



SAFETY DATA SHEET

FORTIPRIME METAL

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

1. Identification

Product identifier

Product name Fortiprime Metal

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

Emergency telephone number

Emergency telephone 832.922.2926

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Carc. 1A – H350

Label elements

Pictogram



Signal word Danger

Hazard Statements H350 May cause cancer.

Precautionary statements P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308+P313 If exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/ container in accordance with national regulations.

Contains Quartz (SiO₂)

Other hazards

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

3. Composition/information on ingredients

Mixtures

Fortiprime Metal

Talc CAS number: 14807-96-6	10-<25%
Trizinc bis (orthophosphate) CAS number: 7779-90-0	2.5 - 10%
Diiron trioxide CAS number: 1309-37-1	2.5 - <5%
Isobutyric acid, monoester with 2,2,4-trimethylpent CAS number: 14808-60-7	1 - <2.5%
Quartz (SiO₂) CAS number: 14808-60-7	0.25 - <0.5%

Composition comments The exact percentage is 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 and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.
Ingestion	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.
Skin contact	Rinse with water.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Prolonged or repeated exposure may cause the following adverse effects: May cause cancer.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	May cause discomfort if swallowed.
Skin contact	Discoloration of the skin. Prolonged contact may cause redness, irritation and dry skin.
Eye contact	May be slightly irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

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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 (CO₂). Carbon monoxide (CO). Acrylic monomers. Harmful gases or vapors.

Advice for firefighters

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 Do not touch or walk into spilled material. Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this safety data sheet.

Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Do not empty into drains. Contain and absorb spillage with sand, earth or other non-combustible material. The contaminated absorbent may pose the same hazard as the spilled material. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. For waste disposal, see Section 13. Wash thoroughly after dealing with a spillage.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Keep away from food, drink and animal feeding stuffs. Wear protective clothing as described in Section 8 of this safety data sheet. Do not handle until all safety precautions have been read and understood. Handle all packages and containers carefully to minimize spills. Do not handle broken packages without protective equipment. Avoid the formation of mists. Avoid discharge to the aquatic environment. Keep container tightly sealed when not in use. 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.

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.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Talc

Long-term exposure limit (8-hour TWA): OSHA 20 particles/cc

respirable dust

Long-term exposure limit (8-hour TWA): ACGIH 0.1 f/cc

containing asbestos fibers

A1

Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³

respirable fraction

A4

Diiron trioxide

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

respirable fraction

A4

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

respirable fraction

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

total dust

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

fume

Titanium dioxide

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

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

A4, A4

Long-term exposure limit (8-hour TWA): OSHA 0.05 mg/m³

respirable dust

Long-term exposure limit (8-hour TWA): OSHA 0.025 mg/m³

respirable dust

Quartz (SiO₂)

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

total dust

Long-term exposure limit (8-hour TWA): ACGIH 0.025 mg/m³

respirable fraction

A2

Aluminum Oxide

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

total dust

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

respirable fraction

Magnesium Oxide

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

fume total particulate

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

inhalable fraction

A4

Calcium Oxide

Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³

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

OSHA = Occupational Safety and Health Administration.

ACGIH = American Conference of Governmental Industrial Hygienists.

A4 = Not Classifiable as a Human Carcinogen.

A1 = Confirmed Human Carcinogen.

A2 = Suspected Human Carcinogen.

Ingredient Comments

The constituents listed 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.

Talc (CAS: 14807-96-6)

Immediate danger to life and health

3000 mg/m³ 3000 mg/m³

Diiron trioxide (CAS: 1309-37-1)

Immediate danger to life and health

2500 mg/m³

Titanium Dioxide (CAS: 13463-67-7)

Immediate danger to life and health

5000 mg/m³

Quartz (SiO₂) (CAS: 14808-60-7)

Immediate danger to life and health

25 mg/m³ 50 mg/m³

Magnesium Oxide (CAS: 1309-48-4)

Immediate danger to life and health

750 mg/m³

Silicon dioxide (CAS: 7361-86-9)

Immediate danger to life and health

3000 mg/m³

Calcium Oxide (CAS: 1305-78-8)

Immediate danger to life and health

25 mg/m³

Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Wear chemical splash goggles.

