



TECNOLOGÍA TOTAL

tecnosleeve-epoxy part A

COATING SYSTEM

MATERIAL SAFETY DATASHEET - MSDS

1. PRODUCT IDENTIFICATION

PRODUCT NAME: **tecnosleeve-epoxy part A**

DESCRIPTION: tecnosleeve-epoxy is a fast drying, 100 % solids by volume coating with high impermeability and temperature resistance, which provides corrosion protection in the **tecnosleeve** coating system.

RECOMMENDED USE: Protection against corrosion in pipelines.

CONTACT INFORMATION: TECNOLOGIA TOTAL S.A.C.
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2. HAZARDS IDENTIFICATION

ADVERSE EFFECTS ON HEALTH: It can cause lung damage, respiratory and skin sensitization, and dermatitis.

EFFECTS ON THE ENVIRONMENT: Not available.

CHEMICAL AND PHYSICAL HAZARDS: Incompatible with strong acids, bases, oxidants and amines.

SPECIFIC HAZARDS: High temperatures.

CARCINOGENIC INFORMATION: Free silica or respirable silica dust is listed as a probable human carcinogen under the IARC.

3. COMPOSITION

| INGREDIENT | CAS Number | % | DANGER SYMBOL | RISK PHRASES |
|-----------------------------|------------|-------|---------------|--------------|
| Epoxi phenol novolac | 28064-14-4 | 15-40 | None known. | None known. |
| Quartz (crystalline silica) | 14808-60-7 | 30-60 | None known. | None known. |
| Neopentyl diglycidyl ether | 17557-23-2 | 5-10 | Xi | R: 38-43 |
| Mica | 12001-26-2 | 1-5 | None known. | None known. |
| Hydrophobic silica | 67762-90-7 | 0.1-1 | None known. | None known. |
| Black carbon | 1333-86-4 | 0.1-1 | None known. | None known. |

4. FIRST AID MEASURES

SKIN CONTACT: Wash with soap and water for 15 minutes. Remove contaminated clothing and seek medical attention.

EYE CONTACT: Rinse with plenty of water for 15 minutes. Seek medical attention.

INHALATION: Take the affected person to a place with fresh air. If they are not breathing, a person trained in first aid should give them artificial respiration. Consult the medical service.

INGESTION: Seek medical attention.



5. FIRE FIGHTING MEASURES

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| EXTINGUISHING AGENTS: | Water spray, dry chemical, foam and carbon dioxide. |
| EXPOSURE RISKS: | Not available. |
| PROTECTIVE EQUIPMENT: | Wear self-contained breathing equipment. |
| DECOMPOSITION PRODUCTS: | Nitrogen and carbon oxides (CO, CO ₂), aldehydes and acids. |

6. MEASURES TO CONTROL SPILLS OR LEAKS

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| PERSONAL PROTECTION: | Use personal protective equipment. Remove all sources of ignition. |
| ENVIRONMENTAL PRECAUTIONS: | Prevent spilled product from reaching drains. |
| CLEANING METHODOLOGY: | Use inert absorbent materials and store them in closed containers. Dispose according to federal, provincial and municipal legislation. |

7. HANDLING AND STORAGE

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| HANDLING: | Maintain good personal hygiene. Wash hands after handling the product. |
| STORAGE: | Store in a dry and refrigerated environment. |
| MATERIALS TO AVOID: | Strong acids, bases, oxidants and amines. |
| VENTILATION: | Adequate ventilation is recommended. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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| ENGINEERING CONTROLS: | Adequate ventilation is recommended. |
| RESPIRATORY PROTECTION: | Use NIOSH approved organic respirator during application and handling in areas where vapor or dew is near the airways. After application and drying, use a dust respirator when performing sandblasting or grinding activities. |
| SKIN PROTECTION: | Wear chemical resistant gloves when handling the product. Waterproof boots and protective clothing should also be worn. |
| EYE PROTECTION: | Wear safety glasses. |



EXPOSURE DATA:

| INGREDIENT | CAS Number | LD ₅₀ (species and route) | LC ₅₀ (species and route) | OSHA (PEL) TWA | ACGIH (TLV) TWA |
|-----------------------------------|------------|--------------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|
| Epoxy phenol novolac | 28064-14-4 | Not available. | Not available. | Not available. | Not available. |
| Quartz (crystalline silica) | 14808-60-7 | Not available. | Not available. | 250 mppcf 10 mg/m ³ | 0.1 mg/m ³ |
| Neopentyl glycol diglycidyl ether | 17557-23-2 | Rabbit, skin: 2150 mg/kg | Not available. | Not available. | Not available. |
| Mica | 12001-26-2 | Not available. | Not available. | 20 mppcf | Inhalable: 3 mg/m ³ |
| Hydrophobic silica | 67762-90-7 | Mouse, oral: 1000 mg/kg | Not available. | Not available. | Not available. |
| Black carbon | 1333-86-4 | Mouse, oral: 8 g/kg | Not available. | 3.5 mg/m ³ | 3.5 mg/m ³ |

