

# MATERIAL SAFETY DATA SHEET



## 1. Product Information

**Product:** Peri 1 System Fixer  
**Product Use:** X-ray fixer for *Peri-Pro* systems  
**Supplier:** maxill inc.  
80 Elm Street, St. Thomas, ON  
Canada N5R 6C8

**Product Code:** 60705 60009 – 1 L

**Contacts:** Head Office: (519) 631-7370 Fax: (519) 631-3388  
In case of a dangerous goods emergency, call CANUTEC at the 24-HOUR number: (613) 996-6666

**WHMIS Classification:** CLASS D2(B)



## 2. Preparation Information

**Date Prepared:** 23 May 2013  
**Prepared by:** Operations Department  
**Glossary of Terms:** NAV – Not Available

**Replaces:** 17 May 2010

**Revision:** 5

NAP – Not Applicable

DG – Dangerous Goods

## 3. Hazardous Ingredients

<u>Ingredient</u>	<u>CAS</u>	<u>% Range</u>	<u>LD50 Oral</u>	<u>LD50 Dermal</u>	<u>LC50 Inhalation</u>
Ammonium Thiosulfate	7783-18-8	10 - 30	mg/kg Species 2890 Rat	mg/kg Species NAV NAV	ppm/1h Species NAV NAV
Sodium Sulfite	7757-83-7	1 – 5	2610 Rat	NAV NAV	NAV NAV
Acetic Acid	64-19-7	1 – 5	3310 Rat	1060 Rabbit	5260 NAV

## 4. Physical Data

**Physical State:** Liquid  
**Boiling Point:** > 100°C  
**Appearance:** Clear, very pale yellow  
**Odour:** NH<sub>4</sub> Thiosulfate, Acetic Acid

**Specific Gravity:** 1.0980  
**Freezing Point:** < 0°C  
**Evaporation Rate:** 1.0 (BuAc = 1)  
**Odour Threshold:** NAV

**Vapour Density:** 0.6 (air = 1)  
**Vapour Pressure:** > 25 mm Hg  
**pH:** 4.60  
**Coeff. of H<sub>2</sub>O / Oil Distribution:** NAV

## 5. Fire and Explosion Data

**WHMIS CLASS B?** No  
**Upper Explosion Limit:** NAP  
**Lower Explosion Limit:** NAP

**Flash Point:** None  
**Auto Ignition Temperature:** NAV

**Sensitivity to Static Charge:** No  
**Sensitivity to Impact:** No

**Exinction Media:** Product is not combustible. Use dry chemical, foam or CO<sub>2</sub> for a surrounding fire.

**Conditions to Avoid:** Avoid contact with strong alkalis, strong acids, nitrites, nitrates and oxidizers.

**Hazardous Combustion Products:** May emit toxic fumes of carbon and sulfur oxides, ammonia, hydrogen sulfide and sodium sulfide (flammable, irritant) if expose fire. Carbon monoxide, sulfur dioxide and hydrogen sulfide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant.

## 6. Toxicological Properties

**Route of Entry:** Eyes, skin contact, inhalation and ingestion.

**Effects of Acute Exposure:**

**Eyes:** Causes severe irritation and or burns to the eyes. May cause severe corneal injury and impairment of vision if prompt first-aid and medical treatment are not obtained.

**Skin:** Brief contact will cause itching with mild to moderate local redness and possibly swelling. Prolonged contact may result in severe redness and swelling and cause an allergic reaction.

**Inhalation:** Mists, aerosols or vapours are irritating to the respiratory tract, causing stinging sensations in the nose and throat. May cause severe allergic reactions in some asthmatics and sulfite sensitive individuals. May cause breathing difficulty and headache.

**Ingestion:** May cause marked irritation to the mouth, throat, esophagus and stomach. Sodium Sulfite has been demonstrated to have mutagenic effects in humans and mammals.

**LD50 Oral:** 10,862 mg/kg (Rat)

**LD50 Dermal:** NAV

**LC50 Inhalation:** NAV

**Irritancy of Product:** Corrosive to eyes, irritating to skin. May cause allergic reactions in some asthmatics.

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## 6. Toxicological Properties (continued)

**Exposure Limit:** ACGIH recommended ceiling limit for sodium sulfite is  $5 \text{ mg/m}^3$ . For  $\text{SO}_2$  the TWAEV is 2 ppm and the STEV is 5 ppm. The exposure limit for ammonium thiosulfate has not been established. The ACGIH TLV-TWA for acetic acid is 10 ppm.

**Carcinogenicity:** No

**Sensitization to Product:** May cause skin sensitization, dermatitis, and an allergic reaction in a small portion of individuals.

**Teratogenicity:** No

**Reproductive Toxicity:** No

**Mutagenicity:** Yes

**Effects of Chronic Exposure:** Potentially sensitizing

**Synergistic Materials:** NAV

## 7. First Aid Measures

**Eye Contact:** Rinse immediately with cool water, remove contact lenses if any, and continue rinsing with water for at least 15 minutes while holding eyelids open. Call a physician immediately.

**Ingestion:** Do not induce vomiting. Give large amounts of milk, egg whites, gelatin solution or water and call a physician immediately. Do not give anything by mouth if person is unconscious or convulsing.

**Inhalation:** Remove to fresh air. If breathing is difficult, consult a physician.

**Skin Contact:** Remove contaminated clothing and shoes. Wash well the skin with soap and water. Wash clothing before wearing again. If irritation develops and persists, consult a physician.

## 8. Preventive Measures

**Engineering Controls:** General ventilation.

**Handling Procedures:** Avoid ingestion, eye or skin contact. Avoid inhalation of vapours.

**Storage Requirements:** Store in original container in a dry place at controlled room temperature, away from incompatible materials. Keep container closed when not in use.

**Leak and Spill Procedure:** Mop up excess spilled liquid. For small spills, collect with absorbent material such as paper, vermiculite or floor absorbent. Dispose of product in accordance with applicable regulations.

**Waste disposal:** Dispose of product in accordance with applicable federal, provincial and municipal regulations.

### **Protective Equipment for Bulk Handling of Sealed Containers:**

**Respiratory:** Not required under normal conditions of handling. Use a NIOSH approved respirator if mists or aerosols are generated or if TLVs and PELs exceed the regulated limit for sodium sulfite or acetic acid.

**Eyes:** Safety goggles are recommended.

**Gloves:** Impermeable gloves (rubber, synthetic) are recommended.

**Footwear:** Safety boots are recommended.

**Other:** Eye wash fountains are recommended.

### **Protective Equipment for End-Users:**

**Respiratory:** Not required under normal conditions of use.

**Eyes:** Safety goggles.

**Gloves:** Impermeable gloves (rubber, synthetic).

## 9. Reactivity Data

**Conditions of Instability:** Stable

**Incompatible Materials:** Avoid contact with oxidizers, strong alkalis, strong acids, nitrites, nitrates and alcohols.

**Conditions of Reactivity:** Heat, oxidizers

**Hazardous Decomposition Products:** May liberate toxic fumes of carbon monoxide, carbon dioxide, ammonia, sulfur dioxide that is toxic and corrosive, sodium sulfide residue that is flammable and oxides of nitrogen if exposed to fire.

## 10. Special Shipping Information

<u>DG</u>	<u>Proper Shipping Name</u>	<u>TDG Hazard Class</u>	<u>UN Number</u>	<u>Packing Group</u>
No	NAP	NAP	NAP	NAP