



Factor II, Incorporated

P.O. Box 1339
Lakeside, AZ 85929

Phone:(928) 537-8387
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MATERIAL SAFETY DATA SHEET VST-50F Part A

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: VST-50F
CHEMICAL NAME: N/A
CHEMICAL FAMILY: Silicone
FORMULA: Mixture
MOLECULAR WEIGHT: Mixture
SYNONYMS: N/A
CAS#: Mixture

2. HAZARDOUS INGREDIENTS

| MATERIAL | CAS# | OSHA HAZARD |
|-----------------------------|-------|-------------|
| Polymethylvinylsiloxanes | Xxxxx | N |
| Polymethylhydrogensiloxanes | Xxxxx | N |
| Silica | xxxxx | N |

3. HAZARDS IDENTIFICATION

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING:

Low acute oral toxicity.

INHALATION:

Not likely.

SKIN CONTACT:

May cause skin irritation and reddening.

EYE CONTACT:

Slightly irritating. May cause redness, irritation.

CONTAINS A TRACE AMOUNT OF A PLATINUM COMPOUND WHICH MAY CAUSE SENSITIZATION. This product contains dimethylpolysiloxane which can generate small amounts of formaldehyde as a byproduct of oxidative thermal



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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. Use good industrial hygiene practices to evaluate and control exposure to formaldehyde when warranted by conditions of use.

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. Do not give anything by mouth to an unconscious person. Seek medical attention.

SKIN:

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

INHALATION:

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 occur.

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. Consideration should be give to the possibility that overexposure to material other than this product may have occurred.

Treat symptomatically . No specific antidote available.

5. FIRE FIGHTING MEASURES

FLASH POINT >93°C (200°F) Flammability Class: Will Burn Method used AFNOR T 60103 (EEC closed cup)

FLAMMABLE LIMITS IN AIR (by volume):

LOWER: No Data UPPER: No Data

EXTINGUISHING MEDIA:

Dry chemical, foam, carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES:

Firefighters should wear NIOSA/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. Small amounts of hydrogen gas, which is flammable and can form explosive mixtures with air, may be released during storage and on contact with water, acids, bases, amines and common metals.

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:

Wear appropriate protective gear for the situation. See Personal Protection information in Section 8. Caution: spilled material may make the floor slippery. Do not leave traces of product on floors, ladders, etc., as this may present a slipping hazard.

WASTE DISPOSAL METHOD:

Absorb with an inert absorbent material. Scrape up and place in appropriate closed container (see Section 7). Clean up residual material with an appropriate solvent like paint thinner or mineral spirits, provided that there is good ventilation and no sources of ignition. Do not flush to drain.

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.

Keep container closed, in a cool dry place

S3/S7/S8

Avoid contact with skin and eyes

S24/S25

In case of fire do not breathe fumes

S41

Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE VALUES AND SOURCE:

Check exposure limit guidelines for formaldehyde, a byproduct of oxidative thermal decomposition of dimethylsiloxane, if this product is handled in extreme temperatures.

RESPIRATORY PROTECTION:

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

SKIN PROTECTION: Skin contact should be minimized through use of gloves and suitable long-sleeved clothing.

Consideration must be given both to durability as well as permeation resistance.

EYE PROTECTION: Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

OTHER PROTECTIVE EQUIPMENT: Eye bath and safety shower. Do not store, use or consume foods etc. in areas where this material is stored or used. Wash hands and exposed skin immediately after handling to remove any accidental splashes.

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

BOILING POINT: Not Available



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SPECIFIC GRAVITY 1.1 at 25°C
FREEZING POINT: N/A
VAPOR PRESSURE, <0.1 mmHg at 20°C
VAPOR DENSITY (air=1): Not available
EVAPORATION RATE (Butyl Acetate=1): N/A
SOLUBILITY IN WATER (By wt): slowly hydrolyses
APPEARANCE: Translucent viscous liquid
ODOR: Odorless

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

10. STABILITY AND REACTIVITY DATA

STABILITY: Stable.

Material and Chemicals to Avoid: Contact with elevated temperatures, open flame and other ignition sources. Static electricity, water, and extreme humidity. Strong bases, Strong acids, strong oxidizing agents, alcohols, amines, metal salts.

