

Handy Flo/DF

Material Safety Data Sheet

1. Product And Company Identification

Supplier

Lucas-Milhaupt, Inc.
A Handy & Harman Company
5656 South Pennsylvania Avenue
Cudahy, WI 53110
Telephone Number: 414-769-6000
FAX Number: 414-769-1093

Supplier Emergency Contacts & Phone Number

Chemtrec: (800) 424-9300

Manufacturer

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Manufacturer Emergency Contacts & Phone Number

Chemtrec: (800) 424-9300

Issue Date: 10/07/2005
Product Name: Handy Flo/DF
CAS Number: Not Established
MSDS Number: 30
Product Code: 83-109/110/111/112/113/114/115/116/118/120/121/122/125/126

2. Composition/Information On Ingredients

Ingredient Name - (CAS Number) - %

Boric acid (10043-35-3)
Petroleum distillates (C12-C15), hydrotreated light (64742-47-8)
Potassium fluoborate (14075-53-7)
Potassium fluoride (7789-23-3)

No Data Available...

3. Hazards Identification

Primary Routes(s) Of Entry

Ingestion; inhalation

Eye Hazards

These products may cause eye irritation, or eye injury upon prolonged contact.

Skin Hazards

These products may produce irritation, particularly on abraded skin. Prolonged exposure may cause dermatitis.

Ingestion Hazards

Some component(s) of these products are potentially toxic if ingested, and may cause one or more of these symptoms and effects: nausea, vomiting, diarrhea, abdominal pain, gastrointestinal irritation, convulsions, tachycardia, cramps, and central nervous system depression.

Inhalation Hazards

Inhalation of the components of these products is not known to present a significant risk to health when used according to instructions and with appropriate protective measures (see Section #8). Inhalation of components and/or decomposition byproducts has been reported to cause one or more of the following symptoms and/or effects upon very high or prolonged exposure:

BORIC ACID: Inhalation of boric acid may irritate the nose, throat, and respiratory system. Chronic exposure may cause borism, which is characterized by dry skin, skin eruptions, and gastrointestinal disturbances.

POTASSIUM FLUORIDE/POTASSIUM FLUOBORATE: Inhalation of inorganic fluoride salts may cause abdominal pain, cramps, impaired pulmonary function, and fluorosis (a disease characterized by mottled teeth, osteosclerosis, and pain and loss of mobility in joints).

PETROLEUM DISTILLATES: Inhalation may irritate the nose, throat, and upper respiratory system. Chronic health effects have not been established.

4. First Aid Measures

Eye

Flush affected areas with water for at least fifteen minutes. Seek medical assistance if necessary.

Skin

Remove contaminated clothing. Wash affected area with large quantities of water for at least five minutes. Seek medical attention if necessary. Launder or dry-clean clothing before reuse.

Ingestion

Do not induce vomiting. If the subject is conscious, give plenty of milk or other form of soluble calcium, such as calcium lactate or calcium gluconate. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious person.

Inhalation

If signs and symptoms of toxicity are observed, remove subject from area, administer oxygen, and seek medical attention. Keep the subject warm and at rest. Perform artificial respiration if breathing has stopped.

Note To Physician

The component potassium fluoride is potentially toxic if ingested. Its concentration in the product is <300 gm/kg. Treat fluoride intoxication symptomatically. If ingested, the hydrocarbon component (hydrotreated light distillate) may cause gastrointestinal irritation, nausea, and vomiting. There is potential for aspiration into the lungs, which may cause pulmonary edema, coughing, choking, and gagging. If product is swallowed, do not induce vomiting, as this can irritate the esophageal tract. No components are absorbed through the skin, although irritation or dermatitis may occur.

5. Fire Fighting Measures

Flash Point: ca. 177 °F ca. 81 °C
Flash Point Method: P.M.C.C. (ASTM D93)
Flammability Class: IIIA
Lower Explosive Limit: ca. 1.3
Upper Explosive Limit: ca. 9.0
Fire And Explosion Hazards

Some components of these products may ignite when exposed to flame or by reaction with incompatible materials (see Section #10). Fires or explosions involving these products may emit boron oxide, carbon monoxide, gaseous and particulate fluorides, smoke, and irritant combustion byproducts.

Extinguishing Media

Use dry chemical, foam, or carbon dioxide. Do not use water.

Fire Fighting Instructions

If fighting a fire in which these products are present, wear a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

6. Accidental Release Measures

Eliminate sources of ignition. Isolate spilled material and transfer to impervious containers. Avoid contact with skin, eyes, and mucous membranes. Wear appropriate protective equipment (e.g., gloves, chemical goggles) during cleanup and disposal.

7. Handling And Storage

Handling Precautions

Avoid contact with skin, eyes, and mucous membranes, using protective equipment as necessary.

Storage Precautions

Store in a cool, dry place away from sources of ignition and incompatible materials (see Section #10).

Work/Hygienic Practices

To minimize ingestion, wash hands and face before eating, drinking, applying cosmetics, or using tobacco.

