



HARWICK

STANDARD

ISO 9001-2015 REGISTERED

Technical Data Sheet

Technically Specified Rubber

Technically Specified Rubber (TSR) is natural rubber that is graded (specified) based on laboratory measurement, rather than visually graded natural rubber such as rib smoked sheet (RSS). The product's country of origin can be found in the naming of the product: SIR (Indonesia), SMR (Malaysia), SVR (Vietnam), STR (Thailand), etc., and products must meet international standards to bear this designation, i.e. SIR 20 and SMR 20 must meet the same technical requirements. There are several different grades of TSR, each with its own specifications: TSR 20, TSR 10, TSR 5, TSR L, TSR CV.

TYPICAL PROPERTIES

Property	TSR Grade					
	TSR 20	TSR 10	TSR L	TSR 3WF	TSR CV60	TSR CV50
Dirt, max % retained on 45 μ m sieve	0.20	0.10	0.03	0.03	0.04	0.04
Ash, max %	1.0	0.75	0.60	0.60	0.60	0.60
Volatile Matter, max %	0.80	0.80	0.80	0.80	0.80	0.80
Nitrogen, max %	0.60	0.60	0.60	0.60	0.60	0.60
Initial Wallace Plasticity, min P ₀	30	30	30	30	-*	-*
Plasticity Retention Index, min	40	50	60	75	60	60
Color Index, max	-	-	6.0	-	-	-
Mooney Viscosity, target	-	-	-	-	60	50

*No Initial Wallace Plasticity measurement for CV grades as these are viscosity controlled.

06/13/2019

HARWICK STANDARD MAKES NO WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE GOODS OR USES OF THE GOODS OR PERFORMANCE OF THE GOODS AND MAKES NO WARRANTIES OF THE FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY. BUYER ACKNOWLEDGES THAT HARWICK STANDARD WILL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, DIRECT, OR SPECIAL DAMAGES ARISING, DIRECTLY, OR INDIRECTLY, IN RESPECT TO SUCH GOODS OR THE USE OR FAILURE THEREOF, WHETHER BASED ON BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE.

HARWICK STANDARD DISTRIBUTION CORPORATION

60 S. SEIBERLING ST. • P.O. BOX 9360 • AKRON, OH 44305-0360 • U.S.A.

PHONE: (330) 798-9300 • FAX: (330) 798-0214

www.harwick.com



HARWICK

S T A N D A R D

ISO 9001-2015 REGISTERED

Technical Data Sheet

TSR 20 & 10: TSR 20 is the most common and commercially available grade of TSR. TSR 10 has similar properties, but is cleaner from a dirt and ash standpoint. Both TSR 20 and TSR 10 will exhibit lower viscosity and easier mixing/mastication than RSS. TSR 20 and 10 will storage harden over time, but this effect can be reversed by pre-mastication, storage in a hot room, or with the use of peptizer to lower viscosity. These grades are used in several applications, including tires and conveyor belts.

TSR L & TSR3WF: Made from high quality latex, TSR L has much lower dirt content due to the purity of the latex. It is color controlled and much lighter than other grades of TSR. TSR 3WF is similar in properties, but is not specified on color.

TSR CV60 & CV50: Constant Viscosity (CV) grades of natural rubber are chemically treated during production to meet and retain a specific Mooney Viscosity value (most often 60 or 50). These grades will exhibit a much more stable viscosity than TSR 20 or 10, and will normally not require pre-mastication or use of peptizer.

Other types of TSR can be found, but will often just be a variant of those grades listed here, for example, a different specified dirt amount or different CV Mooney target.

For assistance in selecting the right grade of natural rubber for your application, please contact the Harwick Standard Technical Department at 330-798-9300 or technical@harwickstandard.com

06/13/2019

HARWICK STANDARD MAKES NO WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE GOODS OR USES OF THE GOODS OR PERFORMANCE OF THE GOODS AND MAKES NO WARRANTIES OF THE FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY. BUYER ACKNOWLEDGES THAT HARWICK STANDARD WILL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, DIRECT, OR SPECIAL DAMAGES ARISING, DIRECTLY, OR INDIRECTLY, IN RESPECT TO SUCH GOODS OR THE USE OR FAILURE THEREOF, WHETHER BASED ON BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE.

HARWICK STANDARD DISTRIBUTION CORPORATION

60 S. SEIBERLING ST. • P.O. BOX 9360 • AKRON, OH 44305-0360 • U.S.A.

PHONE: (330) 798-9300 • FAX: (330) 798-0214

www.harwick.com