



SDS

Diesel Ash and Soot



Safety Data Sheet

Diesel Ash and Soot as Extracted from
Diesel Particulate Filters (DPF's) and Diesel Oxidation Catalysts (DOC's)

Section 1 - Chemical Product and Company Identification

SDS Name: Diesel ash and soot extracted
from DPF's and DOC's

Synonyms: Diesel Particulate Matter (DPM), Soot, ghost dust

Poison Control Center: 800-222-1222 USA

Company Identification:

FSX Equipment, Inc.
10404 Mountain Loop Hwy
P.O. Box 1617
Granite Falls, WA 98252 USA
Website: www.fsxinc.com
Email: support@fsxinc.com
Telephone: +1 (360) 691-2999
Fax: +1 360.691.5991

Section 2 - Hazards Identification

Potential Health Hazards (Acute and Chronic): (See Section 11 for more information)

Eye Contact: Causes eye irritation on direct contact.

Skin Contact: Causes skin irritation upon prolonged contact.

Inhalation: May cause irritation of the respiratory tract.

Ingestion: May be harmful if swallowed.

Chronic: DPM (soot) is listed as a carcinogen/potential carcinogen

National Institute for Occupational Safety and Health (NIOSH): In 1988, NIOSH found animal evidence for carcinogenesis but limited human evidence. DPM listed as potential occupational carcinogen.

International Institute for Research on Cancer (IARC): In 1989, IARC found evidence for carcinogenicity in rats and limited human epidemiology data for carcinogenicity. DPM listed as a probable human carcinogen

National Toxicology Program (NTP): In 2000, NTP found DPM as "reasonably anticipated to be a human carcinogen" based on findings of several elevated lung cancer occupational groups exposed to diesel exhaust, in addition to supporting animal studies.

Environmental Protection Agency (EPA): In 2002, EPA found diesel emissions to be likely carcinogens to humans, citing evidence of carcinogenicity of diesel exhaust particles in rats and mice through non-inhalation routes of exposure.

Medical Conditions Generally Known to be Aggravated by Exposure:

Inhalation of airborne particulate matter may exacerbate asthma symptoms and trigger an asthma attack.

Section 3 - Composition, Information on Ingredients

Distinction between Diesel Particulate Matter (DPM) and particulate removed from DPF's and DOC's: DPM originating from diesel engine exhaust contains a high percentage of hydrocarbons and a lower concentration of ash. Particulate removed or extracted from a DPF or DOC during the cleaning process has a higher ratio of ash to hydrocarbon-containing soot.

<u>Component</u>	<u>Other Designations</u>	<u>CAS Number</u>	<u>EC Number</u>	<u>Concentration (mass %)</u>
Calcium Oxide	CaO, Quicklime, unslaked lime	1305-78-8	N/A	11.8%-26.3%
Phosphorus Pentoxide	P ₂ O ₅ , Diphosphorus pentoxide	1314-56-3	215-236-1	13.8%-25.6%
Sulfur Trioxide	S ₂ O ₃ , Sulfuric anhydride	7446-11-9	231-197-3	11.7%-25.2%
Carbon (Hydrocarbons)	C	7440-44-0	231-153-3	16.5%-21.9%
Zinc Oxide	ZnO, Calamine	1314-13-2	215-222-5	8.8%-17.6%
Magnesium Oxide	MgO, Magnesia	1309-48-4	215-171-9	0.5%-8.5%
Aluminum Oxide	Al ₂ O ₃	1344-28-1	215-691-6	0.7%-8.2%
Iron Oxide	Fe ₂ O ₃ , rust, ferric oxide	1309-37-1	215-168-2	0.6%-7.7%

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Medical Conditions Generally Known to be Aggravated by Exposure:

Inhalation of airborne particulate matter may exacerbate asthma symptoms and trigger an asthma attack.

Section 4- First Aid Measures

Eye Contact: Remove any contact lenses. Immediately flush eyes with water for at least 15 minutes. Seek medical attention immediately.

Skin Contact: Rinse affected area with water for at least 15 minutes after removing contaminated clothing and shoes. Wash clothing and shoes before reuse. Obtain medical assistance if needed.

