunlop SP Winter Sport M2*, \$126.



T-speed-rated *Kumho I'zen Stud KW-11*, \$50.



Q-speed-rated *Michelin Arctic Alpin*, \$85.

Overall Ratings

By type, in performance order

● Excellent ● Very good ○ Good ○ Fair ● Poor

BRAND & MODEL	PRICE	OVERALL SCORE	SNOW TRACTION	BRAKING			HANDLING	HYDRO-PLANING	RECOMMENDATIONS & NOTES
				ICE	DRY	WET			
H-RATED WINTER TIRES <i>Designed for speeds of up to 130 mph—and better performance at lower speeds.</i>									
<i>Goodyear Eagle Ultra Grip GW-2</i>	\$132	85	●	●	●	●	○	●	An excellent all-around choice. Best dry and wet braking among H-rated tires. Best ice braking without ABS.
<i>Dunlop SP Winter Sport M2</i>	126	85	●	●	●	●	●	●	An excellent all-around choice, with responsive handling.
<i>Pirelli Winter 210 SnowSport</i>	155	85	●	●	●	●	●	●	An excellent all-around choice, but pricey. Best dry cornering.
<i>Bridgestone Blizzak LM-22</i>	130	85	●	●	●	●	○	○	An excellent all-around choice. Best emergency handling.
<i>Nokian Hakkapeliitta NRW</i>	157	85	●	●	●	●	○	○	A fine choice for snow, though not ideal for wet weather. Least capable in wet cornering.
<i>Michelin Pilot Alpin</i>	116	85	○	○	○	○	○	○	Best suited to areas where snow is less severe. Quiet ride.
Q-RATED WINTER TIRES <i>Designed for speeds of up to 99 mph; test group includes tires rated S (112 mph) and T (118 mph).</i>									
<i>Kumho I'zen Stud KW-11</i>	50	85	○	●	●	●	●	●	An excellent choice where snow is less severe. Best dry and wet braking among this group. Studdable. T-rated in size tested.
<i>Michelin Arctic Alpin</i>	85	85	○	●	●	●	●	○	An excellent choice where snow is less severe. Excellent cornering.
<i>Dunlop Graspic DS-1</i>	55	85	●	●	●	○	○	○	A top winter performer, although only fair emergency handling.
<i>Gislaved NordFrost II</i>	75	85	○	●	●	●	●	○	A very good choice where snow is less severe. Studdable.
<i>Nokian Hakkapeliitta Q</i>	85	85	●	●	●	●	●	●	A very good all-around tire.
<i>BFGoodrich Winter Slalom</i>	60	85	●	○	●	●	●	●	A very good all-around tire, though slightly less capable than the <i>Nokian</i> in winter driving. Studdable.
<i>Goodyear Ultra Grip Ice</i>	77	85	●	○	○	●	●	●	A fine choice for snow and wet weather, but only fair handling.
<i>Bridgestone Blizzak WS-50</i>	72	85	●	●	●	●	○	●	A very good all-around tire, though less capable in emergency handling than top-rated models. Stiff ride.
<i>Yokohama Guardex F720</i>	75	85	○	●	●	○	●	●	Most susceptible to hydroplaning.
<i>Firestone Winterfire</i>	53	85	●	●	●	●	●	●	Unimpressive ice braking compromises an otherwise fine, economical choice. Studdable. S-rated in size tested.
<i>Cooper Weather-Master XGR</i>	52	85	○	●	●	○	○	○	Long dry stops and only fair emergency handling.

The tests behind the Ratings

Overall score is based on 14 tests, with braking, emergency handling, hydroplaning, and winter performance weighted most heavily. **Snow traction** reflects how far the test vehicle had to travel to accelerate from 5 to 20 mph on flat, moderately packed snow. **Ice braking** is done from 10 mph on an ice rink. **Dry braking** is done from 60 mph, and **wet braking**, from 40 mph. Most braking scores shown are with the antilock brake system (ABS) engaged (ABS was disengaged for touring-performance ice braking); instances where turning ABS off significantly affected

the score are noted above. **Handling** includes how well tires did in an avoidance maneuver that involved a swerve to the left, right, then left again, as well as wet and dry cornering performance and steering feel. **Hydroplaning** reflects the speed tires reached before they began to skim over water on our course. We also judged tire noise and ride comfort on the road, and measured rolling resistance for touring-performance tires with a dynamometer. **Price** is approximate retail for sizes tested. Most winter tires are Q- and H-rated; others are noted above.

Touring-performance all-season tires

All-season tires account for 90 percent of what people buy as replacements. The H-speed-rated touring-performance versions in this report combine better handling and improved grip on wet and dry roads with some of the all-weather competence of the S- and T-rated, regular all-season tires we tested last year.

