

## What are good tyres?

*I've read elsewhere the standard factory issue PX tyres are not the best. Should I consider replacing and if so any recommendations to increase safety?*

The tyres supplied with scooters are generally the lowest cost to meet the country standards. It does not make good business sense to do otherwise. It is very easy to improve the quality of tyre, either within the same brand or with a different brand. It is recommended that the front and rear tyre be matched ([Motorcycle Tyre Safety Information](#))

New Vespa PX's come with Michelin S83's, these have poor grip and are only rated to a max speed of 100Km/hr. These tyres can be upgraded to Michelin S1's which provide better grip but are still only rated to 100Km/hr. For higher performance, Sava MC18/MC20 (and other tyres) are speed rated to 150Km/hr and are very high quality tyres. There are many tyres that are better performing than standard (and some worse). Below we discuss what to look for in the manufacturers tyre rating specification and how to match that to your riding requirements.



## Tyre Ratings

Manufacturers state how their tyres perform in the tyre rating scale below:

Motorcycle Tyre Speed Ratings			Load index							
SpeedRating	Maximum Test Speed		LI	kg	LI	kg	LI	kg	LI	kg
Letter	MPH	Km/H	19	77.5	36	125	53	206	70	335
		(KPH)	20	80	37	128	54	212	71	345

J	62	100
K	68	110
L	74	120
M	81	130
N	87	140
P	94	150
Q	100	160
R	106	170
S	112	180
T	118	190

21	82.5	38	132	55	218	72	355
22	85	39	136	56	224	73	365
23	87.5	40	140	57	230	74	375
24	90	41	145	58	236	75	387
25	92	42	150	59	243	76	400
26	95	43	155	60	250	77	412
27	97.5	44	160	61	257	78	425
28	100	45	165	62	265	79	437
29	103	46	170	63	272	80	450
30	106	47	175	64	280	81	462
31	109	48	180	65	290	82	475
32	112	49	185	66	300	83	487
33	115	50	190	67	307	84	500
34	118	51	195	68	315	85	510
35	121	52	200	69	325	86	530



A brief summary is that the a "51J" rated tyre has to last 20 minutes at 93 km/hr, with correct pressure and a load of greater than 80% of maximum (i.e. ~160Kg). A "51P" rated tyre has to last 20 minutes at 143 Km/hr.

"Last" means "After completion of the high speed test specified in Clause 23.3.5 no tyre shall have 'Tread Separation', 'Ply Separation', 'Cord Separation', 'Belt Separation' or 'Bead Separation', 'Chunking' or 'Broken Cords'."

So the test is for the limit of the tyre before it fails! Riding higher than this limit means the tyre may start to fail. At a guess, manufacturers though will probably use slightly lower speed rating to account for variations in their production quality (so all tyres coming out good and bad still meet the spec).

## Why you should be careful when considering "J" rated tyres for road use

Many scooterists choose tyres by brand, X brand is better than Y brand. With a tuned scooter or one used for carrying loads/pillions, you need to understand tyre ratings rather than rely on just brand reputation. For example Michelin S1's are considered great tyres as Michelin has a good reputation. However let's look closely at why you should consider the tyre safety rating over brand.

Many "good" tyres are only "J" rated (not just Michelin S1's) with an equally low load index, lets look closely at what this means for the perspective of a Vespa PX rider.

1. A Vespa weighs in reality 110-125Kg with fuel and stuff in the glovebox
2. The weight is mostly on the back wheel - about 80Kg
3. Then add the rider who is also sitting over the back wheel - 80-100Kg (with gear)
4. That means about 160-180Kg is hanging over the rear tyre

So at 100Km/hr you are riding at the very edge of the manufacturer's tyre limit! That is assuming that you have correct tyre pressure, if you don't you may be riding above the limit! And this assumes that you aren't ever going to carry luggage or a pillion.

Michelin S1's were used in this example, this does not mean they are not good tyres. They are designed for a specific task, this "might" make them the best tyre for racing a light scooter round a short track but the same attributes that make them good for that, make them "bad" for uses they are not designed for.

In short, if the manufacturer is telling you not to use something through their specification, don't! Buy the right tyres for the right application.

## Table of Vespa Tyres in order of High Speed/High Load

The following lists tyres in order of best performing tyres down, first by maximum speed and then by load they can carry. Within ranges of tyres there are also sometimes hard and soft variants. Soft are more sticky but wear quicker and harder are more durable.

Maker	Model	Sizes	Rating	Max. km/h	Max. m/h	Max. load
Schwalbe	Raceman (HS 541)	3.50-10	59P	150	93	243 kg
Schwalbe	Weatherman (HS 540)	3.50-10	59P	150	93	243 kg

Continental	Twist Race	3.50-10	59P	150	93	243 kg
Sava	MC31-S Racer	3.50-10	51P	150	93	195 kg
Sava	MC18	3.50-10	51P	150	93	195 kg
Sava	MC20 Monsum	3.50-10	51P	150	93	195 kg
Continental	Continavigator M+S	3.50-10	59M	130	81	243 kg
Continental	Twist "PX/T5"*	130/ 70-10	59M	130	81	243 kg
Heidenau	K 61 200*	120/ 90-10	66M	130	81	300 kg
SIP	Performer	3.50-10	59L	120	74	243 kg
Michelin	S1 P200*	130/ 70-10	62J	100	62	265 kg
Pirelli	SL 26	3.50-10	59J	100	62	243 kg
Continental	K 62 WW Whitewall	3.50-10	59J	100	62	243 kg
Continental	K 62 (Zippy 3)	3.50-10	59J	100	62	243 kg
Continental	Continavigator	3.50-10	59J	100	62	243 kg
IRO	Urban Snow	3.50-10	59J	100	62	243 kg
Heidenau	K 61	3.50-10	59J	100	62	243 kg
Heidenau	K 47	3.50-10	59J	100	62	243 kg
Heidenau	K 38	3.50-10	59J	100	62	243 kg
Heidenau	K 58	3.50-10	59J	100	62	243 kg
Pirelli	SC 30	3.50-10	51J	100	62	195 kg
Michelin	S1	3.50-10	51J	100	62	195 kg

Sava	B14 Whitewall	3.5-10	51J	100	62	195 kg
Insert tyres in order... right click, select row, add...						

\*Wide tyre kit required to fit to a 10" wheel.

Not included in this table are race tyres (such as the Heidenau Slick) which are classified as NHS (Non Highway Service). See <http://www.reifenwerk-heidenau.de/modules/reifenliste/view.php?point=3&rty=18&profil=117&pic=81>.



A race tyre for Vespas: Heidenau Slick 3.50-10 TL NHS



A snow tyre for Vespas: IRO Urban Snow 3.50-10 59J M+S

### More Tyre Resources

Beedspeed [Tyre Size Information](#)

[Motorcycle Tyre Safety Information](#)