

Ecoreflect - Kingfield Construction Products

SAFETY DATA SHEET (SDS)

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	Ecoreflect
Chemical Family	Titanium Dioxide Coating
Chemical Formula	Mixture
Manufacturer	Kingfield Construction Products, Inc.
Address	300 North 4th Street, Suite #300 Minneapolis, Minnesota 55401 USA
Contact Number	+1 (612) 225-5167
E- Mail	info@kingfieldcp.com
Revised Date	August 12, 2016

2. Hazards identification:

2.1. Classification of the substance or mixture

The product is not classified as dangerous according to Directive 67/548/EEC and 99/45/EC as amended and adapted (2001/60/ EC and 2006/08/ EC), the EC Regulation 12/2/2008, according to the CLP criteria, GHS and subsequent amendments and adjustments.

2.2. Label elements

The product does not need to be labeled according to Directive 67/548/ EEC and 99/45/ EC as amended and adapted (2001/60/ EC and 2006/08/ EC), the EC Regulation 12/2/2008, according to the CLP criteria, GHS and subsequent amendments and adjustments.

2.3. Other hazards

Evaluation PBT e vPvB: slightly irritating to eyes, skin and respiratory.

3. Composition/information on ingredients

Titanium dioxide:

CAS number: b13463-67-7 EC numbers: 236-675-5

4. First aid measures

4.1. Description of first aid measures:

General information: no delayed effects are known.

In case of inhalation: remove to fresh air immediately. In case of discomfort seek medical attention, showing this safety data sheet.

In case of skin contact: immediately flush skin with plenty of soap and water as a precautionary measure. Generally, the product does not irritate the skin. If inflammation or irritation occurs, consult a doctor, showing this safety data sheet.

In case of eyes contact: do not rub. Remove contact lenses, if present and easy to do. Immediately flush eyes with plenty of water for 15 mins, keeping eyelids open. If irritation persists, consult a doctor, showing this safety data sheet or label. Never put anything in the eyes without first consulting a doctor.

In case of ingestion: rinse mouth and drink 1-2 glasses of water. Do not induce vomit unless indicated by medical personnel. Never give anything by mouth to an unconscious person. In case of discomfort consult a doctor, showing this safety data sheet or label.

4.2. Most important symptoms and effects, both acute and delayed

No available data.

For more detailed information on health effects and symptoms, see Section 11.

4.3. Indication of any immediate medical attention and special treatment

In case of accident or discomfort, seek medical attention (show the safety data sheet or label).

Note for the doctor: no symptoms known. Treat symptomatically.

5. Firefighting measures

5.1 Thermal decomposition

Thermal decomposition can cause acrylic monomer

5.2. Extinguishing media

Suitable extinguishing media: pulverized water spray, dry powder extinguishing system or CO₂. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: do not use water because it may scatter and spread fire.

5.3. Special hazards arising from the substance or mixture

Do not breathe fumes from fire. Harmful gases produced by the flame, if this produces an incomplete combustion, may consist of carbon monoxide and carbon dioxide. Combustion gases of organic materials are classified as harmful to the respiratory system.

The material can give rise to splatter above 100°C/212°F. Dried products can burn.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and extinguishing media which are compatible with local regulations. Wear protective clothing to prevent contact with skin and eyes: anti-flame overall, gloves and anti-heat shoes.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

6.1.1. For non-emergency personnel

Keep out people that do not wear any protection equipment.

Avoid skin and eyes contact – wear suitable protection equipment (see section 8). Material can create slippery surfaces.

6.1.2. For emergency responders

Keep out people that do not wear any protection equipment. Avoid skin and eyes contact – wear suitable protection equipment.

Wear gloves, protective equipment, safety glasses, boots and protection for breathing apparatus (see section 8).

Eliminate free flames and possible sources of ignition. Do not smoke. Provide for a sufficient aeration.

Material can create slippery surfaces.

6.2. Environmental precautions

Contain spreading. Do not discharge product or washing liquids into drains or rivers. In case of spill into water course, alert Environment Agency or any other authority for the environmental protection. Material can create slippery surfaces. If the spill happens in close containers aerate the room.

6.3. Methods and material for containment and cleaning up

Small quantities: mix with absorbent materials (sand, saw dust, universal binder, diatomaceous earth), scoop solids into a suitable labeled container and dispose following current local, national and European regulations. If a spill happens, aerate the room.

Large quantities: mechanically suck the product, scoop solids into a suitable labeled container, recycle or dispose following current local, national and European regulations. If the spill happens in close containers aerate the room.

