KES

Brake Lining

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Additional Rule

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1. Scope of Application

This standard determines the import inspection for brake lining for cars.

2. Types

Brake lining shall be classified as follow according to its phenomenon and usage.

2.1 Classification by phenomenon

(1) Class 1, soft (Usually woven or similar ones)

(2) Class 2, semi-soft (Soft mold or similar ones)

(3) Class 3, hard (Mold, specially processed woven, semi-mold, metal, or similar ones)

2.2 Classification by usage

(1) #1 A

Special light load (Usually used for center brake)

(2) #1 B

Special light load (Usually used for parking brae (Including disc brake))

(3) #2

Light load (Usually used for passenger cars)

(4) #3

Middle load (Usually used for light trucks)

(5) #4A

Heavy load (Usually used for large-sized trucks)

(6) #4B

Heavy load (Usually used for disc brake)

3. Inspection Items

(1) Performance Inspection

(2) Size Inspection

(3) External Appearance Inspection

4. Inspection Method

It shall be the regular inspection level 2 of KS A 3109 (Coefficient adjustment type sampling inspection).

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5. Inspection Lot

All products for one time delivery shall be considered as a lot.

6. Sample Picking Method

Follow KS A 3151 (Random sampling method)

7. Performance

7.1 Friction Performance

Friction coefficient of brake lining and its tolerance and defacement rate shall be as following. There shall not be any harmful scratch or swelling on the friction face of disc and sample.

(1) Friction coefficient shall be as table 1.

Table 1

Phenomenon	Usage	Temperature of the disc friction face					
		100°C	150°C	200°C	250°C	300°C	350°C
Class 1 2 And 3	#1 A	0.30 ~ 0.60	0.25 ~ 0.60	—	—	—	—
	#1 B	0.30 ~ 0.60	0.25 ~ 0.60	0.20 ~ 0.60	—	—	—
	#2	0.39 ~ 0.60	0.39 ~ 0.60	0.39 ~ 0.60	0.35 ~ 0.50	0.30 ~ 0.60	—
	#3	0.30 ~ 0.60	0.30 ~ 0.60	0.20 ~ 0.60	0.15 ~ 0.60	—	—
	#4 A	0.30 ~ 0.60	0.30 ~ 0.60	0.25 ~ 0.60	0.20 ~ 0.60	0.15 ~ 0.60	—
	#4 B	0.25 ~ 0.60	0.25 ~ 0.60	0.25 ~ 0.60	0.25 ~ 0.60	0.25 ~ 0.60	0.25 ~ 0.60

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(2) Tolerance for assigned friction coefficient shall be as table 2.

Table 2

Phenomenon	Usage	Temperature of the disc friction face					
		100°C	150°C	200°C	250°C	300°C	350°C
Class 1 2 And 3	#1 A	± 0.10	—	—	—	—	—
	#1 B	± 0.10	± 0.12	—	—	—	—
	#2	± 0.08	± 0.10	—	—	—	—
	#3	± 0.08	± 0.10	± 0.12	—	—	—
	#4 A	± 0.08	± 0.10	± 0.12	± 0.12	—	—
	#4 B	± 0.08	± 0.10	± 0.12	± 0.12	—	—

(3) Defacement rate shall be as table 3.

Table 3

Unit : 10^{-7} $cm^2/kg \cdot m$

Phenomenon	Usage	Temperature of the disc friction face					
		100°C	150°C	200°C	250°C	300°C	350°C
Class 1 2 And 3	#1 A	Less than 10.0	Less than 15.0	—	—	—	—
	#1 B	Less than 10.0	Less than 20.0	Less than 35.0	—	—	—
	#2	Less than 1.5	Less than 2.0	Less than 3.0	Less than 4.0	Less than 6.0	—
	#3	Less than 5.0	Less than 7.5	Less than 10.0	Less than 20.0	—	—
	#4 A	Less than 5.0	Less than 7.5	Less than 10.0	Less than 20.0	Less than 35.0	—
	#4 B	Less than 5.0	Less than 7.5	Less than 10.0	Less than 20.0	Less than 35.0	Less than 70.0

7.2 Flexibility

About the flexibility of brake lining class 1, it shall not have harmful cracks when the product's inside is rolled and attached on the cylinder on table 4.

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