



SAFFIRE BLUE *inc.*

Safety data sheet

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Safety data sheet

Date / Revised: 24.07.2014

Product: **Z-COTE® HP1**

Version: 2.0

(30083072/SDS_COS_VN/EN)

Date of print 09.10.2014

1. Substance/preparation and manufacturer/supplier identification

Z-COTE® HP1

Use: cosmetic ingredient

Distributor: _____

Saffire Blue inc.
1444 Bell Mill Side Road
Tillsonburg, ON N4G4G9
Canada

2. Hazard identification

Classification of the substance and mixture:

Hazardous to the aquatic environment - acute: Cat. 1

Hazardous to the aquatic environment - chronic: Cat. 1

Label elements and precautionary statement:

Pictogram:



Signal Word:

Warning

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Hazard Statement:

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

Avoid release to the environment.

Precautionary Statements (Response):

Collect spillage.

Precautionary Statements (Disposal):

Dispose of contents/container to hazardous or special waste collection point.

Other hazards which do not result in classification:

Fine dust can form an inflammable mixture together with air.

3. Composition/information on ingredients

Chemical nature

INCI Name: Zinc Oxide (and) Triethoxycaprylylsilane

Powder based on: zinc oxide, Silane, triethoxyoctyl-

Hazardous ingredients

zinc oxide

Content (W/W): $\geq 70 \%$

CAS Number: 1314-13-2

Aquatic Acute: Cat. 1

Aquatic Chronic: Cat. 1

M-factor acute: 1

M-factor chronic: 1

Silane, triethoxyoctyl-

Content (W/W): $\geq 1 \%$ - $< 5 \%$

CAS Number: 2943-75-1

Skin Corr./Irrit.: Cat. 2

Eye Dam./Irrit.: Cat. 2A

4. First-Aid Measures

General advice:

If adverse health effects develop seek medical attention.

If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention if necessary.

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On ingestion:
Rinse mouth and then drink 200-300 ml of water.

Note to physician:

Symptoms: No significant reaction of the human body to the product known.
Hazards: No hazard is expected under intended use and appropriate handling.
Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Suitable extinguishing media:
water spray, carbon dioxide, foam, dry powder

Specific hazards:

harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:
Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions:
Use personal protective clothing. Avoid dust formation. Information regarding personal protective measures see, section 8.

Environmental precautions:
Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:
For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Contain with dust binding material and dispose of.
Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:
Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Avoid dust formation.

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Storage

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE)

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

8. Exposure controls and personal protection

Components with occupational exposure limits

zinc oxide, 1314-13-2;

TWA value 2 mg/m³ (ACGIHTLV), Respirable fraction
STEL value 10 mg/m³ (ACGIHTLV), Respirable fraction
STEL value 10 mg/m³ (OEL (VN)), Dust and fume
TWA value 5 mg/m³ (OEL (VN)), Dust and fume

Personal protective equipment

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Particle filter with high efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P3 or FFP3). Suitable respiratory protection for higher concentrations or long-term effect: Self-contained breathing apparatus.

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:

Avoid contact with eyes. Avoid inhalation of dusts. Handle in accordance with good industrial hygiene and safety practice. No eating, drinking, smoking or tobacco use at the place of work.
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form: powder

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Colour: white
Odour: odourless

pH value: approx. 7
(50 g/l, 20 °C)
(as suspension)

Melting point: approx. 1,970 °C
Boiling point: not applicable, solid with a melting temperature over 300 °C

Flash point: not applicable, the product is a solid

Evaporation rate: The product is a non-volatile solid.

Flammability (solid/gas): not flammable
Lower explosion limit: not determined
Upper explosion limit: not determined
Ignition temperature: not determined

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.
Self ignition: Based on its structural properties the product is not classified as self-igniting.

Explosion hazard: Based on the chemical structure there is no indicating of explosive properties.

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Vapour pressure: not applicable, solid with a melting temperature over 300 °C

Bulk density: approx. 500 - 700 kg/m³
Literature data.
500 kg/m³

Relative vapour density (air): The product is a non-volatile solid.

Solubility in water: insoluble
Partitioning coefficient n-octanol/water (log Pow): not applicable

Viscosity, dynamic: not applicable

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Viscosity, kinematic:
not applicable, the product is a solid

Other Information:
primary particle size < 200 nm
If necessary, information on other physical and chemical parameters is indicated in this section.
No further information available.

10. Stability and Reactivity

Conditions to avoid:
See MSDS section 7 - Handling and storage. Avoid dust formation. Avoid deposition of dust.

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Substances to avoid:
hydrogen peroxide, magnesium

Hazardous reactions:
No hazardous reactions if stored and handled as prescribed/indicated.

Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Acute toxicity

Assessment of acute toxicity:
Virtually nontoxic after a single ingestion.

Experimental/calculated data:
LD50 rat (oral): > 5,000 mg/kg

Irritation

Assessment of irritating effects:
Not irritating to eyes and skin.

Respiratory/Skin sensitization

Assessment of sensitization:
There is no evidence of a skin-sensitizing potential.

Germ cell mutagenicity

Assessment of mutagenicity:
The chemical structure does not suggest a specific alert for such an effect.

Carcinogenicity

Assessment of carcinogenicity:

Based on the ingredients there is no suspicion of a carcinogenic effect in humans. The product has not been tested. The statement has been derived from the properties of the individual components.

Reproductive toxicity**Assessment of reproduction toxicity:**

| The chemical structure does not suggest a specific alert for such an effect.

Developmental toxicity**Assessment of teratogenicity:**

| No data was available concerning toxicity to development.

Specific target organ toxicity (single exposure):**Assessment of STOT single:**

| Based on available Data, the classification criteria are not met.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)**Assessment of repeated dose toxicity:**

Repeated exposure to large quantities may affect certain organs. Damages blood cells. Damages the lung.

Aspiration hazard

| No aspiration hazard expected.

Other relevant toxicity information

| The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

12. Ecological Information**Ecotoxicity****Assessment of aquatic toxicity:**

Very toxic (acute effect) to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.

Toxicity to fish:

LC50 > 0.1 - 1 mg/l

Microorganisms/Effect on activated sludge:

EC0 > 1 - 10 mg/l

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Mobility

Assessment transport between environmental compartments:

| not applicable

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

Bioaccumulation potential

Assessment bioaccumulation potential:

| No data available.

Additional information

Other ecotoxicological advice:

The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

13. Disposal Considerations

| Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:

Untamminated packaging can be re-used.

Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport Information

Domestic transport:

Hazard class:	9
Packing group:	III
ID number:	UN 3077
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains ZINC OXIDE)

Sea transport

IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3077
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains ZINC OXIDE)

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Air transport

IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3077
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains ZINC OXIDE)

15. Regulatory Information**Regulations of the European union (Labelling)**Directive 1999/45/EC ('Preparation Directive'):

Hazard symbol(s)	
N	Dangerous for the environment.
R-phrase(s)	
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

Other regulations

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Information on intended use: This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use. This includes the mentioned and recommended usage. Any other intended applications should be discussed with the manufacturer. In particular this concerns the application for products that are the object of special standards and regulations.

Vertical lines in the left hand margin indicate an amendment from the previous version.

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The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.