6.4. Reference to other sections

Information regarding exposure control/personal protection and disposal considerations refers to section 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling

7.1.1 Protection measures

Avoid skin, eyes and mucous membranes contact. Wear personal protection equipment for hands, eyes and skin (see section 8). Wash carefully after manipulation. Keep container tightly closed. Do not wear contact lenses while using this product. Avoid breathing vapor or mist.

7.1.2 Advice on general occupational hygiene

Avoid inhalation, ingestion or skin/eyes contact. General occupational hygiene measures are required to guarantee the safe manipulation of the material. These measures are: good personal practices, regular cleaning of the workplace, do not drink, eat or smoke in the workplace, wash your hands after any manipulation, take a shower and change clothes at end of each work shift. Do not bring contaminated clothes at home. Separate working clothes from the others. Wash them separately.

7.2 Conditions for safe storage, including any incompatibilities

Store in dry places, away from sunlight, water and ice, at temperature between +40°F and +95°F, in its original container tightly closed. Keep away from acids, free flames, ignition sparks and heat sources. Keep out from the reach of children, food, beverage and animal feed. May develop monomer vapors when the material is heated.

Formaldehyde is generated under acidity conditions. In these conditions, it is necessary to maintain suitable ventilation to prevent exposure to formaldehyde above the TWA of 0.3 ppm and 0.6 ppm STEL.

7.3. Specific end use(s): Not available.

8. Exposure controls/personal protection

8.1 Control parameters

Components with limit values:

3

Titanium dioxide: 10 mg/m TLV - ACGIH 2010

DNEL

Workers: long term effects, inhalation: 10 mg/m³. Professional users: long term effects, inhalation: 10 mg/m³.

PNEC

Water: PNEC water (fresh water): 0,127 mg/l.

PNEC water (sea water): 1 mg/l.

PNEC water (intermittent release): 0,61 mg/l.

Wastewater treatment plants: PNEC STP 100 mg/l.

Sediment: PNEC sediment (fresh water): 1000 mg/kg dry weight.

PNEC sediment (sea water): 100 mg/kg dry weight.

Ground: PNEC ground: 100 mg/kg dry weight.

Oral (food chain): PNEC oral: 1667 mg/kg food.

Formaldehyde is generated under acidity conditions. In these conditions, it is necessary to maintain suitable ventilation to prevent exposure to formaldehyde above the TWA of 0.3 ppm and 0.6 ppm STEL.

8.2 Exposure control

Where exposure to vapors is inevitable wear personal protection equipment (glasses, protective clothes, & safety shoes).

8.2.1 Appropriate engineering controls None.

8.2.2 Individual protection measures, such as personal protective equipment

8.2.2.1 Eye/face protection

Do not use contact lenses. Use tight fitting goggles with side shields conforming to UNI EN 166 (frame goggles) to protect against liquid splashes. Use eyes protection compatible with the system used to protect respiratory system.

8.2.2.2 Skin protection

Wear protective gloves suitable for chemical agents (permeation time to be determined based on the amount and duration of skin exposure), waterproof and in compliance with UNI EN 374 parts 1 and 2 (neoprene gloves, chloroprene rubber or plastic material). Always keep in mind that, because of several factors (such as temperature), the lasting of a protection glove against chemical agents can be less than permeation time tested. If gloves are damaged or worn change them. Wear standard protective clothes that can cover the entire skin surface, long trousers, long sleeved overalls tight at the ends and safety shoes. Contaminated clothes should be removed and the skin washed with soap and water.

8.2.2.3 Respiratory protection

Formaldehyde is generated under acidity conditions. In these conditions, it is necessary to maintain suitable ventilation to prevent exposure to formaldehyde above the TWA of 0.3 ppm and 0.6 ppm STEL

8.2.2.4 Thermal hazards None.

8.2.3 Environmental exposure controls

Avoid discharge into the environment. In case of massive spill into water courses, alert Environmental Agency or other agency for the environmental protection.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	liquid
Color:	white, pastel green, pastel pink, pastel pale blue
Odor:	typical
pH:	n./a.
Specific weight:	1,30 kg/l (T = 23°C).
Viscosity (viscometer Brookfield DV-E s04, 6 rpm, T= 20°C, U.R. 75%):	50 – 65 Pa-s
Melting point:	0°C – 32°F water.
Boiling point:	100°C – 212°F water.
Upper/lower limit of flammability or explosion:	n./a.
Flammability point:	n./a.
Auto-ignition temperature:	n./a.
Evaporating Speed:	n./a.
Vapor tension:	n./a.
Solubility in water:	miscible in water
Lipid solubility:	insoluble
Explosive properties:	the product does not have explosive properties
Combustive properties:	n./a.
Oxidants properties:	n./a.

