SAFETY DATA SHEET

Issue Date 31-Jan-2018 **Revision Date** 29-Jul-2019 **Version** 5

CH **Color Hardeners**

1. IDENTIFICATION

Product identifier
Product Name Color Hardeners

Other means of identification
Product Code CH

Recommended use of the chemical and restrictions on use
Recommended Use Restricted to professional users.
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Supplier Address	**Manufacturer Address**
Solomon Colors, Inc. 4050 Color Plant Road Springfield, IL 62702	Solomon Colors, Inc. 4050 Color Plant Road Springfield, IL 62702

Company Phone Number 800-624-0261 (US & Canada); 217-522-3112 (Outside North America)
24 Hour Emergency Phone Number 1-800-373-7543 Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemical

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3 (Respiratory System)
Specific target organ toxicity (repeated exposure)	Category 1 (Lungs)

Label elements

Emergency Overview

Danger

Hazard statements
Causes severe skin burns and eye damage
May cause an allergic skin reaction
May be irritating to skin, eyes and respiratory system.
Causes damage to lungs through prolonged or repeated inhalation exposure.

May cause cancer by inhalation

Overexposure to dust can cause chronic lung injury. Acute silicosis may develop in a short timewith heavy exposure. Silicosis can be progressive and may cause death.

Appearance Color will vary **Physical state** Powder **Odor** No information available

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously 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 ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Quartz, Crystalline Silica	14808-60-7	35 - 70	*
Portland Cement	65997-15-1	20 - 40	*
Yellow Iron Oxide	51274-00-1	1 - 5	*
Titanium Dioxide	13463-67-7	1 - 5	*
Red Iron Oxide	1309-37-1	1 - 5	*
Black Iron Oxide	1317-61-9	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. In the case of skin irritation or allergic reactions see a physician.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion If swallowed, call a poison control center or physician immediately. Rinse mouth. Do not induce vomiting without medical advice.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Hazardous combustion products Thermal decomposition can lead to the release of irritating gases and vapors. Carbon monoxide. Carbon dioxide (CO2). Metal Oxides. Oxides of sulfur.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Ensure adequate ventilation, especially in confined areas. Avoid breathing dust/fume/gas/mist/vapors/spray.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information. Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment	Vacuum or sweep up material and place in a designated labeled waste container.
Methods for cleaning up	With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Pick up and transfer to properly labeled containers. For disposal see section 13.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible materials	Cement is reactive or incompatible with oxidizing materials, acids, aluminum, and ammonium salt. Cement is highly alkaline and will react violently with acids that can produce toxic gases or vapors. Silica reacts violently with oxidizing agents. Silicates dissolve readily in hydrofluoric acid and produces corrosive gas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Quartz, Crystalline Silica 14808-60-7	TWA: 0.025 mg/m³ respirable particulate matter	TWA: 50 µg/m³ TWA: 50 µg/m³ excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m³ respirable dust : (250)/(%SiO2 + 5) mppcf TWA respirable fraction : (10)/(%SiO2 + 2) mg/m³ TWA respirable fraction	IDLH: 50 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust
Portland Cement 65997-15-1	TWA: 1 mg/m³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction TWA: 50 mppcf <1% Crystalline silica	IDLH: 5000 mg/m³ TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
Titanium Dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³ TWA: 2.4 mg/m³ CIB 63 fine TWA: 0.3 mg/m³ CIB 63 ultrafine, including engineered nanoscale
Red Iron Oxide 1309-37-1	TWA: 5 mg/m³ respirable particulate matter	TWA: 10 mg/m³ fume TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ fume and total dust Iron oxide (vacated) TWA: 5 mg/m³ respirable fraction regulated under Rouge	IDLH: 2500 mg/m³ Fe dust and fume TWA: 5 mg/m³ Fe dust and fume

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Powder		
Appearance	Color will vary	**Odor**	No information available
Color	No information available	**Odor threshold**	No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point/freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	No information available	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
Reacts slowly with water forming hydrated products

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
Reactive or incompatible with oxidizing materials, acids, aluminum and ammonia salts.

Conditions to avoid
Extremes of temperature and direct sunlight.

Incompatible materials
Cement is reactive or incompatible with oxidizing materials, acids, aluminum, and ammonium salt. Cement is highly alkaline and will react violently with acids that can produce toxic gases or vapors. Silica reacts violently with oxidizing agents. Silicates dissolve readily in hydrofluoric acid and produces corrosive gas.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO_2). Sulfur oxides. Metal oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available

Inhalation Harmful by inhalation.

Eye contact Avoid contact with eyes. Risk of serious damage to eyes.

Skin Contact Irritating to skin. May cause burns in the presence of moisture. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion May be harmful if swallowed. Can burn mouth, throat, and stomach.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium Dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-
Red Iron Oxide 1309-37-1	> 10000 mg/kg (Rat)	-	-
Black Iron Oxide 1317-61-9	> 10000 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause serious burns in the presence of moisture.
Serious eye damage/eye irritation May cause serious burns in the presence of moisture. Risk of serious damage to eyes.
Sensitization Repeated or prolonged contact may cause allergic reactions in very susceptible persons.
Germ cell mutagenicity Not classified. (Based on mixture components).
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Quartz, Crystalline Silica 14808-60-7	A2	Group 1	Known	X
Titanium Dioxide 13463-67-7	-	Group 2B	-	X
Red Iron Oxide 1309-37-1	-	Group 3	-	-

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
The International Agency for Research on Cancer ("IARC") concluded that there was "sufficient evidence in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite. Crystalline silicia in the form of quartz or cristobalite dust causes cancer of the lung", and that there is "sufficient evidence in experimental animals for the carcinogenicity of quartz dust" The overall IARC evaluation was that "crystalline silica quartz or cristobalite dust is carcinogenic to humans (Group 1)."
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Not classified. (Based on mixture components).
STOT - single exposure Target Organs. Respiratory system.
STOT - repeated exposure Causes damage to lungs through prolonged or repeated exposure if inhaled. Overexposure to dust can cause chronic lung injury such as chronic silicosis, accelerated silicosis, and acute silicosis. Several studies have also reported excess cases of kidney diseases in silica exposed workers.
Target Organ Effects lungs, kidney.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 5177 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product has not been fully evaluated on the product level.

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO (air) Not regulated

IATA Not regulated

IMDG Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Does not comply
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA): This product does not contains chemicals at levels that are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories
See section 2 for more information

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain substances that would exceed the reportable quantity as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
WARNING: This product can expose you to chemicals including Silica, Crystalline which are known to the State of California to cause cancer, and chemicals including Hexavalent Chromium which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

U.S. State Right-to-Know Regulations

This product contains substances regulated by state right-to-know regulations. For more information, please contact your sales or technical representative.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** 3	**Flammability** 0	**Reactivity** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 3	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Prepared By Solomon Colors - Lab Technical Services
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Revision Note
Periodic Review

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet