



# SAFETY DATA SHEET OF JSP Silver Test Solution #GT41

According to ISO 11014:2010  
First Print Date: 4-May-2019  
Revision Date: --  
Version: 1

## Section 1: Chemical Product and Company Identification

### Product identifier:

Identification as on the label/Trade name: Silver Test Solution

Unique Product Code/s: #GT41

### Relevant identification uses of the substance and uses advised against:

Identified uses: Silver test solution.

Uses advised against: No other uses are advised.

### Details of the supplier of the Safety Data Sheet:

JSP  
1632 North Indiana Street  
Los Angeles, California 90063

### Contact details and website:

+1-323-231-0600

[sales@jsp.cc](mailto:sales@jsp.cc)

### Emergency telephone numbers:

24-hour Emergency Contact: 800-255-3924

CHEMTREC 24-hour: 813-248-0585

## Section 2: Hazards Identification

### Classification of the substances or mixture:

The mixture is classified according to: Regulation EC 1272/2008 [EU-GHS/CLP]

#### **Hazard classes/Hazard categories:**

Oxidizing solids (Category 2)  
Acute toxicity, Dermal (Category 1),  
Skin corrosion (Sub-category 1B)  
Skin sensitisation (Category 1)  
Serious eye damage (Category 1)  
Acute toxicity, Inhalation (Category 2),  
Respiratory sensitisation (Category 1)  
STOT SE (Category 3)  
Germ cell mutagenicity (Category 1B),  
Carcinogenicity (Category 1B)  
Reproductive toxicity (Category 1B)  
STOT RE (Category 1)

#### **Hazard Statement:**

H272  
H310  
H314  
H317  
H318  
H330  
H334  
H335  
H340  
H350  
H360  
H372

## Label elements:

### Hazard pictograms:



**Signal Words:** DANGER.

### Precautionary Statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 Keep away from clothing and other combustible materials.

P260 Do not breathe dust or mist.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338+ P310 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

**Special labeling of certain mixtures:** None known.

**Other hazards:** None known.

## Section 3: Composition/Information on Ingredients

**Substance/Mixture:** Mixture.

Substance name (IUPAC/EC)	CAS-No.	Concentration % by weight	Classification EC1272/2008
Nitric acid	7697-37-2	28 -40%	Ox. Liq. 3, H272 Skin. Corr. 1A, H314 Acute Tox. 3, H331
Potassium dichromate	7778-50-9	4%	Ox. Sol. 2; Acute Tox. 3; Acute Tox. 2; Acute Tox. 1; Skin Corr. 1B; Eye Dam. 1; Resp. Sens. 1; Skin Sens. 1; Muta. 1B; Carc. 1B; Repr. 1B; STOT SE 3; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H272, H301, H330, H310, H314, H318, H334, H317, H340, H350, H360FD, H335, H372

**The exact percentages (concentration) of composition have been withheld as a trade secret.**

**Ingredients:** Contains other inert ingredients which are within the current knowledge of the supplier and in the concentration applicable, are not classified as hazardous to health or the environment and hence require reporting in this section.

## Section 4: First-Aid Measures



# SAFETY DATA SHEET OF JSP Silver Test Solution #GT41

## **Description of first aid measures:**

**First-aid measures general:** No data available.

**First-aid measures after inhalation:** Immediately remove victim to fresh air. If breathing is difficult, give oxygen if available and obtain immediate medical attention. If not breathing, give artificial respiration. WARNING: if may be hazardous to the person providing artificial respiration when the inhaled material is toxic, infectious or corrosive.

**First-aid measures after skin contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing any contaminated clothing or shoes. Cover the irritated skin with an emollient. Obtain medical attention. Wash any contaminated clothing and/or shoes before reuse.

**First-aid measures after eye contact:** Immediately flush eyes with cold water for at least 15 minutes while lifting upper and lower eyelids. Be sure to remove any contact lenses. Obtain immediate medical attention.

**First-aid measures after ingestion:** DO NOT INDUCE VOMITING. If person is fully conscious, give one or two glasses of water or milk and obtain immediate medical attention.