Note: The values presented above about the physical and chemical properties are typical values for this product and should not therefore be considered as a specification.

10. Stability and reactivity 10.1 Reactivity

No hazardous reactions if it follows rules/guidelines for safe handling and storage (see section 7).

10.2 Chemical stability

Stable under recommended handling or storage conditions (see section 7).

10.3 Possibility of hazardous reactions

Under normal conditions of storage and handling, hazardous reactions will not occur.

10.4 Conditions to avoid

Store in dry places, away from sunlight, water and ice, at temperature between +5°C and +35°C, in its original container tightly closed. Keep away from acids, free flames, ignition sparks and heat sources. Keep out from the reach of children, food, beverage and animal feed.

May develop monomer vapors when the material is heated.

Formaldehyde is generated under acidity conditions. In these conditions, it is necessary to maintain suitable ventilation to prevent exposure to formaldehyde above the TWA of 0.3 ppm and 0.6 ppm STEL.

10.5 Incompatible materials

Materials that react with water. Keep away from acids, free flames, ignition sparks and heat sources.

10.6 Hazardous decomposition products

Can create irritating fumes as a result of thermal decomposition.

11. Toxicological information

11.1. Information on toxicological effects

No data are available for this material. The information is provided by analogy on profiles of products with similar composition.

Primary irritation: on the skin: OECD 404 – no irritant effect on eyes: OECD 405 - eye exposure to dust may cause irritation.

Sensitization: OECD 406, OECD 429 – No sensitization effects.

Subacute Chronic Toxicity

Titanium dioxide: Oral NOAEL 3500 mg/kg/d (90 days).
Cutaneous NOAEL no relevant data available. inhalation NOAEC 10 mg/m³ (90 days).

CMR Effects (carcinogenicity, germ cell mutagenicity, reproductive toxicity) There is no evidence of CMR effects in humans.

Specific target organ toxicity (STOT)

No specific target organ toxicity, according to the criteria defined by Regulation (EC) No. 1272/2008.

Toxicity by inhalation: No risk of inhalation.

Other information: People with sensitive airways, such as asthmatic, may react to vapors.

12. Ecological information Use according to good working practices, avoiding disposal in the environment.

12.1 Toxicity

Water hazard: class 1 (WGK1), slightly hazardous No toxicity

data applicable for the mixture as such.

12.1.1 Acute/prolonged toxicity on fishes Not available data.

12.1.2 Acute/prolonged toxicity on aquatic organism Not available data.

12.1.3 Acute/prolonged toxicity on aquatic plants Not available data.

12.1.4 Toxicity on microorganism (eg. bacteria)/effect on active fungus Not available data.

12.1.5 Chronic toxicity on aquatic organism Not available data.

12.1.6 Toxicity on soil organism Not available data.

12.1.6 Toxicity on plants Not available data.

12.1.7 General effect Not available data.

12.2 Persistence and degradability

Not relevant for inorganic substances.

Do not pour the product into pipelines and waterways, if the product has flowed into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities.

12.3 Bioaccumulative potential

Given the high molecular weight of the product, we do not expect a bioconcentration of the polymeric component. Latex dispersions will take on the water a milky white color.

12.4 Mobility in soil (and other section if available)

No data available for the mixture as a whole. The titanium dioxide contained in the product is insoluble in water and sediment in aquatic environment.

12.5 Results of PBT and vPvB assessment

The product does not meet the criteria for PBT/vPvB.

12.6 Other adverse effects

There are no known collateral effects.

12.6. Additional indication

Halogenated organic compounds absorbable (AOX): n./a.

The product was not tested. The data reported in this paragraph are based on the information contained in safety data sheets of the raw materials that compose the product.

13. Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible.

Coagulate the emulsion by the stepwise addition of ferric chloride and calcium hydrate. Remove the liquid surface phase and send it into the sewer collection of chemicals. For disposal, waste the product in a suitable incineration plant, in accordance with regulations at local, national and EU level. The preparation is not suitable for the disposal in public water channels, natural streams or rivers.

The package used is intended exclusively for the packaging of this product, it must not be reused for other purposes. Containers, even when completely empty, must not be discarded in the environment and should be subjected to a decontamination treatment before being sent for disposal. If they contain residues must be classified, stored and sent to a suitable treatment facility in accordance with applicable local, national and EU regulations.

