



Factor II, Incorporated

P.O. Box 1339
Lakeside, AZ 85929

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Fax: (928) 537-0893

MATERIAL SAFETY DATA SHEET

FX-882 Part A BASE

In Case of Emergency Contact 928-537-8387 Factor II, Inc.

Factor II Technology urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to the use and understanding of the data contained in this MSDS.

To promote safe handling each customer or recipient should: (1) notify and furnish its employees, agents, contractors, customers, and others whom it knows or believes will use this material of the information regarding hazards or safety; (2) request its customers to notify their employees, customers and other users of the product of this information.

1. CHEMICAL PRODUCT

PRODUCT NAME: FX-882

CHEMICAL NAME: Polysiloxane

CHEMICAL FAMILY: Silicone

FORMULA: Proprietary

2. HAZARDOUS INGREDIENTS

| % | MATERIAL | CAS# | OSHA Hazard |
|-----|------------------------------------|------------|-------------|
| >35 | Poly(dimethyl)siloxane, Hydroxy | 70131-67-8 | N |
| <35 | Terminated | 63148-62-9 | N |
| <25 | Poly (dimethyl) Siloxane Silica | 7631-86-9 | N |

3. HAZARDS IDENTIFICATION

WARNING STATEMENT:

This product, as sold, does not meet the regulatory definition of a hazardous material. This product contains dimethylpolysiloxane which can generate formaldehyde as a byproduct of oxidative thermal decomposition beginning at approximately 150°C 300°F. Exposure to formaldehyde can cause adverse effects such as skin and respiratory sensitization and eye and throat irritation. Formaldehyde is a potential cancer hazard. Evaluate and control exposure to formaldehyde when warranted by conditions of use.

SWALLOWING:

Low acute oral toxicity.

SKIN ABSORPTION:

No evidence of adverse effects from available information.

INHALATION:

Not likely

SKIN CONTACT:

Non irritating.



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EYE CONTACT:

May cause redness and irritation.

CHRONIC EFFECTS:

This product does not contain any ingredient designated by IARC, NYP, ACGIH, or OSHA as probable or suspected human carcinogen.

OTHER EFFECTS OF OVEREXPOSURE

None currently known.

4. FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING:

If large quantity has been swallowed, and if patient is fully conscious, give two glasses of water. Obtain medical attention.

SKIN:

Wash with soap and water. Seek medical attention if irritation develops or persists.

INHALATION:

Inhalation is not an expected route of exposure. If symptoms should develop. Remove to fresh air. Obtain Medical attention if symptoms persist.

EYES:

Immediately flush eyes with water and continue washing for at least 15 minutes. Obtain medical attention if discomfort persists or visual changes.

NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

FLASH POINT (test method(s): 200°F (Tag Closed Cup)

FLAMMABLE LIMITS IN AIR (by volume):

LOWER: N/A UPPER:N/A

EXTINGUISHING MEDIA:

Dry chemical, foam, carbon dioxide..

SPECIAL FIRE FIGHTING PROCEDURES:

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Cool containers exposed to fire with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Product will burn under fire conditions.

HAZARDOUS DECOMPOSITION MATERIALS (Under fire conditions)

Formaldehyde, Oxides of Carbon, Silica (crystalline).



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6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Do not flush to drain. Clean up residual material with an appropriate solvent like paint thinner or mineral spirits (provided there is good ventilation and no source of ignition).

WASTE DISPOSAL METHOD: Dispose of in accordance with all Federal, State, and local regulations.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Normal precautions common to safe manufacturing practice should be followed in handling and storage.

Avoid breathing vapors and mists. Avoid direct or prolonged contact with skin and eyes.

Store away from incompatible materials (See section 10)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

INTRODUCTORY REMARKS:

Check exposure limit guidelines for formaldehyde, a byproduct of oxidative thermal decomposition of dimethylsiloxane, if this product is handles above 300°F.

OCCUPATIONAL EXPOSURE VALUES AND SOURCE: None found for this product.

RESPIRATORY PROTECTION:

Use NIOSH approved respirator or self-contained breathing apparatus as needed to maintain personnel exposure below established Occupational Exposure Values..

VENTILATION: General (mechanical) room ventilation with local ventilation as needed to maintain exposure below established Occupational Exposure Values.

WORK PRACTICE CONTROLS:

Personal hygiene should be taken when working with or handling any chemical.

1. Do not store, use, or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
2. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
3. Wash exposed skin promptly to remove accidental splashes of contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES (based on typical material)

BOILING POINT: 599°F @ 760mmHg

SPECIFIC GRAVITY (H₂O=1): 1.11

VAPOR PRESSURE Not available

VAPOR DENSITY (air=1): Not Available

SOLUBILITY IN WATER (By wt): Insoluble

ODOR: Slight odor

PHYSICAL STATE: translucent viscous liquid

Evaporation Rate <1 (Butyl Acetate =1)

Note: The above information is not intended for use in preparing product specifications.

10. STABILITY AND REACTIVITY DATA

STABILITY: Stable.

