CeramiGlass™ Architectural

Safety Data Sheet

Date of issue: 10/03/2015 Revision date: 11/05/2018 Version: 1.4

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Name : CeramiGlass™

Product code : OPH/ORH/OSH

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use,Industrial use

Industrial/Professional use spec : Industrial
For professional use only

Use of the substance/mixture : Coating

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ICD High Performance Coatings
7350 S. Union Ridge Parkway
Ridgefield, WA 98642
United States of America

Tel: +1 (360) 546 2286
Fax: +1 (360) 546 2287

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number
UNITED STATES OF AMERICA	ICD High Performance Coatings	7350 S. Union Ridge Parkway Ridgefield, WA 98642	: +1 (360) 546 2286

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS Classification

H314 Skin corrosion : Category 1A

H318 Serious eye damage : Category 1

Full text of H-phrases mentioned in this Section: see Section 16

2.2. Label elements

GHS Labelling

Hazard pictograms :

Signal word : Danger

Hazard statements : Causes severe skin burns and eye damage
Causes serious eye damage

Precautionary statements : **Prevention:**
Wash hands thoroughly after handling
Wear protective gloves
Wear eye protection/ face protection
Do not breathe dust or mist
Take off contaminated clothing and wash it before reuse
Store locked up

Response:

IF ON SKIN: Immediately remove all contaminated clothing. Rinse skin with water.

IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Disposal:

Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

Dries to form glass film, which can easily cut skin. Spilled material is very slippery. Can etch glass if not promptly removed.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Hazardous ingredients:

Name	CAS No.	Concentration (Wt %)
Silicic acid, sodium salt	1344-09-8	10 - 20 %
Silicic acid, potassium salt	1312-76-1	5 - 10 %
Potassium hydroxide	1310-58-3	0.5 - 3 %

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.

First-aid measures after ingestion : Do not induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Obtain medical attention.

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

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Compatible with all standard fire fighting techniques.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Not applicable. Aqueous solution. Non-combustible

5.3. Advice for firefighters

Firefighting instructions : Compatible with all standard fire fighting techniques.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.2

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. See section 8.2

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if substance enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage for proper disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep container closed when not in use.

Incompatible materials : Acids. Unsuitable containers: Aluminium

See Also Section 10

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ingredients	CAS-No.	Type (Form of exposure)	Value	Basis
Silicic acid, sodium salt	1344-09-8	No Occupational Exposure Limit assigned.	An exposure limit of 2 mg/m^3 (15 min TWA) is recommended by analogy with sodium hydroxide	UK EH40
Silicic acid, potassium salt	1344-09-8	No Occupational Exposure Limit assigned.	An exposure limit of 2 mg/m^3 (15 min TWA) is recommended by analogy with potassium hydroxide	UK EH40
Potassium hydroxide	1310-58-3	TLV	2 mg/m^3 Upper Respiratory Tract irritation Eye irritation Skin irritation	ACGIH
		REL	2 mg/m^3 Upper Respiratory Tract irritation Eye irritation Skin irritation	NIOSH

8.2. Exposure controls

Appropriate engineering controls	: Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.
Personal protective equipment	: Protective clothing. Protective goggles. Gloves.
Hand protection	: Wear protective plastic or rubber gloves. For example EN374-3, level 6 breakthrough time (>480min).
Eye protection	: Chemical goggles (EN 166)
Skin and body protection	: Wear suitable overalls. For example EN ISO 13982 (dust), EN14605 (liquid splashes).
Respiratory protection	: Respiratory protection not normally required. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid.
Appearance	: Opaque liquid.
Colour	: Various.
Odour	: Odorless.
Odour threshold	: No data available.
pH	: 10 - 13
Relative evaporation rate (butylacetate=1)	: No data available.
Melting point	: Not applicable.
Freezing point	: 0°C
Boiling point	: 100°C
Flash point	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not applicable.
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: Not applicable.
Relative vapour density at 20 °C	: No data available.
Relative density	: No data available.
Density	: 1.5 - 1.9 g/cm³
Solubility	: Soluble in water.
Log Pow	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Explosive properties	: No data available.
Oxidising properties	: No data available.
Explosive limits	: No data available.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

When arc welding vessels containing aqueous solutions of this material, take care to control any explosion risk from hydrogen evolved by electrolysis. Aqueous solutions will react with aluminium, zinc, tin and their alloys evolving hydrogen gas which can form an explosive mixture with air. Can react violently if in contact with acids. Can react with sugar residues to form carbon monoxide.