14. Transport information

Product classified as non-dangerous for transport (land transport ADR/RID, railways transport RID, sea transport AND/IMDG / GGVSea, air transport IATA/ICAO).

14.1 ONU number

Product classified as non-dangerous for transport.

14.2 ONU proper shipping name

Product classified as non-dangerous for transport.

14.3 Transport hazard classes

Product classified as non-dangerous for transport.

14.4 Packaging group

Product classified as non-dangerous for transport.

14.5 Environmental hazards

Product classified as non-dangerous for transport.

14.6 Special precautions for user Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code Not applicable.

Transportation classifications may vary according to the capacity and the type of container and according to the different national legislations.

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National legislation

D.Lgs. 21 September 2005 n. 238 (Directive Seveso Ter).

D.P.R. 250/89 (labeling detergents).

D.P.R. 1124/65 (consolidated dispositions for compulsory insurance against accidents at work and occupational diseases).

D.Lgs n. 152/06 e s.m.i. (environmental rules).

D.lgs n. 475/82 e s.m.i. (implementation of Directive 89/686/EEC of 21 December 1989 on the approximation of the laws of the Member States relating to personal protective equipment).

D.Lgs 81/08 e s.m.i. (implementation of art. 1 of the Law 3/8/2007, concerning the protection of health and safety in the workplace).

UE Regulation

Regulation (EC) n. 1907/2006 (REACH). Regulation (EC) n. 1272/2008 (CLP).

Regulation (EC) n. 790/2009 (1° ATP CLP). Regulation (UE) n. 453/2010 (Attachment I). Ministerial circulars 46 e 61 (aromatic amines). Regulation CE n. 648/2004 (Detergents).

Directive 67/548/EEC e s.m.i. (classification, packaging and labelling of dangerous substances).

Hazard German classes for waters: WGK = 1 in accordance with directive Water Hazardous Directive, VwVwS, del 17 may 1999.

Registration number WGK: 662

15.2 Chemical safety assessment (CSA)

Chemical safety assessment not applicable.

16. Altre informazioni

16.1 Abbreviations

ADR:	Accord européen relative au transport international des marchandises dangereuses par route.
CAS:	Service of Chemical Abstract (division of American Chemical Society).
CLP:	Classification, Labelling and Packaging.
CSR:	Chemical Safety Report.
NOEL:	No Observed Effect Level.
DNEL:	Derived No Effect Level.
PNEC:	Predicted No Effect Concentration.
DMEL:	Derived Minimum Effect Level.

EINECS:	European Inventory of Existing Commercial Chemical Substances
GHS:	Globally Harmonized System of Classification and of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Regulation on the Transport of Dangerous Goods of the "International Association for aviation" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions' "International Civil Aviation" (ICAO).
IMDG:	International Maritime Dangerous Goods code.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Coefficient of explosion.
PBT:	Persistent, bioaccumulative and toxic.
RID:	Règlement concernant le transport International ferroviaire des marchandises Dangereuses.
STEL:	Short term exposure limit.
STOT:	Specific target organ toxicity.
TLV:	Threshold limit value.
TWATLV:	Threshold limit value for time weighted average of 8 hours per day (standard ACGIH).
WGK:	Hazard German classes for waters
UE:	European Union.
vPvB:	Very persistent very bioaccumulative.
N.A.:	Not available.

16.2 Bibliography

NIOSH – Registry of toxic effects of chemical substances (1983);
 I.N.R.S. - Fiche Toxicologique;
 CCNL - Attachment 1 "TLV per il 1989-90";
 Istituto Superiore di Sanità – National inventory chemicals.

Disclaimer:

This Safety Data Sheet (SDS) is based on the legal regulations listed in REACH Regulation (CE/1907/2006), and successive amendments and integration.

The information enclosed in this SDS are based on the information reported in the SDS of the raw materials that composed the product and are based on our knowledge at the above date. The information relates only to this specific product and may not apply to the same when used in combination with other materials or in any process unless specified in product safety data sheet. They are only reported to the indicated product and they do not constitute guarantee of special qualities. No statement or guarantee concerning accuracy, reliability and completeness of the information contained in this SDS is released. The Company does not assume any liability for damages to persons or property that may result from use the product other than that for which it was intended. The SDS does not replace but complements the text or the rules that regulate the activity of use.

The user must make sure of these information suitability and completeness in relation to the specific use he has to do. This schedule revokes and replaces any previous edition.

Indications of changes to the previous version of the SDS: review of the entire document.