## **Section 5: Fire-Fighting Measures**

### **Extinguisher media:**

**Suitable extinguisher media:** Water spray may be used to keep fire exposed containers cool. Do not get water inside container.

**Unsuitable extinguishing media:** None known.

**Special hazards arising from the mixture:** Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Can react with metals to release flammable hydrogen gas.

**Advice for fire-fighters:** Increases the flammability of combustible, organic and readily oxidizable materials. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

## **Section 6: Accidental Release Measures**

### **Personal precautions, protective equipment and emergency procedures:**

No data available.

### **Methods for containment and cleaning up:**

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

### **Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**Additional information:** None known.

## **Section 7: Handling and Storage**

### **Precautions for safe handling:**

Do not wash out container and use it for other purposes. When diluting, the acid should always be added slowly to water and in small amounts. Never use hot water and never add water to the acid. Water added to acid can cause uncontrolled boiling and splashing. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

### **Conditions for safe storage, including incompatibilities:**

Oxidizing materials should be stored in a separate safety storage cabinet or room that is cool, dry, ventilated and acid

## **Section 8: Exposure Controls and Personal Protection**



## SAFETY DATA SHEET OF JSP Silver Test Solution #GT41

resistant. Protect from physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials.

### **Control parameters:**

### **Occupational exposure limits:**

Component	OSHA PEL (TWA)	OSHA PEL (STEL)	ACGIH (TWA)	ACGIH (STEL)
Nitric acid	4 ppm	2 ppm	4 ppm	2 ppm
Potassium dichromate	0.1 mg/m <sup>3</sup>	-	0.05 mg/m <sup>3</sup>	-

**Biological exposure indices (BEI):** No data available.

**Additional exposure limits under the conditions of use:** No data available.

### **Exposure control:**

**Appropriate engineering controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

### **Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** Wear Chemical Safety Goggles and/or Face Shield to protect eyes and face.

**Skin protection:** Sleeved Length Impervious Rubber Gloves or approved equivalent for handling and use. Wear Rubber boots, Impervious Rubber Apron or Suit when appropriate for use.

**Respiratory protection:** Use a NIOSH approved/certified Full Face Vapor Respirator or a Positive Pressure Self Contained Breathing Apparatus.

**Environmental exposure controls:** None required.

## Section 9: Physical and Chemical Properties

### **Information on basic physical and chemical properties**

**Appearance (form):** Liquid

**Color:** Reddish

**Odor threshold:** Suffocating, acrid

**pH (concentration):** 1.0

**Melting point/range (°C):** -42 °C

**Boiling point/range (°C):** 122 °C

**Flash point (°C):** Not known.

**Evaporation rate:** Not known.

**Flammability (solid, gas):** Not known.

**Ignition temperature (°C):** Not known.

**Upper/lower flammability/explosive limits:** Not known.

**Vapor pressure (20 °C):** 48

**Vapor density:** 2-3

**Relative density (25 °C):** Not known.

**Water solubility (g/L) at 20 °C:** Infinitely soluble.

**n-Octanol/Water partition coefficient:** Not known.

**Auto-ignition temperature:** Not known.

**Decomposition temperature:** Not known.

**Viscosity, dynamic (mPa s):** Not known.



## SAFETY DATA SHEET OF JSP Silver Test Solution #GT41

### Physical hazards:

None.

### Other information:

**Fat solubility (solvent-oil to be specified):** Not known.

**Bulk density:** Not known.

**Dissociation constant in water (pKa):** Not known.

**Oxidation-reduction potential:** Not known.

## Section 10: Stability and Reactivity

**Reactivity:** Stable

**Chemical stability:** Stable under ordinary conditions of use and storage. Containers may burst when heated.

**Possibility of hazardous reactions:** Hazardous polymerization is not expected to occur.

**Conditions to avoid:** Light, heat and incompatible materials.

**Incompatible materials:** Nitric Acid is a dangerously powerful oxidizing agent and is incompatible with most substances, especially strong bases, metallic powders, carbides, hydrogen sulfide, turpentine, charcoal and combustible organics.