8. Exposure Controls/Personal Protection

Engineering Controls

Use appropriate ventilation (e.g., dilution, local exhaust) adequate to maintain concentrations of all components and their byproducts to within their applicable standards.

Eye/Face Protection

Wear eye protection adequate to prevent eye contact with the product and injury from the hazards of brazing. Plastic-frame spectacles with side shields and filter lenses (shade #3 or #4) are recommended.

Skin Protection

Wear appropriate protective gloves and clothing to prevent skin injuries from the hazards of brazing and/or for prolonged or repeated contact with the product. Avoid flammable fabrics.

Respiratory Protection

If an exposure level exceeds an applicable exposure standard, use a NIOSH-approved respirator having a configuration (type of facepiece, filter media, assigned protection factor, etc.) appropriate to the concentration of the contaminant(s) generated. For guidance on selection and use of respiratory protection, consult American National Standard Z88.2 (ANSI, New York, NY 10036 USA).

Ingredient(s) - Exposure Limits

Boric acid

No ACGIH TLV(s) No OSHA PEL(s)

Petroleum distillates (C12-C15), hydrotreated light

ACGIH TLV: 300 ppm TWA (TLV for VM&P Naphtha as guideline)

OSHA PEL: 500 ppm TWA

Potassium fluoborate

ACGIH TLV: 2.5 mg/m³ TWA (as F-). OSHA PEL: 2.5 mg/m³ TWA (as F-)

Potassium fluoride

ACGIH TLV: 2.5 mg/m³ TWA (as F-). OSHA PEL: 2.5 mg/m³ TWA (as F-)

9. Physical And Chemical Properties

Appearance

Viscous liquids, mineral spirits odor

Chemical Type: Mixture

Physical State: Liquid

Percent Volatiles: ca. 20

Percent VOCs: Not Applicable (N/A)

Vapor Pressure: <1 mm Hg

Solubility: partial

Evaporation Rate: <0.01 (n-Butyl Acetate = 1)

10. Stability And Reactivity

Stability: stable

Hazardous Polymerization: will not occur

Conditions To Avoid (Stability)

Some components of these products may decompose or offgas at elevated temperatures.

Incompatible Materials

Strong oxidizing agents; strong acids; halogens; oxygen; hypochlorites; perchlorates; permanganates; acetic anhydride; alkali and alkali earth metals; zirconium; platinum; bromine trifluoride.

Hazardous Decomposition Products

Boron oxide, boron trifluoride and/or hydrogen fluoride; carbon monoxide, smoke, and irritant decomposition byproducts.

11. Toxicological Information

Chronic/Carcinogenicity

The products contain no chemicals classified as potential or demonstrated carcinogens by IARC, NTP, or OSHA.

Reproductive Effects

In experimental animal studies, inorganic borate compounds and boric acid have been found to cause decreased sperm production and testicular effects in male rats, and developmental effects in fetuses of exposed female mice. No human reproductive effects attributable to occupational exposure to borates or boric acid have been established.

Mutagenicity (Genetic Effects)

Inorganic fluoride compounds have been demonstrated to induce mutagenic changes in mammalian cell in culture. The significance of these findings to human health risks is unknown.

Conditions Aggravated By Overexposure

Pre-existing pulmonary diseases (e.g., bronchitis, asthma) may be aggravated by inhalation overexposure. Chronic overexposure by ingestion or inhalation may

aggravate diseases of the liver, kidneys, and skeletal and gastrointestinal systems.

Ingredient(s) - Toxicological Data

Boric acid

LD50: 2660 mg/kg (oral/rat). LC50: No data available.

Petroleum distillates (C12-C15), hydrotreated light

LD50: No data available LC50: No data available

Potassium fluoborate

LD50: No data available LC50: No data available

Potassium fluoride

LD50: 245 mg/kg (oral/rat) LC50: No data available

12. Ecological Information

In their intended manner of use, these products should not be released into the environment, and adverse effects on ecosystems are not anticipated under recommended conditions of use, storage, and disposal.

13. Disposal Considerations

Dispose of unused or unusable product in accordance with applicable Federal, State/Provincial, and local regulations.

14. Transport Information

Proper Shipping Name

Combustible liquid n.o.s. (contains petroleum distillates)

Hazard Class

Combustible liquid

DOT Identification Number

NA1993

Packaging Exceptions

49CFR Part 173.150

Packaging Requirements

Non-hazardous as an air shipment

15. Regulatory Information

SARA Hazard Classes

Acute Health Hazard; Chronic Health Hazard; Fire Hazard

SARA Section 313 Notification

These products contain no ingredients in concentrations greater than 1% (for carcinogens 0.1%) regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

Canadian Regulatory Information

WHMIS Class(es) and Division(s): B3, D1B, D2A
Component(s) on Ingredients Disclosure List:
1. Boric acid (CASRN 10043-35-3)
2. Fluoride compounds, inorganic, n.o.s.

16. Other Information

Revision/Preparer Information

This MSDS Supercedes A Previous MSDS Dated: 05/14/2004

Disclaimer

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Lucas-Milhaupt, Inc.