10.4. Conditions to avoid

Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead, and zinc.

10.5. Incompatible materials

See Section 10.3

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	:	Skin contact. Eye contact. Ingestion. Inhalation.
Acute toxicity	:	Not classified
Ingestion	:	All symptoms of acute toxicity are due to high alkalinity. Material will cause irritation. Oral LD50 (rat) >5000 mg/kg bw
Inhalation	:	Mist is irritant to the respiratory tract. All symptoms of acute toxicity are due to high alkalinity. Inhalation LC50 (rat) >2.06 g/m³
Skin Contact	:	Material will cause irritation. Dermal LD50 (rat) >5000 mg/kg bw
Eye Contact	:	Material will cause severe eye damage. Risk of serious damage to eyes.
Skin corrosion/irritation	:	Causes severe skin burns and eye damage.
Serious eye damage/irritation	:	Causes serious eye damage.
Respiratory or skin sensitisation	:	Not classified based on available data.
Germ cell mutagenicity	:	No evidence of genotoxicity. In vitro/in vivo negative.
Carcinogenicity	:	Not classified based on available data.

Ingredient	Results	Remarks
Titanium dioxide	IARC 2B Possiblly carcinogenic to humans.	Suspected of causing cancer. IARC has classified TIO2 as 2B Possibly carcinogenic to humans. However, the only evidence of carcinogenicity is in rats exposed to very high concentrations. Two major epidemiology studies among titanium dioxide workers in the US and in EUROPE could not demonstrate an elevated lung cancer risk. Boffetta et. al. Mortality among workers employed in the titanium dioxide production industry in Europe. Cancer Causes Control. 2004 Sep;15(7):697-706. Fryzek et. al. A cohort mortality study among titanium dioxide manufacturing workers in the United States. J Occup Environ Med. 2003 Apr;45(4):400-9. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. IARC Monographs, Volume 93 (Summary)
Cobalt titanate green spinel	Carcinogenic IARC 2B	IARC and the NTP consider nickel compounds to be carcinogenic to humans. IARC has classified cobalt and cobalt compounds as possibly carcinogenic to humans. This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished pigment do not necessarily reflect the properties of the component metals or oxides.
Iron oxide	Not carcinogenic	The IARC monograph on underground hematite mining (1972) states, “no carcinogenic effects were observed in mice, hamsters, or guinea pigs given ferric oxide intratracheally”.

Cobalt aluminate blue spinel	IARC 2B Possibly carcinogenic to humans	IARC has classified cobalt and cobalt compounds as possibly carcinogenic to humans. This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished pigment do not necessarily reflect the properties of the component metals or oxides.

Reproductive toxicity : No evidence of reproductive toxicity or developmental toxicity.

Specific target organ toxicity (single exposure) : Not classified based on available data.

Specific target organ toxicity (repeated exposure) : May cause damage to organs (central nervous system) through prolonged or repeated exposure (if inhaled).

Ingredient	Results	Remarks
Manganese ferrite spinel	Category 2	Specific target organ toxicity (repeate exposure) Route of exposure: inhalation Target organs: central nervous system Repeated overexposure to this compound may cause eye, skin and respiratory tract irritation. Some compounds of the metals used in the manufacturing of this material have demonstrated various toxic properties. However, there is no evidence that this material has these toxic characteristics. This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished material do not necessarily reflect the properties of the component metals or oxides.

Aspiration hazard : Not classified based on available data.

Potential adverse human health effects and symptoms : Not classified based on available data.

