



MATERIAL SAFETY DATA SHEET

Date of Issue: Jul/1992

According to ISO 11014-1

Issue: 5th

MSDS - RT/270

Last Update Date: Oct/2001

SECTION 01 – PRODUCT AND COMPANY IDENTIFICATION

IDENTITY: Clutch Facing – **RT/270**

Chemical Family Name: Non Asbestos Friction Material

Use for the product: Transmission Application

Manufacturer's Name: FRAS-LE S.A

Address: RS 122 – Km 66 – nº 10945 – Bairro Forqueta – Caxias do Sul – 95010.550 – RS –Brasil

Telephone Number for Information: (54) 209-1955 - Fax (54) 209-2021 - silaq@fras-le.com.br

SECTION 02 – INGREDIENTS AND HAZARDOUS

Hazardous Components	ACGIH TLV-TWA *
Inorganic Fiber	1 f/cm ³
Metallic Wire	NA
Organic Fiber	10 mg/m ³
Graphite	2 mg/m ³
Rubber	NA
Carbon Black	3,5 mg/m ³
Phenolic Modified Resin	5 mg/m ³
Metal Sulphides	0,05 mg/m ³
Other Fillers	10 mg/m ³

Note: This is an asbestos free product.

SECTION 03 – HAZARDS IDENTIFICATION

Respiratory protection	Appropriate mask for persons
Ventilation	Local exhaust for dust exposures exceeding TLV Mechanical: not recommended for dust exposures
Protective gloves	Recommended for persons with skin sensitive to phenolic resins. Other: barrier creams for persons with skin sensitive to phenolic resins and glass fiber.
Eye protection	Should not be needed for normal handling of product. Eye protection is a good practice where dust is propelled by grinding or drilling activities.
Other protective clothing or Equipment	Long sleeve shirts or other protective clothing may be beneficial to prevent skin contact of person sensitive to phenolic resins and glass fiber.

SECTION 09 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	NA
Vapor Pressure	NA
Vapor Density	NA
Solubility in Water	None
Melting Point	NA
Evaporation Rate	0
Specific Gravity	1,78 – 1,90 g/cm ³
Appearance and Odor	Dark gray color and characteristic odor
Physical State	Solid

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable	Conditions to avoid : NK
Incompatibility (material to avoid): NK	
Hazards polymerization: will not occur	Condition to avoid : NK
Hazardous Decomposition Products: incomplete combustion will create carbon monoxide and dioxide	

SECTION 13 – DISPOSAL CONSIDERATION

Waste Disposal:

Scrap pieces should be disposed of in a way to prevent airborne dust.

Wastes should be placed in sealed container marked with appropriate warning label.

Check local, state and federal regulations.

SECTION 14 – TRANSPORT INFORMATION

Shipping name: Non – regulated material according to 49 CRF 172. 101 part 171

Hazard Class: Not sublet to DOT Hazardous Material Registry.

SECTION 16 – OTHER INFORMATION

Maintain good housekeeping practices.

Employees should be properly instructed of control measures as indicated above when there is a need for it. The amount of dust produced should be controled, being necessary the use of vacuum cleaning.

* ACGIH TLV-TWA - American Conference of Governmental Industrial Hygienists - 2000 Edition

NA – Not Available

NK – Not Known

Prepared: Research Chemist

Approved: Research and Development Manager