A competitive market is also making some H-rated touring-performance all-season tires nearly as affordable as S- and T-rated, regular all-season tires. An example is this year's top-scoring *Dunlop SP Sport A2*; at \$70, it's priced similarly to the T-rated *Dunlop D65T* tested last year.

Shorter tread-wear warranties are a downside to touring-performance all-season tires. Those for the models we tested for this report range from 40,000 to 65,000 miles, compared with as much as 100,000 miles for the S- and T-rated regular all-season tires we tested last year (see "Other Good Choices," page 64, for available models). Choose the *Goodyear* and *Michelin* models, and you get no tread-wear warranty. Long warranties can be less than they seem, however, since you pay a growing percentage of the replacement cost as the mileage adds up.

WHAT WE TESTED, WHAT WE FOUND

We bought nine H-rated touring-performance all-season models in size P195/65R15, standard on our 2001 *Honda Accord EX* test car. You can use our overall test judgments as a yardstick for other 14-, 15- and 16-inch sizes of these models, however.

Most models performed competently. Impressive braking on wet, dry, and icy surfaces put the *Dunlop SP Sport A2* and *Michelin Energy MXV4 Plus* at the top of our Ratings (see page 64). Both also did well in our handling and hydroplaning tests. While the *Continental Conti TouringContact CH95* excelled in those two areas, as the Ratings show, it was an average performer in others. And like the other touring-performance all-season tires in this report, it isn't designed to provide the snow traction you'll get with a winter tire (see page 61).


The Recommendations & Notes in our Ratings include these tires' rolling resistance, which affects fuel economy. Those with the lowest—including the high-rated *Michelin Energy MXV4 Plus*—delivered the equivalent of nearly 2 mpg more in our highway fuel-economy tests than the *Cooper Lifeliner Touring SLE*, which had the highest rolling resistance.

RECOMMENDATIONS

Check the overall scores in the Ratings. Then look at the key performance judgments under Three-Season Driving and

Winter Driving to see which tire is best for the kind of driving you typically do.

► The *Dunlop SP Sport A2*, \$70, and the *Michelin Energy MXV4 Plus*, \$120, deliver the best combination of year-round performance. The *Michelin* is pricey and lacks a tread-wear warranty, however.

► For better handling, consider the *Continental ContiTouringContact CH95*, \$70, which did well overall. A caveat: Wet stops with the antilock braking system (ABS) disengaged were long—a concern if you drive a non-ABS vehicle. 

Turn page for Ratings

Where you buy can save you a bundle

It may be tempting to buy car tires at a warehouse club along with the frozen steaks and jumbo bags of kitty litter. Based on the BJ's, Costco, and Sam's Club stores we spoke with in 10 states, however, you may not find the exact model you want. We also called mail-order retailers, independent tire dealers, large tire chains, new-car dealers, and department stores in the same states. We asked all of these major tire-buying sources whether they stocked five of the touring-performance all-season tires we tested in size P195/65R15—and what they charged.

► Mail-order retailers like Discount Tire (www.discounttire.com) and Tire Rack (www.tirerack.com) and independent tire dealers had the lowest prices overall. All prices include the \$10 or so per tire that a shop typically charges for mounting and balancing, as well as roughly \$9 per tire for shipping, where applicable. Depending on your state, you may also have to pay sales

tax when you buy from a mail-order retailer, or be required to report the purchase if your state has an income tax.

► Independent tire dealers, large chains, car dealers, and department stores all carried the five tire models we specified.

► While warehouse clubs generally carry a wide selection, none of the three we called stock *Cooper*, *Dunlop*, or *Yokohama* tires. Average prices for the *Goodyear Eagle LS* and *Michelin Energy MXV4 Plus* were nearly as high overall as those at the Sears and Wal-Mart department stores we queried.

► Some tires cost more everywhere. Priciest were *Goodyear* and *Michelin*.

► Good advice and convenient shopping can make some retailers more appealing than others. Mail-order retailers tend to offer friendly web sites and an expert staff, while large chains and dealers provide one-stop shopping and installation. But you can make mail-order buying easier by having tires shipped to a dealer or shop.

Same tires, different prices ⁽¹⁾

TIRE BRAND	MAIL ORDER	INDEPENDENT TIRE DEALERS	LARGE CHAINS	CAR DEALERS	WAREHOUSE CLUBS	DEPARTMENT STORES
Cooper	NA ⁽²⁾	\$67	\$69	\$83	NA ⁽²⁾	\$87
Dunlop	\$76	77	80	83	NA ⁽²⁾	100
Goodyear	97	92	107	105	\$120	128
Michelin	134	136	136	136	139	139
Yokohama	74	71	75	83	NA ⁽²⁾	84

⁽¹⁾ Prices quoted are for tested models in size P195/65R15 and include mounting and balancing (about \$10 per tire); thus they differ from prices in the Ratings. ⁽²⁾ Not available at retail source.