Ingestion: If swallowed, do not induce vomiting. Administer artificial respiration by qualified personnel if victim is not breathing. Get medical attention immediately.

Inhalation: If adverse effects occur, remove to an uncontaminated area. Administer artificial respiration by qualified personnel if victim is not breathing. Seek immediate medical attention.

If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Section 5 - Fire Fighting Measures

Extinguishing Media: Regular dry chemical, Carbon Dioxide, water spray, regular foam.

Fire Fighting: Move container from fire area if possible without risk. Wear full protective clothing. Avoid inhaling any dust generated and wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA).

Flash Point: Not available

Auto-ignition Temperature: Not available

Flammability Limits: Not available

Hazardous Combustion Products: None known

Section 6 - Accidental Release Measures

Exposure Controls: Ventilate area and do not allow spill to enter drains or watercourses.

Personal Protection: Wear suitable respiratory equipment if airborne dust is generated. Wear non-absorbing gloves suitable for handling chemicals. Use eye protection such as goggles if airborne dust is present.

Disposal Considerations: Damp down and sweep up to avoid generating airborne dust. Use vacuum cleaner. Scoop up and place in sealable container. Dispose in accordance with local regulations. (See Section 13)

Section 7- Handling and Storage

Handling:	Avoid skin contact. Avoid eye contact. Avoid inhalation of dust. Ensure proper ventilation. Wear suitable protective clothing (see Section 8).
Storage:	Store in tightly sealed, labelled containers.

Store in cool, dry, well-ventilated areas.

Section 8 - Exposure Controls, Personal Protection

Occupational Exposure Limit: 3.5mg/m³ (total dust) 7mg/m³ 8hrTWA OES Carbon Black
Engineering Controls: Use mechanical ventilation or other controls to keep airborne levels below recommended exposure limits. Vacuum floors regularly.
Personal protection: Wear suitable overalls or apron and change if contaminated.
Wear suitable eye protection such as BS EN 166 if airborne dust is generated.
Wear heavy duty gloves: neoprene, rubber, PVC or equivalent for handling chemicals.
After contact with skin, wash off immediately.
If airborne dust is present, use a properly fitted NIOSH/MSHA approved respirator.

Section 9 - Physical and Chemical Properties

Physical State: Solid. Powder.
Appearance: Fine. White, grey or black powder.
Odor: N/A
pH: Not available.
Vapor Pressure: N/A
Vapor Density: N/A
Evaporation Rate: N/A
Viscosity: N/A
Boiling Point: N/A
Freezing/Melting Point: N/A
Solubility: N/A
Density: Not available.

Section 10 - Stability and Reactivity

Conditions to avoid: High temperature & direct sunlight.
Stable at normal temperatures.
No hazardous decomposition products when stored and handled correctly.
Materials to avoid: Not available.

Section 11 - Toxicological Information

Routes of Exposure: Inhalation, eye contact and ingestion
Toxic Effects on Humans: Excessive inhalation may cause irritation.
Repeated skin contact may cause dermatitis.
Chronic effects from ingestion: Kidney and liver damage.
Contains traces of potentially carcinogenic material;
uncontrolled exposure may raise the risk of developing cancer.
Carcinogen Status: See Section 3 for carcinogen status.

Section 12 - Ecological Information

Ecotoxicity: Not designated as hazardous waste according to the TCLP RCRA-8 metal test and fish bioassay using Washington Department of Ecology protocol 80-12.
Persistence: No specific data available.
Bioaccumulative potential: No specific data available.
Mobility: Not determined.

Section 13 - Disposal Considerations

Do not discharge into drains or watercourses. Dispose of in accordance with local regulations.
Can be recycled. Contact FSX Equipment Inc. for more information.

Section 14 - Transport Information

D.O.T. Classification: Not applicable; not a D.O.T hazardous material

Section 15 - Regulatory Information

Risk & Safety:
Not Hazardous according to 88/379/EEC and subsequent amendments.

Other Regulations:

Health & Safety at Work etc. Act 1974
Control of Substances Hazardous to Health Regulations 1994
Environmental Protection Act 1990
Special Waste Regulations 1996

Section 16- Other Information

References: Not available
Other considerations: Not available
Created: 6/26/2014
Last Updated: 10/7/2015

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