

PRODUCT	APPEARANCE	SOFTENING POINT °C	SULFUR CONTENT %	DENSITY AT 25°C	ADDITIONAL INFORMATION	USAGE
VULTAC® 2	brown, slightly tacky solid	55 ± 5	22.8 ± 1.0	1.1/1.2		To replace sulfur it should be used at levels of around 4PHR Vultac® 2 to 1PHR sulfur.
VULTAC® 3	brown, solid	88 ± 10	28.0 ± 1.0	1.15/1.25		Due to its higher sulfur level than Vultac® 2, its activity in the vulcanization process is slightly higher. It should therefore substitute sulfur in the following proportions: 2.6 PHR Vultac® 3 to PHR sulfur. NV1 PHR Vultac® 3 is equivalent to about 1.5 PHR Vultac® 2.
VULTAC® 5	brown, free flowing powder	Particle size 99%: 840 µm 98%: 300 µm	18.5 - 22.00	1.34/1.42	Water content max 2.0%	Using VULTAC® 5 offers the same flat curing level and the same ageing properties for rubber compounds as those obtained with Vultac® 2. In general 1.0 PHR Vultac® 5 produces the equivalent activity as * 1.2 to 1.7 PHR Vultac® 2. * 0.7 to 1.0 PHR Vultac® 3. The specific usage of Vultac® 5 lies in its granulometry which allows it, contrary to Vultac® 2, to be easily incorporated into rubber compounds, either in mill or Banbury mixing without using staining oils or rotor. For an optimum result, the batch temperature should ideally be held at 71°C or more during the mixing cycle which follows the incorporation of Vultac® 5.
VULTAC® 7	brown, flakes	120 ± 10	29.30 - 31.80	1.2/1.3		The usage quantities of Vultac® 7 are: * Vultac® 3: the performance of Vultac® 7 is completely comparable in relation to activity with Vultac® 3. * 1 PHR Vultac® 2 is replaced by 0.8 PHR Vultac® 7. * 1 PHR Vultac® 2 is replaced by 0.75 PHR Vultac® 7. In the last two cases, and for certain other formulations, lower quantities can be sufficient. Due to its higher softening point, Vultac® 7 must be mixed at a minimum temperature of 88°C.
VULTAC® 710	brown, flakes	85 ± 10	27.4 ± 1	1.20/1.3	Stearic acid 10 (± 1)%	Vultac® 710 was developed for applications where the softening point of Vultac® 7 was too high and rendered it unusable. Vultac® is added during the 2nd mixing stage during which the maximum temperature rises to 110°C and the duration is relatively short. In these conditions, Vultac® 7 is not incorporated completely homogeneously and it is necessary to use a Vultac® with lower softening point and which can also be used in flake form.