SECTION 12: Ecological information

12.1. Toxicity

Ingredients:

Silicic acid, sodium salt:	
Toxicity to fish	LC50 (Gambusia affinis): 2320 mg/l LC50 (Brachydanio rerio): 1108 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna): 1700 mg/l Exposure time: 48 h
Mean Threshold Limit	TLM (Gambusia affinis): 2320 ppm Exposure time: 96 h

Silicic acid, potassium salt:	
Toxicity to fish	LC50 (Leuciscus idus): >146 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna): >146 mg/l Exposure time: 24 h

Potassium hydroxide:	
Toxicity to fish	LC50 (Pisces): >28.6 mg/l LC50 (Gambusa affinis): 80 mg/l Exposure time: 96 h
Mean Threshold Limit	TLM (Gambusia affinis): 80 ppm Exposure time: 24 h

12.2. Persistence and degradability

Ingredient	Remarks
Silicic acid, sodium salt	Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica.
Silicic acid, potassium salt	Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica.
Potassium hydroxide	Not applicable

12.3. Bioaccumulative potential

Ingredient	Remarks
Silicic acid, sodium salt	Inorganic. The substance has no potential for bioaccumulation.
Silicic acid, potassium salt	Inorganic. The substance has no potential for bioaccumulation.
Potassium hydroxide	Not applicable

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No ingredient is classified as PBT or vPvB.

12.6. Other adverse effects

Additional information : Avoid release to the environment. The alkalinity of this material will have a local effect on ecosystems sensitive to changes in pH.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Discharge of this product to sewage treatment works is dependent on local regulations with regard to pH controls.

Dispose of this material and its container to hazardous or special waste collection point.

Disposal should be in accordance with local, state or national legislation.

Ecology - waste materials : Waste material is classified as a RCRA Hazardous waste if it exhibits the corrosive characteristic (pH greater than or equal to 12.5)

European List of Waste (LoW) code : 08 02 00 - wastes from MFSU of other coatings (including ceramic materials)

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not dangerous goods in terms of transport regulations

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

Proper Shipping Name (IATA) : Not applicable

Proper Shipping Name (ADN) : Not applicable

Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

Unsuitable containers: Aluminium

14.6.1. Overland transport

14.6.2. Transport by sea

14.6.3. Air transport

14.6.4. Inland waterway transport

Carriage prohibited (ADN) : No
Not subject to ADN : No

14.6.5. Rail transport

Carriage prohibited (RID) : No

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

Not applicable

SECTION 15: Regulatory information

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

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : THIS PRODUCT MAY CONTAIN A CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372. THIS INFORMATION MUST BE INCLUDED IN ALL MSDS THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

100% Cobalt Compound

100% Chromium Compound

100% Nickel Compound

100% Zinc Compound

100% Copper Compound

100% Antimony Compound

100% Manganese Compound

These materials may not be present in all product colors.

US State Right To Know Regulations

Ingredient	CAS No.
Cobalt chromite blue green spinel	68187-11-1*
Cobalt titanate green spinel	68186-85-6*
Cobalt aluminate blue spinel	1345-16-0*
Copper chromite black spinel	68186-91-4*
Manganese ferrite black spinel	68186-94-7*
Manganese ferrite spinel	75864-23-2*
Cobalt chromite green spinel	68187-49-5*
Manganese antimony titanium buff rutile	68412-38-4*
Chrome antimony titanium buff rutile	6816-90-3*
Iron oxide	1309-37-1
Titanium dioxide	13463-67-7
Potassium hydroxide	1310-58-3
Kaolin	1332-58-7

Composition Comments : *This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished pigment do not necessarily reflect the properties of the component metals or oxides.

These materials may not be present in all product colors.

California Prop. 65

WARNING! This product contains chemicals known in the State of California to cause cancer and birth defects or other reproductive harm.

Ingredient	CAS No.	Remarks
Titanium dioxide	13463-67-7	Titanium dioxide is listed as a carcinogen by the State of California under Proposition 65. This listing is a qualified listing which applies only to airborne, unbound, particles of respirable size and does not require warnings on products containing titanium dioxide such as plastics, paper, and paint.
Iron oxide	1309-37-1	

These materials may not be present in all product colors.

The ingredients of this product are reported in the following inventories:

REACH : All ingredients (pre)registered or exempt.

TSCA : All chemical substances in this material are included on or exempted fro listing on the TSCA Inventory of Chemical Substances.

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or are exempt from listing on the Canadian Domestic Substances List (DSL).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Internal technical data, data from raw material SDS's, and OECD eChem Portal search results.

Other information : None.

Full text of H- phrases:

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.