Touring-performance all-season tires



Dunlop SP Sport A2, \$70.



Michelin Energy MXV4 Plus, \$120.



Continental ContiTouringContact CH95, \$70.



Kelly Charger HR, \$70.

Overall Ratings

In performance order

Excellent Very good Good Fair Poor

BRAND & MODEL	PRICE	OVERALL SCORE	THREE-SEASON DRIVING				WINTER DRIVING		RECOMMENDATIONS & NOTES
			DRY BRAKING	WET BRAKING	HANDLING	HYDROPLANING	SNOW TRACTION	ICE BRAKING	
Dunlop SP Sport A2	\$70	70	+	+	+	+	○	+	An excellent all-around choice, with the best overall braking. Good rolling resistance. 50,000-mile tread-wear warranty.
Michelin Energy MXV4 Plus	120	70	+	+	+	+	○	+	An excellent all-around choice, though pricey. Excellent cornering and rolling resistance. No tread-wear warranty.
Continental ContiTouringContact CH95	70	70	○	○	+	+	○	○	An impressive-handling tire. Very good cornering grip and rolling resistance. 60,000-mile tread-wear warranty.
Kelly Charger HR	70	70	+	○	○	○	○	+	Competent overall, though cornering grip was weakest of this group. Fair rolling resistance. 40,000-mile tread-wear warranty.
Cooper Lifeline Touring SLE	60	60	+	+	+	○	○	+	A very good dry-weather choice. Poor rolling resistance. 50,000-mile tread-wear warranty.
Toyo Proxes TPT	85	65	+	+	+	+	○	+	A very good choice where winters are mild. Very good rolling resistance. Stiff and relatively noisy ride. 65,000-mile tread-wear warranty.
Yokohama Avid H4	70	65	+	+	○	+	○	+	Competent overall, though unexceptional in most areas. Fair rolling resistance. 45,000-mile tread-wear warranty.
Goodyear Eagle LS	80	65	+	+	○	+	○	○	Competent overall, though dry stops were longest of this group. Excellent rolling resistance. No tread-wear warranty.
Uniroyal Tiger Paw Touring HR	70	65	○	+	+	○	○	+	Competent overall, though wet stops were longest of this group. Excellent rolling resistance. 55,000-mile tread-wear warranty.

See "The Tests Behind the Ratings" on page 62 for details on our tire-testing program.

Other good choices

Here are the highest-scoring car and truck tires that remain available from our 2001 tire report. Models are in Ratings order, and prices are approximate retail for the sizes tested (P195/70R14 for all-season tires, P225/75R15 for SUV and pickup-truck tires).

All-season tires for cars (S and T speed-rated)

Tread-wear warranties are 80,000 to 100,000 miles

- Michelin X-One \$80
- Kelly Navigator Platinum TE \$75
- Yokohama Avid Touring \$65
- Pirelli P3000 Cinturato \$60
- Goodyear Aquatred 3 \$60
- Hankook Mileage Plus 845 \$50
- Kumho Power Prima II 792 \$42
- Cooper Lifeline STE \$51

Tread-wear warranties are 60,000 to 70,000 miles

- Pirelli P400 Touring \$53

- Yokohama Aegis LS4 \$60
- BFGoodrich Control T/A M65 \$70
- Michelin RainForce MX4 \$78
- Kelly Navigator Gold \$70

Tread-wear warranties are 40,000 to 50,000 miles

- Uniroyal Tiger Paw ASC \$45
- BFGoodrich Momenta S/E \$45
- Dunlop SP20 A/S \$55
- Cooper Trendsetter SE \$38
- Kelly Explorer \$51
- Futura (Pep Boys) Euro-Metric \$34

Tires for SUVs and pickup trucks

All-terrain tires

- Dayton Timberline A/T \$60
- Bridgestone Dueler A/T 693 \$67
- Michelin XCX/APT \$117
- Kelly Safari AWR \$85
- Dunlop Radial Rover \$80
- Pirelli Scorpion A/T \$80

All-season tires

- Toyo M410 Open Country Radial \$85
- BFGoodrich Radial Long Trail T/A \$85
- Bridgestone Dueler H/L \$85
- Michelin LTX M/S \$110
- Dunlop Radial Rover A/T \$82