



SAFETY DATA SHEET

Forticoat 55 HB

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name Forticoat 55 HB

Recommended use of the chemical and restrictions on use

Application Coating

Uses advised against No specific uses advised against are identified

Details of the supplier of the safety data sheet

Manufacturer FortiSystems
16601 Central Green Blvd. Ste. 100
Houston, TX 77032 USA
T: 833.840.2777
E: inquiries@forti-systems.com

Emergency telephone number

Emergency telephone 832.922.2926

2. Hazard(s) identification

Hazard Classification

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

Titanium dioxide CAS number: 13463-67-7	1 - <15%
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Zinc oxide CAS number: 1314-13-2	0 - <0.5%
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Aluminum hydroxide CAS number: 21645-51-2	10 - <55%
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Ammonia CAS number: 1336-21-6	<1%
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Biocide - withheld as TRADE SECRET CAS number: Proprietary	<1%
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Composition comments The exact percentage is withheld as a trade secret in accordance with 29 CFR 1910.1200
The product identifiers are withheld as a trade secret in accordance with 29 CFR 1910.1200

4. First-aid measures**Description of first aid measures**

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air.
Ingestion	Rinse mouth thoroughly with water. Give 1 to 2 glasses of water. Consult a physician if necessary. Never give anything by mouth to an unconscious person.
Eye contact	Rinse with plenty of water. If eye irritation persists, consult a specialist.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important systems and effects are described in Section 11: Toxicology Information

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treatment should be directed at preventing absorption, administering to systems (if they offer), and providing supportive therapy
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5. Fire-fighting measures**Extinguishing media**

Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO ₂). Carbon monoxide (CO). Acrylic monomers. Harmful gases or vapors.

Advice for firefighters

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Protective actions during firefighting	Avoid breathing fire gases or vapors. Evacuate the area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Keep people away from and upwind of spill/leak. Material can create slippery conditions.
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Environmental precautions

Environmental precautions	CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.
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Methods and material for containment and cleaning up

Methods for cleaning up	Contain spills immediately with inert material, (e.g. sand, earth). Transfer spilled material to suitable containers for recovery or disposal.
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7. Handling and storage

Precautions for safe handling

Usage precautions	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. May cause cancer. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
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Advice on general occupational hygiene	Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.
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Conditions for safe storage, including any incompatibilities

Storage precautions	Store away from incompatible materials (see Section 10). Store locked up. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.
Storage class	Miscellaneous hazardous material storage.
Shelf-Life	12 months
Storage temperature	Minimum storage temperature: 1°C/33.8°F Maximum storage temperature: 49°C/120.2°F

Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.
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8. Exposure Controls/personal protection

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Control parameters

Occupational exposure limits

Comments

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Aluminum Trihydroxide

Long-term exposure limit (8-hour TWA): OSHA 10 mg/m³

respirable fraction

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³

total dust

Titanium dioxide

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³ A4

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³

total dust

Zinc oxide

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³

fume

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³

total dust

Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m

respirable fraction

Short-term exposure limit (15-minute): ACGIH 10 mg/m³

respirable fraction

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³

respirable fraction

Aluminum hydroxide

Long-term exposure limit (8-hour TWA): ACGIH 1 mg/m³

A4

Ammonia

Long-term exposure limit (8-hour TWA): ACGIH 25 ppm 17 mg/m³ Short-term exposure limit (15-minute): ACGIH 35 ppm 24 mg/m³

Long-term exposure limit (8-hour TWA): OSHA 50 ppm 35 mg/m³

Biocide - withheld as TRADE SECRET

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³ A4

**Immediate danger to life
and health**

Titanium Dioxide (CAS: 13463-67-7)
5000 mg/m³

**Immediate danger to life
and health**

Zinc oxide (CAS: 1314-13-2)
500 mg/m³

**Immediate danger to life
and health**

Ammonia (CAS: 1336-21-6)
300 ppm

Exposure controls

Protective equipment



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Appropriate engineering controls	Provide adequate ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.
Eyeface protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
Hygiene measures	Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved.
Environmental exposure controls	Keep container tightly sealed when not in use.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Various colors.
Odor	Mild. Amine.
Odor threshold	Not available.
pH	Not available.
Melting point	0°C (as water)
Initial boiling point and range	100°C (boiling point of water)
Evaporation rate	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	17 mm Hg @ 20°C/68°F
Vapor density	Not available.
Relative density	Not available.
Specific Gravity	1.2 – 1.5
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

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Viscosity	Not available.
Explosive properties	Not available.
Oxidizing properties	Not available.
Volatile organic compound	<50g/liter

10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity – oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitization

Respiratory sensitization Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization Based on available data the classification criteria are not met. The product contains a small amount of sensitizing substance. May cause skin sensitization or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data criteria are not met.

