

Ransom & Randolph

1. Product and Company Name

<i>Product Name</i> Primcote® PLUS Binder	<i>MSDS Code Number</i> 237
<i>Trade Name & Synonyms</i> Silica Sol Formulation	<i>Date of Last Revision</i> 09/03
<i>Chemical Name</i>	<i>Manufacturer</i> Ransom & Randolph
<i>C.A.S. Number</i>	<i>Address</i> 3535 Briarfield Blvd, Maumee, OH 43537
<i>Grades or Minor Variant Identities</i>	<i>Information Telephone Number</i> 419/865-9497 FAX 419/865-9997
<i>Product Use</i>	<i>Emergency Telephone Number</i> 419/865-9497

2. Composition

<u>Hazardous Components</u>	<u>C.A.S. Number</u>	<u>%</u>
Silica (amorphous)	7631-86-9	<50
Dipotassium fluorescein	6417-85-2	<10
Ethoxylated alcohol	29938-91-8	<5

3. Hazardous Identification*Emergency Overview*

Contains alkaline material. May cause irritation. Avoid contact with eyes, skin, and clothing. Wash exposed skin areas thoroughly. Wash contaminated clothing before re-use.

<i>Routes of Exposure</i>	<i>Signs & Symptoms</i>	<i>Single, Repeated, or Lifetime Exposure</i>	<i>Severity (Mild, Moderate, Severe)</i>	<i>Acute and Chronic Health Effect(s)</i>	<i>Target Organ(s)</i>
<i>Eye</i>	Irritation				
<i>Skin</i>	May tend to dry out skin.				
<i>Inhalation</i>	Prolonged exposure to amorphous silica (respirable) can lead to lung injury.				
<i>Ingestion</i>					
<i>Other</i>					

Medical Conditions Aggravated by Exposure

None known

Carcinogenicity (IARC, NTP)

In the as shipped form, this product was not evaluated by the IARC, not listed by NTP and not regulated by OSHA.

Although amorphous silica is not a carcinogen as purchased in this product, portions of it may convert to crystalline silica (cristobalite) when subjected to higher temperatures (e.g. 1700 Deg F), such as when used in a mold for ferrous and other high temperature alloy castings. The exposure to crystalline silica is highest at the mold knockout stage of the casting process.

The specifics on carcinogenicity of respirable crystalline silica follow:

The exposure limits for respirable crystalline silica; specifically cristobalite, established by OSHA-PEL = 0.05 mg/m³.

The IARC and NTP report the following on the carcinogenicity of respirable crystalline silica:

The National Toxicology Program (NTP) published its Ninth Annual Report on Carcinogens which concludes that "silica, crystalline (respirable)" is known to be a human carcinogen. The NTP conclusion is based on experimental animals and limited evidence in humans.

IARC Monograph Volume 68: Silica, silicates, coal dust, and para-aramid fibrils states that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the forms of quartz and cristobalite from occupational sources. Crystalline silica is categorized in the "Group 1" category which the IARC defines as the agent is carcinogenic to humans.

For more detailed information on the effects of crystalline silica, contact the manufacturer.

4. First Aid Measures

<i>Routes of Exposure</i>	<i>First Aid Instructions</i>	<i>Immediate Medical Attention</i>	<i>Delayed Effects</i>
<i>Eye</i>	Flush with flowing water at least 15 minutes.		If irritation persists, call a physician
<i>Skin</i>	Wash with soap and water.		
<i>Inhalation</i>	Remove to fresh air. Call a physician.		
<i>Ingestion</i>	Call a physician.		
<i>Other</i>	NEVER give fluids to induce vomiting if patient is unconscious or having convulsions.		

Note to Physicians (Treatment, Testing, and Monitoring)

5. Fire-fighting Measures

<i>Flashpoint: (Method)</i> N/A	<i>Flammable (Explosive) Limits in Air</i> LEL: N/A UEL: N/A		<i>Autoignition Temperature:</i>	<i>Other</i>
<i>Flame Propagation or Burning Rate (for solids):</i>	<i>Properties Contributing to Fire Intensity</i>	<i>Flammability Classification NFPA Rating:</i>		
<i>Extinguishing Media</i> Water spray, carbon dioxide, foam, dry chemical		<i>Extinguishing Media to Avoid</i>		

Protection and Procedures for Firefighters:

Unusual Fire and Explosion Hazards:

None

6. Accidental Release Measures

Containment Techniques

Contain spill to prevent spreading.

Spill/Leak Clean-Up Procedures and Equipment

Absorb on solid absorbent material. Shovel into containers.

Evacuation Procedures

Special Instructions

Reporting Requirements

7. Handling and Storage

Handling Practices and Warnings

Normal handling precautions applicable to industrial chemicals.

Storage Practices and Warnings

Keep from freezing. Binder stored in transparent or translucent containers should be sheltered from direct sunlight.

8. Exposure Controls/Personal Protection

Ventilation

Other Engineering Controls

General ventilation and local exhaust.

Routes of Entry:

Personal Protective Equipment (PPE) for Normal Use:

PPE for Emergencies:

Eye/Face

Recommend chemical workers goggles

Skin

Protective gloves

Inhalation

NIOSH approved respirator

General Hygiene Considerations and Work Practices

Other Protective Measures and Equipment

Eye wash and shower.

9. Physical and Chemical Properties

Appearance

Yellow or white liquid

Odor

Normal Physical State:

Liquid X Gas

Solid

Boiling Point

212°F (100°C)

Melting Point

32°F (0°C)

Freezing Point

32°F (0°C)

Specific Gravity or Density (H₂O=1)

1.17 – 1.18

Solubility in Water

E100%

pH

E10.6 (typical)

Vapor Pressure (mm Hg.)

17.5 mm Hg

Vapor Density (AIR = 1)

0.016

Evaporation Rate (water=0)

1

Other

% Volatile by Volume: 65% (water)

10. Stability and Reactivity

Incompatibility (Materials to Avoid)

Acids

Hazardous Products Produced During Decomposition

None

Hazardous Polymerization?

May Occur

May Not Occur

Conditions to Avoid

N

Y

N/A

Stability?

Stable

Unstable

Conditions to Avoid

Y

N

Freezing

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data

12. Ecological Information

Toxicity, Environmental Fate, Physical/Chemical Data, or Other Data Supporting Environmental Hazard Statements

No ecotoxicity data is available. This product is not expected to present an environmental hazard.

13. Disposal Considerations

Regulations

Properties (Physical/Chemical) Affecting Disposal

14. Transport Information

Regulated for shipping?

Yes No X

Proper Shipping Name

Cement high temp bonding – bulk

Packing Group

N/A

Do changes in quality, packaging, or shipment method change product classification?

Yes No X

Hazard Class

N/A

Identification Number

N/A

Other

15. Regulator Information

Federal Regulations

International Regulations

Other

This product contains trace amounts of the following chemicals known to the State of California to cause cancer and/or reproductive toxicity:

1, 3 Butadiene
1, 4 Dioxane
Ethylene Oxide

This product contains alkaline material. May cause irritation. Avoid contact with eyes, skin, and clothing. Wash exposed skin areas thoroughly. Wash contaminated clothing before re-use. Portions of this product are silica (amorphous) which can become respirable in certain applications.

16. Other Information

NFPA Hazard Rating	Health: 1	Flammability: 0	Reactivity: 0
HMIS Hazard Rating	Health: 1	Flammability: 0	Reactivity: 0
Personal Protection: Use NIOSH/MSHA/OSHA approved respirator.			

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