

KES

Evaluation Standard on IR
(Isoprene Rubber)

KES T – L448

(EST.) 1991 – 10 – 16

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1. Scope of application

This method shall specify the mixing treatment of mixing ingredients, mixing sequence and test method for evaluation on isoprene rubber and production management.

2. Standard mixing treatment for standard test

Standard mixing treatment

Mixing ingredients	NBS SRM No	Weight(Parts)
		Mixing treatment No.
		1A
Isoprene rubber	—	100.00
Oxidized iron	370	5.00
Sulfur	371	2.25
Stearine acid	372	2.00
Oil pernice black	378	35.00
Vulcanizing facilitator TBBS	384	0.70
Total		144.95
Batch factor	Roll mixing	3.0
	Internal mixer mixing	10.0

3. Making the sample

Test sample should be sampled and made according to ASTM D 1485.

4. Mixing sequence

4.1 Refer to ASTM D 3182 for the recommended method of general mixing sequence.

4.1.2 There are 3 mixing sequences. The result from one of them can be unrelated to that from the different sequences.

(1) Method A

Internal mixer for both the first mixing and the second mixing

(2) Method B

Internal mixer for the first mixing and roller for the second mixing

(3) Method C

Roll mixing

4.2 Mixing sequence

4.2.1 Method A

The first mixing (Internal mixer)

	Consuming Time(Minute)	Accumulated Time(Minute)
(1) Control the temperature of internal mixer to make the discharge condition shown on the (5) clause. Close the discharge door and operate the roller and raise the ram.	0	0
(2) After adding the half of rubber, entire oxidized iron, carbon black, stearine acid add up the rest of rubber. Lower the ram.	0.5	0.5
(3) Conduct mixture	3.0	3.5
(4) Raise the ram, and after cleaning the throat of mixer and upper surface of ram lower the ram.	0.5	4.0
(5) Mix until the temperature of raw fat reaches 170°C or total mixing time reaches 6 minutes or until either one can be reached faster gets faster and discharge raw fat.	2.0	6.0
(6) Check the weight of raw fat and record it. If the weight is more than ±0.5% different from the theoretical value, throw away the raw fat.	Maximum consuming time is 6 minutes	
(7) Pass the raw fat 3 times through the standard test roller with the roll gap of 6.0mm and the temperature of 70±5°C.	1.0	7.0
(8) Leave the raw fat alone for 1~24 hours	Toal maximum consuming time is 7 minutes	
4.2.2 Method A		
The second mixing sequence		