FOLLOWING HAZARDOUS DECOMPOSITION PRODUCTS MIGHT BE EXPECTED:

Hydrolysis; Hydrogen

Thermal: dimethylcyclosiloxanes, methylphenylcyclosiloxanes, formaldehyde

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE EYE , SKIN, DERMAL, RESPIRATORY, INHALATION: No text data found for product.

CHRONIC TOXICITY:

This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

Under certain conditions, this product may generate formaldehyde as a byproduct of oxidative thermal decomposition. Formaldehyde is listed as a potential human carcinogen by IARC, OSHA and ACGIH.

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.

EPA Hazardous Waste NO

14. TRANSPORT INFORMATION

I.A.T.A. HAZARD CLASSIFICATION: Not regulated.

15. REGULATORY INFORMATION



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| INVENTORY STATUS | Status |
|------------------------|--------|
| United States (TSCA) | Y |
| Canada (DSL) | Y |
| Europe (EINECS/ELINCS) | P |
| Australia (AICS) | Y) |
| Japan (MITI) | N |
| South Korea (KECL) | Y |

Y = All ingredients are on the inventory.

E = All ingredients are on the inventory or exempt from listing.

P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

SARA Title III Hazard Classes:

| | |
|-----------------------|----|
| Fire Hazard | No |
| Reactive Hazard | No |
| Release of Pressure | No |
| Acute Health Hazard | No |
| Chronic Health Hazard | No |

CHIP REGULATIONS

Chemicals (Hazards Information and Packaging) Regulations 1993 requires physico-chemical and health hazard determination of all substances and preparations manufactured, transported, stored, modified, or consumed within the EEC. Components present in this product at a level which could require reporting under the statute are:

NONE

INVENTORY STATUS

The ingredients of this product are listed on, or are exempt from listing on, the TSCA inventory.

STATE-RIGHT-TO-KNOW

CALIFORNIA Proposition 65

This product contains no levels of listed substances, which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute.

16. OTHER INFORMATION

HMIS FORMAT:

Health: 1

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 VST-50F Part B IN CASE OF EMERGENCY 928-242-1308

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: VST-50F
CHEMICAL NAME: N/A
CHEMICAL FAMILY: Silicone
FORMULA: Mixture
MOLECULAR WEIGHT: Mixture
SYNONYMS: N/A
CAS#: Mixture

2. HAZARDOUS INGREDIENTS

| % | MATERIAL | CAS# | OSHA HAZARD |
|---|--------------------------|------|-------------|
| | Polymethylvinylsiloxanes | | N |
| | Platinum Complex | | N |
| | Silica | | N |

3. HAZARDS IDENTIFICATION

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING:

Low acute oral toxicity.

INHALATION:

Not likely.

SKIN CONTACT:

May cause skin irritation and reddening.

EYE CONTACT:

Slightly irritating. May cause redness, irritation.

CONTAINS A TRACE AMOUNT OF A PLATINUM COMPOUND WHICH MAY CAUSE SENSITIZATION.



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This product contains dimethylpolysiloxane which can generate small amounts of 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. Use good industrial hygiene practices to evaluate and control exposure to formaldehyde when warranted by conditions of use.

EFFECTS OF REPEATED OVEREXPOSURE:

No evidence of adverse effects from available information.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:

Contains crystalline silica, which is classified by IARC as an animal carcinogen and a probable human carcinogen. Crystalline silica as a respirable dust may cause silicosis. Since the silica in this product is compounded into polymer matrix, it is not expected to present the same hazard as neat silica.

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. Do not give anything by mouth to an unconscious person. Seek medical attention.

SKIN:

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

INHALATION:

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 occur.

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. Consideration should be give to the possibility that overexposure to material other than this product may have occurred.

5. FIRE FIGHTING MEASURES

FLASH POINT >93°C (200°F) Flammability Class: Will Burn Method used Tagliabue Closed Cup

FLAMMABLE LIMITS IN AIR (by volume):

LOWER: No Data UPPER: No Data

EXTINGUISHING MEDIA:



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Dry chemical, foam, carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES:

Firefighters should wear NIOSA/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. Small amounts of hydrogen gas, which is flammable and can form explosive mixtures with air, may be released during storage and on contact with water, acids, bases, amines and common metals.