CONDITIONS TO AVOID: Avoid contact with elevated temperatures, open flame and other ignition sources.



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MATERIAL/CHEMICAL TO BE AVOIDED:

Strong bases, Acids, and Oxidizing agents

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: *Thermal*

Dimethycyclosiloxanes

Methylphenylcyclosiloxanes

Oxidative/Thermal

Formaldehyde

Traces of formaldehyde may be generated due to oxidative thermal decomposition at temperatures greater than 150°C (300°F). Exposure to formaldehyde can cause adverse effects such as skin and respiratory sensitization and eye and throat irritation. Formaldehyde is a potential carcinogen. Evaluate and control exposure to formaldehyde when warranted by conditions of use.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

COMPONENT:

No test data found for this product

Refer to Section 3 for further discussion of the health hazards associated with this preparation.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

Complete information not yet available.

CHEMICAL FATE INFORMATION:

Complete information not yet available.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all Federal, State, and local regulations. Not EPA Hazardous Waste

14. TRANSPORT INFORMATION

I.A.T.A. HAZARD CLASSIFICATION:

Proper Shipping Name: Not regulated

15. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations.

| | | | |
|------------------|------------------------|---|---|
| Inventory Status | United States (TSCA) | | Y |
| | Canada (DSL) | Y | |
| | Eruope (EINECS/ELINCS) | | P |
| | Austrailia (AICS) | | Y |
| | Japan (MITI) | Y | |
| | South Korea (KECL) | | Y |

16. OTHER INFORMATION

HMIS FORMAT:

Health: 0

Flammability:1

Reactivity: 0

We believe that the information contained herein is current as of the date of this Material Safety Data Sheet, and is offered in good faith. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of Factor II Technology, it is the user's obligation to determine the conditions of safe use of the product.



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MATERIAL SAFETY DATA SHEET FX-882 CAT

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To promote safe handling each customer or recipient should: (1) notify and furnish its employees, agents, contractors, customers, and others whom it knows or believes will use this material of the information regarding hazards or safety; (2) request its customers to notify their employees, customers and other users of the product of this information.

1. CHEMICAL PRODUCT

PRODUCT NAME: FX-882 CAT

CHEMICAL NAME: Silicone

CHEMICAL FAMILY: Silicone

FORMULA: Proprietary

2. HAZARDOUS INGREDIENTS

| % | MATERIAL | CAS# | OSHA Hazard |
|-------|----------------------------|------------|-------------|
| 65-70 | Dimethylpolysiloxane Fluid | 63148-62-9 | N |
| 25-30 | Silane Derivative | | N |
| 1-3 | Organotin Carboxylate | 68928-76-7 | Y |

3. HAZARDS IDENTIFICATION

WARNING STATEMENT:

Warning !!!! Contains an organotin compound which may be toxic by ingestion, inhalation and absorption, is a skin irritant and severe eye irritant and can possibly cause chronic effects.

If moisture is present, methanol may be emitted before and during curing and is irritating to eyes, skin and respiratory tract. Methanol, at high concentrations, can have central nervous system effects and may cause blindness if swallowed (unlikely route for exposure in this form). This product contains dimethylpolysiloxane which can generate small amounts of formaldehyde as a byproduct of oxidative thermal decomposition beginning at approximately 300°F. Exposure to formaldehyde can cause adverse effects such as skin and respiratory sensitization and eye and throat irritation. Formaldehyde is a potential cancer hazard. Use good industrial hygiene practices to evaluate and control exposure to formaldehyde when warranted by conditions of use.

ACUTE INGESTION

Harmful if ingested. Can cause nausea, vomiting, abdominal pain, blindness

ACUTE SKIN ABSORPTION:

Toxic if absorbed through skin. Irritant. Can cause redness, inflammation, irritation.

ACUTE INHALATION:

Toxic if inhaled. Can cause upper respiratory tract irritation, dizziness, headache.



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EYE CONTACT:

May cause redness and irritation.

CHRONIC EFFECTS:

This product does not contain any ingredient designated by IARC, NYP, ACGIH, or OSHA as probable or suspected human carcinogen. Organotin compounds can affect the central nervous system, respiratory system, eyes, liver, urinary tract, skin and blood. Symptoms include sore throat, cough, headache, dizziness, nausea, vomiting, weakness.

4. FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING:

If large quantity has been swallowed, and if patient is fully conscious, give two glasses of water. Obtain medical attention.

SKIN:

Wash with soap and water. Seek medical attention if irritation develops or persists.

INHALATION:

Inhalation is not an expected route of exposure. If symptoms should develop. Remove to fresh air. Obtain Medical attention if symptoms persist.

EYES:

Immediately flush eyes with water and continue washing for at least 15 minutes. Obtain medical attention if discomfort persists or visual changes.

NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

FLASH POINT (test method(s): 203^oF (Tag Closed Cup)

FLAMMABLE LIMITS IN AIR (by volume):

LOWER: N/A UPPER:N/A

EXTINGUISHING MEDIA:

Dry chemical, foam, carbon dioxide..

SPECIAL FIRE FIGHTING PROCEDURES:

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Cool containers exposed to fire with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Product will burn under fire conditions.

