

D2011 Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION OF THE COMPANY

PRODUCT: D2011 Friction Material
COMMON USES: Brakes/Clutch Lining
SUPPLIER: Ferotec Friction Ltd
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2. COMPOSITION/INFORMATION ON INGREDIENTS

This product contains a number of ingredients, all of which have become sealed in a synthetic rubber/resin binder resulting in a low probability of dust/fibre release.

| Chemical Name | CAS No | Concentration (%) | OEL (mg/m ³) | Exposure Time |
|--------------------|------------|-------------------|---------------------------------|---------------|
| Copper Fibre | 7440-50-8 | 9- 11 | Fume - 0.2 Dust & Mist - 1.0 | 8 hour TWA |
| Synthetic Rubber | | 1.5-2.5 | Fume - 0.6 Dust & Mist - 6.0 | 8 hour TWA |
| Para- aramid fibre | 26125-61-1 | 1.5-2.5 | Fibres - 5.0 | 8 hour TWA |

3. HAZARD IDENTIFICATION

Exposure to dust created by handling this product should be kept a low as reasonably practicable and limits as above are observed. Handling of this product may cause skin irritation.

4. FIRST AID MEASURES

Inhalation Avoid breathing dust. In the event of excessive inhalation of dust, remove the individual to fresh air. Obtain medical advice.
Skin Contact Clean skin with soap and water. Obtain medical advice if irritation persists.
Eye Contact Irrigate with clean water for at least 15 minutes. Obtain medical advice if irritation persists.
Ingestion It is not normally considered that the product will be ingested, but if small quantities are ingested, seek medical advice.

5. FIRE-FIGHTING MEASURES

Extinguishing Media Any standard extinguishing media may be used.
Protective Equipment Fire fighters, and others exposed, wear self-contained breathing apparatus.
Exposure Hazards When heated to very high temperatures, may give off smoke and decomposition products which may contain toxic compounds.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment as recommended in section 8.
Environmental Precautions No special precaution required
Methods for Cleaning up Remove any dust generated by vacuum or wet cloth.

7. HANDLING AND STORAGE

Handling Excessive handling may generate dust, use adequate ventilation to keep dust concentration below stipulated standard.
Storage Conditions Prevent exposure to temperatures above 300°C.

D2011 Safety Data Sheet

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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| Engineering measures | Use local exhaust ventilation to maintain airborne dust levels to below established exposure standard. |
| Personal Protection | |
| Respiratory Protection | Wear suitable protection if exposure limits are exceeded. |
| Hand Protection | Wear impervious gloves.; use suitable barrier creams and maintain good hygiene standards. |
| Eye Protection | Wear safety glasses when machining or abrading the product. |
| Skin Protection | Wear overalls of close weave material |

9. PHYSICAL AND CHEMICAL PROPERTIES

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|-----------------------------|--|----------------------------|----------------|
| Appearance | Black solid | Colour | Black |
| pH-value | Not applicable | Melting point/range | Not applicable |
| Explosive properties | As supplied, does not present an explosion hazard. however, dust produced from grinding operations presents an explosion hazard. | | |
| Density | 3.00 g/cm ³ | Autoflammability | > 350°C |
| Flammability | Does not support combustion but will burn at elevated temperatures. Will burn when finely divided. | | |
| Odour | No characteristic odour | Boiling point/range | Not applicable |
| Flash point | Not applicable | Vapour pressure | Not applicable |
| Solubility in water | Not applicable | Viscosity | Not applicable |

10. STABILITY AND REACTIVITY

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| Stability | Stable |
| Conditions to avoid | Prolonged exposure to elevated temperatures >300°C |
| Materials to avoid | Not applicable |
| Hazardous decomposition products | CO, CO ₂ , NO _x , SO _x , phenol, formaldehyde and cyanides |
| Hazardous Reactions | None - relatively inert |

11. TOXICOLOGICAL INFORMATION

Short Term Effects

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| Inhalation | May cause irritation to upper respiratory tract |
| Ingestion | Not established |
| Skin Contact | May cause temporary irritation |
| Eye Contact | May cause irritation |

Chronic Effects

| | |
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| Inhalation | Para-aramid fibres of respirable dimensions (<i>fibres with diameters <3.0µm that are capable of entering the respiratory system</i>) are produced from harsh treatment of larger fibres, e.g. by abrading the product. Animal studies have shown that high concentrations of para-aramid fibres should be regarded as potentially harmful to man. |
| Ingestion | Not established |
| Skin Contact | Not established |
| Eye Contact | Not established |
| Carcinogenicity | The US Environmental Protection Agency classified para-aramid fibre as a possible human carcinogen. |

12. ECOLOGICAL INFORMATION

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| Bioaccumulation | Not established |
| Mobility | Not established |
| Ecotoxic effects | Not established |
| Biodegradation | Not inherently biodegradable |

13. DISPOSAL CONSIDERATION

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| Product | Seal all dust created by abrading in impervious bags and dispose to a suitable licensed landfill site. |
| Contaminated Packaging | Remove all packaging for recovery or incinerate/landfill |

14. TRANSPORT INFORMATION

Not classified as dangerous for conveyance. Use any container of suitable size and strength.

D2011 Safety Data Sheet

15. REGULATORY INFORMATION

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| EEC Classification | Not classified |
| Refer to | Health & Safety at Work Act 1974 Control of Substances hazardous to Health (COSHH) Regulations 1994 |
| Please note | This Safety Data Sheet does not constitute the user's own assessment of workplace risk as required by other health and safety legislation. |

16. ADDITIONAL INFORMATION

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| Further Information | Health and Safety Executive Guidance Note <i>EH40/2000- Occupational Exposure Limits 2000</i> Health and Safety Executive Guidance Note <i>EH46- Man-Made Mineral Fibres</i> Health and Safety Executive Guidance Note <i>MDHS14 - General Methods for the Gravimetric Determination of Respirable and Total Inhalable Dust</i> Health and Safety Executive Guidance Note <i>MDHS59 - Man-Made Mineral Fibre</i> |
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This information is based on our present knowledge and is accurate at the date of issue, to the best knowledge of Ferotec Friction Ltd. However, it shall not constitute a guarantee for any specific product featured and shall not establish a legally contractual relationship and condition or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with handling, storage, use or disposal of the product.

For any additional information, contact Ferotec Friction Ltd.