HAZARDOUS DECOMPOSITION MATERIALS (UNDER FIRE CONDITIONS)

Formaldehyde
Oxides of carbon
Silica (crystalline)

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Wear appropriate protective gear for the situation. See Personal Protection information in Section 8. Caution: spilled material may make the floor slippery. Do not leave traces of product on floors, ladders, etc., as this may present a slipping hazard.

WASTE DISPOSAL METHOD:

Absorb with an inert absorbent material. Scrape up and place in appropriate closed container (see Section 7). Clean up residual material with an appropriate solvent like paint thinner or mineral spirits, provided that there is good ventilation and no sources of ignition. Do not flush to drain.

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.

Minimum/Maximum Storage Temperatures: 5 to 25°C (41 to 77°F)

Keep container closed, in a cool dry place

S3/S7/S8

Avoid contact with skin and eyes

S24/S25

In case of fire do not breathe fumes

S41

Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE VALUES AND SOURCE:

Check exposure limit guidelines for formaldehyde, a byproduct of oxidative thermal decomposition of dimethylsiloxane, if this product is handled in extreme temperatures.

No Exposure limits were found for this product or any of its ingredients.

RESPIRATORY PROTECTION:

Use NIOSH/MSHA approved respirator or self-contained breathing apparatus as needed to maintain personal exposure



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below established Occupational Exposure Values..

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

EYE PROTECTION: Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

OTHER PROTECTIVE EQUIPMENT: Eye bath and safety shower. Do not store, use or consume foods etc. in areas where this material is stored or used. Wash hands and exposed skin immediately after handling to remove any accidental splashes.

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

BOILING POINT: Not Available
SPECIFIC GRAVITY 1 at 25°C
VAPOR PRESSURE, <0.1 mmHg at 20°C
VAPOR DENSITY (air=1): Not available
EVAPORATION RATE (Butyl Acetate=1): N/A
SOLUBILITY IN WATER (By wt): Insoluble
APPEARANCE: Clear paste like liquid
ODOR: Slight Odor

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

10. STABILITY AND REACTIVITY DATA

STABILITY: Stable.

Material and Chemicals to Avoid: Contact with elevated temperatures, open flame and other ignition sources. Static electricity, water, and extreme humidity. Strong bases, Strong acids, strong oxidizing agents, alcohols, amines, metal salts.

FOLLOWING HAZARDOUS DECOMPOSITION PRODUCTS MIGHT BE EXPECTED:

Thermal: dimethylcyclsiloxanes, methylphenylcyclsiloxanes, formaldehyde

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE EYE , SKIN, DERMAL, RESPIRATORY, INHALATION: No text data found for product.

CHRONIC TOXICITY:

This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

Under certain conditions, this product may generate formaldehyde as a byproduct of oxidative thermal decomposition. Formaldehyde is listed as a potential human carcinogen by IARC, OSHA and ACGIH.

TOXICOLOGICAL INFORMATION AND INTERPRETATION:



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LDL₀ Lowest lethal dose, 2002 mg/kg, rat. Not deaths were observed.

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.
EPA Hazardous Waste NO

14. TRANSPORT INFORMATION

I.A.T.A. HAZARD CLASSIFICATION: Not regulated.

15. REGULATORY INFORMATION

| INVENTORY STATUS | Status | |
|------------------------|--------|---|
| United States (TSCA) | | Y |
| Canada (DSL) | Y | |
| Europe (EINECS/ELINCS) | | P |
| Australia (AICS) | Y) | |
| Japan (MITI) | N | |
| South Korea (KECL) | | Y |

Y = All ingredients are on the inventory.

E = All ingredients are on the inventory or exempt from listing.

P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

SARA Title III Hazard Classes:

| | |
|-----------------------|----|
| Fire Hazard | No |
| Reactive Hazard | No |
| Release of Pressure | No |
| Acute Health Hazard | No |
| Chronic Health Hazard | No |

CHIP REGULATIONS

Chemicals (Hazards Information and Packaging) Regulations 1993 requires physico-chemical and health hazard determination of all substances and preparations manufactured, transported, stored, modified, or consumed within the EEC. Components present in this product at a level which could require reporting under the statute are:

****NONE ****

INVENTORY STATUS

The ingredients of this product are listed on, or are exempt from listing on, the TSCA inventory.



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STATE-RIGHT-TO-KNOW

CALIFORNIA Proposition 65

This product contains no levels of listed substances, which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute.

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.