**Hazardous decomposition products:** When heated to decomposition, emits toxic nitrogen oxides fumes and hydrogen nitrate. Will react with water or steam to produce heat and toxic and corrosive fumes. (Nitric acid, fuming)

## Section 11: Toxicological Information

### Toxic kinetics, metabolism and distribution:

**Non-human toxicological data:** No data available.

**Method:** No data available.

**Dosage:** No data available.

**Routes of administration:** No data available.

**Results:** No data available.

**Absorption:** No data available.

**Distribution:** No data available.

**Metabolism:** No data available.

**Excretion:** No data available.

### Information on toxicological effects:

#### **Acute toxicity:**

Nitric acid:LC50 (inhaled) 217 ppm/4h (rat)

Potassium dichromate: LD50 (oral) 25 mg/kg (rat).

LD50 (dermal) 14 mg/kg (rat)

**Skin corrosion/irritation:** Causes severe skin burns and eye damage.

**Serious eye damage/irritation:** Causes serious eye damage.

**Respiratory or skin sensitization:** May cause an allergic skin reaction.

**Germ cell mutagenicity:** May damage fertility. May damage the unborn child.

**Carcinogenicity:** Potassium dichromate: May cause cancer.

**Reproductive toxicity:** May damage fertility. May damage the unborn child.

**STOT-single exposure:** May cause respiratory irritation.

**STOT-repeated exposure:** Causes damage to organs (Cardio-vascular system) through prolonged or repeated exposure if inhaled.

**Aspiration hazard:** No data available.



# SAFETY DATA SHEET OF JSP Silver Test Solution #GT41

## Section 12: Ecological Information

**Toxicity:** No data available.

**Persistence and degradability:** No data available.

**Bio accumulative potential:** No data available.

**Mobility in soil:** No data available.

**Results of PBT& vPvB assessment:** No data available.

**Other adverse effects:** No data available.

## Section 13: Disposal Considerations

**Waste treatment methods:** Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. This product would be classified as a RCRA hazardous waste and requires appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.

**Product/packaging disposal:** Dispose of container and unused contents in accordance with federal, state and local requirements.

## Section 14: Transport Information

**UN number:** ADR/RID: 2031 IMDG: 2031 IATA: 2031

**UN proper shipping name:**

ADR/RID: NITRIC ACID

IMDG: NITRIC ACID

IATA: Nitric acid

Passenger Aircraft: Not permitted for transport

**Transport hazard class (es):** ADR/RID: 8 (5.1) IMDG: 8 (5.1) IATA: 8 (5.1)

**Packing group:** PG II

**Environmental hazards:** Yes

**Special precautions for user:** No data available.

**Transport in bulk according to Annex II of Marplot and the IBC Code:** Not applicable.

## Section 15: Regulatory Information

SARA	Sec 313		Sec 311 & 312 Hazards			Sec. 302
Chemical Name	Acute	Chronic	Flammable	Pressure	Reactive	Extremely Hazardous Substance
Nitric acid	Yes	Yes	Yes	No	Yes	Yes
Potassium dichromate	Yes	Yes	Yes	No	Yes	Yes

**CALIFORNIA WARNING!** This product contains chemicals known to the state of California to cause:

Potassium dichromate: birth defects, reproduction harm, cancer.

### INTERNATIONAL REGULATIONS

The components of this product are listed on the chemical inventories of the following countries

Nitric acid: Australia, Canada, Europe (EINECS), Japan, Korea, UK.

Potassium dichromate: Australia, Canada, Europe (EINECS), Japan, Korea, UK.

### WHMIS Classification (CANADA):



## SAFETY DATA SHEET OF JSP Silver Test Solution #GT41

---

Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).

Class D-2A: Material causing other toxic effects (VERY TOXIC).

Class E: Corrosive Liquid

Class C: Oxidizing material.

### Section 16: Other Information

**Indication of changes:** GHS aligned.

**Relevant classification and H statements (number and full text):**

H272 May intensify fire; oxidizer.

H301 Toxic if swallowed.

H310 + H330 Fatal in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H340 May cause genetic defects.

H350 May cause cancer.

H360FD May damage fertility. May damage the unborn child.

H372 Causes damage to organs (Cardio-vascular system) through prolonged or repeated exposure if inhaled.

**Training instructions:** Use as instructed.

**Further information:** This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

**Notice to readers:** Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.