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IARC carcinogenicity	Based on available data criteria are not met.
NTP carcinogenicity	Based on available data criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met
Inhalation	With proper ventilation single exposure is not expected to cause adverse effects.
Ingestion	Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	Discoloration of the skin. Prolonged contact may cause redness, irritation and dry skin.
Eye contact	May cause temporary eye irritation.
Route of entry	Ingestion, Inhalation, skin and/or eye contact.
Target organs	No specific target organs known.

12. Ecological information

Toxicity	The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.
<u>Persistence and degradability</u>	
Persistence and degradability	The degradability of the product is not known.
<u>Bio-accumulative potential</u>	
Bio-accumulative potential	No data available on bioaccumulation.
Partition coefficient	Not available.
<u>Mobility in soil</u>	
Mobility	No data available.
<u>Other adverse effects</u>	
Other adverse effects	None known.

13. Disposal considerations

Waste treatment methods

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General information

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods

Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number

Not applicable.

UN proper shipping name

Not applicable.

Transport hazard class(es)

No transport warning sign required.

Packing group

Not applicable.

Environmental hazards

Environmentally Hazardous Substance

No.

Special precautions for user

Not applicable.

DOT TIH Zone

Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15. Regulatory information

Regulatory Status

Classified in accordance with Appendix A, Appendix B and Appendix F of the OSHA Hazard Communication Standard 29 CFR § 1910.1200

Regulatory References

OSHA Hazard Communication Standard 29 CFR §1910.1200

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The following ingredients are listed or exempt:

Ammonia

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Final CERCLA RQ: 1000(454) pounds (Kilograms)

methyl benzimidazol-2-yl carbamate

Final CERCLA RQ: 10(4.54) pounds (Kilograms)

Biocide - withheld as TRADE SECRET

Final CERCLA RQ: 100(45.4) pounds (Kilograms)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

SARA 313 Emission Reporting

The following ingredients are listed or exempt:

Ammonia

1.0%

Zinc oxide

1.0%

Biocide - withheld as TRADE SECRET

1.0%

Biocide - withheld as TRADE SECRET

1.0%

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

FDA - Essential Chemical

None of the ingredients are listed or exempt.

FDA - Precursor Chemical

None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories

None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals

None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

The following ingredients are listed or exempt:

Benzophenone

Known to the State of California to cause cancer.

Titanium Dioxide

Known to the State of California to cause cancer.

Biocide - withheld as TRADE SECRET

Known to the State of California to cause cancer.

California Air Toxics "Hot Spots" (A-I)

The following ingredients are listed or exempt:

Zinc oxide

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California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances

The following ingredients are listed or exempt:

Ammonia

Biocide - withheld as TRADE SECRET

Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

Ammonia

Titanium Dioxide

Zinc oxide

Biocide - withheld as TRADE SECRET

Rhode Island "Right To Know" List

The following ingredients are listed or exempt:

Benzophenone

Titanium Dioxide

Zinc oxide

Propane-1,2-diol

Biocide - withheld as TRADE SECRET

Minnesota "Right To Know" List

The following ingredients are listed or exempt:

Benzophenone

Titanium Dioxide

Zinc oxide

Propane-1,2-diol

Biocide - withheld as TRADE SECRET

New Jersey "Right To Know" List

The following ingredients are listed or exempt:

Ammonia

Titanium Dioxide

Zinc oxide

Propane-1,2-diol

Biocide - withheld as TRADE SECRET

methyl benzimidazol-2-yl carbamate

Biocide - withheld as TRADE SECRET

Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

Ammonia

Titanium Dioxide

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Zinc oxide

Propane-1,2-diol

Biocide - withheld as TRADE SECRET

Inventories

US – TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

Note: Based on information provided by our suppliers, this product is considered “DRC Conflict Free” as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7- 40-10; Date: 2012-08-22).

16. Other information

Classification abbreviations and acronyms

Carc. = Carcinogenicity

Training advice

Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Revision date

8/30/2019

Revision

2

Supersedes date

6/30/2016

SDS No.

5533

Hazard statements in full

H350 May cause cancer.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.