HAZARDOUS DECOMPOSITION MATERIALS (Under fire conditions)

Formaldehyde, Oxides of Carbon, Silica (crystalline).



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6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Do not flush to drain. Clean up residual material with an appropriate solvent like paint thinner or mineral spirits (provided there is good ventilation and no source of ignition).

WASTE DISPOSAL METHOD: Dispose of in accordance with all Federal, State, and local regulations.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Normal precautions common to safe manufacturing practice should be followed in handling and storage.

Avoid breathing vapors and mists. Avoid direct or prolonged contact with skin and eyes.

Store away from incompatible materials (See section 10)

MINIMUM/MAXIMUM STORAGE TEMPERATURES:

90°F

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

INTRODUCTORY REMARKS:

Check exposure limit guidelines for formaldehyde, a byproduct of oxidative thermal decomposition of dimethylsiloxane, if this product is handles above 300°F.

OCCUPATIONAL EXPOSURE VALUES AND SOURCE:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling limit:

| ACGIH | NOTES | TWA | STEL |
|-------|-------|-------------|------------|
| | S | 0.1 mg/cu m | 0.2mg/cu m |

RESPIRATORY PROTECTION:

Use NIOSH approved respirator or self-contained breathing apparatus as needed to maintain personnel exposure below established Occupational Exposure Values. Under normal conditions, in the absence of other airborne contaminants, the following devices should provide protection from this material up to the conditions specified by appropriate agencies. Air-purifying (half-mask/full-face respirator with cartridges/canister approved for use against organic vapors).

EYE/FACE PROTECTION:

It is generally regarded as good practice to wear a minimum of safety glasses with side shields when working in industrial environments.

SKIN PROTECTION:

Skin contact should be minimized through use of gloves and suitable long-sleeved clothing. Consideration give to both durability as well as permeation resistance.

WORK PRACTICE CONTROLS:

Personal hygiene should be taken when working with or handling any chemical.

1. Do not store, use, or consume foods, beverages, tobacco products, or cosmetics in areas where this material



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is stored.

2. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
3. Wash exposed skin promptly to remove accidental splashes of contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES (based on typical material)

BOILING POINT: 412°F @ 760mmHg

SPECIFIC GRAVITY (H₂O=1): 1

VAPOR PRESSURE <20mmHg at 226°F

VAPOR DENSITY (air=1): Not Available

SOLUBILITY IN WATER (By wt): slowly hydrolyses

ODOR: Alcohol like odor

PHYSICAL STATE: Colorless viscous liquid

Evaporation Rate <1 (Butyl Acetate =1)

Note: The above information is not intended for use in preparing product specifications.

10. STABILITY AND REACTIVITY DATA

STABILITY: Stable.

CONDITIONS TO AVOID: Avoid contact with elevated temperatures, open flame and other ignition sources, static electricity, water, extreme humidity.

MATERIAL/CHEMICAL TO BE AVOIDED:

Moisture, Water, Strong bases, Acids, and Oxidizing agents

DECOMPOSITION PRODUCTS:

Hyrolysis

Methanol

Thermal

Dimethycyclosiloxanes

Methylphenylcyclosiloxanes

Oxidative/Thermal

Formaldehyde

Traces of formaldehyde may be generated due to oxidative thermal decomposition at temperatures greater than 150°C (300°F). Exposure to formaldehyde can cause adverse effects such as skin and respiratory sensitization and eye and throat irritation. Formaldehyde is a potential carcinogen. Evaluate and control exposure to formaldehyde when warranted by conditions of use.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

COMPONENT:

No test data found for this product

Refer to Section 3 for further discussion of the health hazards associated with this preparation.

12. ECOLOGICAL INFORMATION



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ECOTOXICOLOGICAL INFORMATION: No Data found for this product.
CHEMICAL FATE INFORMATION: No Data found for this product.

13.DISPOSAL CONSIDERATIONS

Dispose of in accordance with all Federal, State, and local regulations. Not EPA Hazardous Waste

14. TRANSPORT INFORMATION

I.A.T.A. HAZARD CLASSIFICATION:
Proper Shipping Name: Not regulated

DOT Marine Pollutants:

The ingredients listed below have been determined to be present, in concentrations that make them reportable as regular or severe DOT Marine Pollutants.

Ingredient/Chemical Family
Organotin Compounds

Marine Pollutant Class
DOT Severe Marine Pollutant

15. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations.

| | | | |
|------------------|------------------------|---|---|
| Inventory Status | United States (TSCA) | | Y |
| | Canada (DSL) | Y | |
| | Eruope (EINECS/ELINCS) | | P |
| | Austrailia (AICS) | | Y |
| | Japan (MITI) | N | |
| | South Korea (KECL) | | N |

16. OTHER INFORMATION

HMIS FORMAT:

Health: 2

Flammability: 1

Reactivity: 0

We believe that the information contained herein is current as of the date of this Material Safety Data Sheet, and is offered in good faith. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of Factor II Technology, it is the user's obligation to determine the conditions of safe use of the product.