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Hand protection	Wear protective gloves. 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	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Provide eyewash station and safety shower.
Respiratory protection	IF ventilation is inadequate, suitable respiratory protection must be worn.
Environmental exposure controls	Keep container tightly sealed when not in use. Avoid release to the environment.

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	Not available.
Initial boiling point and range	100°C/212°F similar to water
Flash point	Not applicable (water based product), however, solid material will support combustion if water has been evaporated.
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
Solubility(ies)	Not known.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not considered to be explosive.
Oxidizing properties	Does not meet the criteria for classification as oxidizing.
Other information	No information required.

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.

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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: Carbon dioxide (CO ₂). Carbon monoxide (CO). Acrylic monomers. Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity – oral

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

Acute toxicity - dermal

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

Acute toxicity - inhalation

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

Skin corrosion/irritation

Animal data 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.

Germ cell mutagenicity

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

Carcinogenicity

Carcinogenicity May cause cancer.

IARC carcinogenicity

Contains a substance/a group of substances which may cause cancer. IARC Group 1
Carcinogenic to humans.

Reproductive toxicity

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.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met

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General information	May cause cancer after repeated exposure. Risk of cancer depends on duration and level of exposure. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	May cause discomfort if swallowed.
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

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	For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.
<u>UN Number</u>	
UN No. (TDG)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082
UN No. (DOT)	UN3082

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UN proper shipping name

Proper shipping name (TDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Trizinc bis (orthophosphate), Ammonia)
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Trizinc bis (orthophosphate), Ammonia)
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Trizinc bis (orthophosphate), Ammonia)
Proper shipping name (DOT)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS Trizinc bis (orthophosphate), Ammonia)

Transport hazard class(es)

DOT hazard class	9
DOT hazard label	9
TDG class	9
TDG label(s)	9
IMDG Class	9
ICAO class/division	9
DOT transport labels	



Transport labels



Packing group

TDG packing group	III
IMDG packing group	III
ICAO packing group	III
DOT packing group	III

Environmental hazards

Environmentally Hazardous Substance



Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS	F-A, S-F
DOT reportable quantity	RQ: Ammonium hydroxide (255834,9558 lbs)
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable

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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

Final CERCLA RQ: 1000(454) 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:

Trizinc bis(orthophosphate)

1.0%

Aluminum Oxide

1.0%

Magnesium Oxide

1.0%

Ammonia

1.0%

Polyurethane

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:

Silicon dioxide

Known to the State of California to cause cancer.

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Titanium Dioxide

Known to the State of California to cause cancer.

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

The following ingredients are listed or exempt:

Aluminum oxide

Silicon dioxide

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:

Magnesium oxide

Calcium oxide

Diiron trioxide

Ammonia

Talc

Silicon dioxide

Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

Quartz (SiO₂)

Aluminum oxide

Magnesium oxide

Calcium oxide

Diiron trioxide

Ammonia

Talc

Zirconium dioxide

Silicon dioxide

Titanium dioxide

Rhode Island "Right To Know" List

The following ingredients are listed or exempt:

Quartz (SiO₂)

Aluminum oxide

Magnesium oxide

Calcium oxide

Diiron trioxide

Talc

Titanium dioxide

Minnesota "Right To Know" List

The following ingredients are listed or exempt:

Quartz (SiO₂)

Aluminum oxide

Fortiprime Metal

Magnesium oxide

Calcium oxide

Diiron trioxide

Talc

Silicon dioxide

Titanium dioxide

New Jersey "Right To Know" List

The following ingredients are listed or exempt:

Quartz (SiO₂)

Aluminum oxide

Magnesium oxide

Calcium oxide

Diiron trioxide

Ammonia

Talc

Titanium dioxide

Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

Quartz (SiO₂)

Aluminum oxide

Magnesium oxide

Calcium oxide

Diiron trioxide

Ammonia

Talc

Silicon dioxide

Titanium dioxide

Inventories

US – TSCA

All the ingredients are listed or exempt.

Trizinc bis(orthophosphate)

Quartz (SiO₂)

Aluminum oxide

Magnesium oxide

Calcium oxide

Diiron trioxide

Isobutyric acid, monoester with 2,2,4-trimethylpentane-1,3-diol

Ammonia

Water

Polyurethane

Distillates (petroleum), solvent-dewaxed heavy paraffinic

Fortiprime Metal

Talc

Zirconium dioxide

Silicon dioxide

Titanium dioxide

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

4/3/2017

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.