9. CHEMICAL AND PHYSICAL PROPERTIES

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| PHASE: | Liquid | WATER SOLUBILITY: | Slightly soluble. |
| APPEARANCE: | Viscous liquid. | MELTING POINT: | < -5°C |
| ODOR: | Slight odor of oil. | EVAPORATION RATE: | Not available. |
| COLOR: | Gray. | VAPOR PRESSURE: (mmHg) | Negligible. |
| BOILING POINT: | > 300°C (572°F) | WATER / OIL DISTRIBUTION COEFFICIENT: | Not available. |
| SPECIFIC GRAVITY: (AGUA=1) | 1.573 | VAPOR DENSITY: | Not available. |

10. STABILITY AND REACTIVITY

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| STABILITY: | Stable under normal conditions. Does not generate dangerous polymerization. |
| HAZARDOUS DECOMPOSITION PRODUCTS: | Nitrogen and carbon oxides (CO, CO ₂), aldehydes and acids. |
| CONDITIONS/MATERIALS TO AVOID: | Avoid high temperatures and contact with strong acids, bases, oxidants and amines. |
| INFLAMMABILITY INFORMATION: | |
| Decomposition temperature: | Not available. |
| Flashpoint: | > 93.3 °C (212 °F) |
| Autoignition temperature: | Not available. |



EXPLOSION DATA:

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| Static discharge: | Not available. |
| Mechanical impact: | Not available. |
| Lower explosion limit (LEL - %): | Not available. |
| Upper explosion limit (UEL - %): | Not available. |

11. TOXICOLOGICAL INFORMATION

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| EFFECTS OF CONTACT WITH THE EYES: | Causes eye irritation. |
| EFFECTS OF CONTACT WITH SKIN: | It can cause burns or allergic reactions. |
| INHALATION EFFECTS: | May cause nose and throat irritation. It can also cause burns and / or lung injuries. |
| INGESTION EFFECTS: | Dangerous if swallowed. |
| TOXICOLOGICAL INFORMACION: | |
| Effects from acute exposure: | See above. |
| Effects from chronic exposure: | It can cause lung damage, skin and respiratory sensitization, and dermatitis. Repetitive inhalation of free silica dust can cause lung wounds (silicosis). |
| Material irritability: | See acute effects. |
| Sensitizing capacity: | Yes. |
| Carcinogenicity: | Free silica or respirable silica powder is listed as a probable human carcinogen by the IARC. |
| Reproductive toxicity: | Not available. |
| Teratogenicity: | Not available. |
| Mutagenicity: | Not available. |
| Synergistic materials: | Not available. |

12. ECOLOGICAL INFORMATION

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| ECOTOXICITY: | Not available. |
| OTHER EFFECTS AND INFORMATION: | Not available. |

13. DISPOSAL CONSIDERATIONS

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| PRODUCT IN CONDITION OF SALE: | Dispose according to federal, provincial and municipal legislation. |
| PRODUCT PACKAGING: | Dispose according to federal, provincial and municipal legislation. |
| SPECIAL INSTRUCTIONS: | Not available. |

**14. SHIPPING INFORMATION**

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| SHIPPING NAME: | Tecnosleeve-epoxy |
| UN PIN/NUMBER: | Not available. |
| PACKING GROUP: | Not available. |
| TDG REGULATION: | Not regulated as a hazardous material |
| DOT REGULATION: | Not regulated as a hazardous material |
| IATA REGULATION: | Not regulated as a hazardous material |
| IMDG REGULATION: | Not regulated as a hazardous material |
| SPECIAL SHIPPING INSTRUCTIONS: | Not available. |

15. REGULATORY INFORMATION

The regulatory information provided is not intended to be exhaustive. Other local, state, provincial, federal, international or country-specific regulations may apply for this material.

This product has been classified according to the Controlled Products Regulations (CFR) dangerousness criteria for controlled products and the safety data sheet contains all the information required by the CPR.

GENERAL INFORMATION ABOUT THE PRODUCT: Classification WHMIS: D2A

PRODUCT COMPOSITION ANALYSIS:

| INGREDIENT | CAS Number | CANADA WHMIS IDL | US CERCLA PRIORITY |
|-----------------------------------|------------|------------------|--------------------|
| Epoxy phenol novolac | 28064-14-4 | NO | NO |
| Quartz (crystalline silica) | 14808-60-7 | YES | NO |
| Neopentyl glycol diglycidyl ether | 17557-23-2 | NO | NO |
| Mica | 12001-26-2 | YES | NO |
| Hydrophobic silica | 67762-90-7 | NO | NO |
| Black carbon | 1333-86-4 | YES | NO |

COMPOSITION ANALYSIS - STATUS OF INVENTORY:

| INGREDIENT | No. CAS | CANADA DSL | US TSCA | EU EINECS | AUSTRALIA AICS |
|-----------------------------------|------------|------------|---------|------------------|----------------|
| Epoxy phenol novolac | 28064-14-4 | YES | YES | NO | YES |
| Quartz (crystalline silica) | 14808-60-7 | YES | YES | YES 238-878-4 | YES |
| Neopentyl glycol diglycidyl ether | 17557-23-2 | YES | YES | YES 241-536-7 | YES |
| Mica | 12001-26-2 | YES | NO | NO | YES |
| Hydrophobic silica | 67762-90-7 | YES | YES | NO | YES |
| Black carbon | 1333-86-4 | YES | YES | YES 215-609-9 | YES |

16. OTHER INFORMATION

Revision Date: 07 Jul 2016