ISNR 20

Processing of natural rubber into blocks similar to synthetic rubbers adopting cost effective and modern processing methods is a notable improvement in the presentation of dry natural rubber from India. This is in line with the consumer preference in the world rubber market for Technically Specified Rubber, which has the following advantages:

- Technically certified rather than visually graded as in the case of RSS and crepe grades of natural rubber.
- Consistency in quality
- Compact packaging
- Low contamination in handling and transportation

Bureau of Indian Standards formulated specifications for ISNR in 1969 (IS 4588).IS 4588 prescribes 6 grades viz., ISNR 3 CV, ISNR 3 L, ISNR 5, ISNR 10, ISNR 20 and ISNR 50. Its specification details are given below.

Characteristic	ISNR 3CV	ISNR 3L	ISNR 5	ISNR 10	ISNR 20	ISNR 50
Dirt percent by mass (Max)	0.03	0.03	0.05	0.10	0.20	0.50
Volatile matter, percent by mass (Max)	0.80	0.80	0.80	0.80	0.80	0.80
Ash, percent by mass (Max)	0.50	0.50	0.60	0.75	1.00	1.50
Nitrogen, percent by mass, Max	0.60	0.60	0.60	0.60	0.60	0.60
Initial plasticity Po (Min)	As agreed to between the purchaser and the supplier	30.00 (Min)	30.00 (Min)	30.00 (Min)	30.00 (Min)	30.00 (Min)
Plasticity retention index, PRI (Min)	60.00	60.00	60.00	50.00	40.00	30.00
Colour (Lovibond scale)	-	6.0	-	-	-	-
Mooney viscosity (1+4) at 100 C	60+(-)5	-	-	-	-	-
Accelerated storage hardening Po (max)	8.00	-	-	-	-	-
Colour code	Black	Black	Green	Brown	Red	Yellow

Applications of ISNR grades

ISNR 3 CV: High quality products with superior dynamic properties.

ISNR 3 L: Colored products like injection bottle caps, syringe heads, transparent items.

ISNR 5: Moulded and extruded items like auto components, bridge bearings,rubber linings etc.

ISNR 10: Inner tubes, conveyor belts, footwear, water proofing materials, hoses and tubes.

ISNR 20: All types of automobile tyres, re-treading materials, mats and other generalrubber products.