

## Section 1. Chemical Product and Company Identification

<b>Product/Trade Name</b>	<b>AQUATAC® 4188</b>	<b>Code</b>	AQ4188
		<b>MSDS#</b>	6397
<b>Supplier / Manufacturer</b>	Arizona Chemical P.O. Box 550850 Jacksonville, FL 32255-0850 USA (800) 526-5294 / (904) 928-8700	<b>Validation Date</b>	4/24/2003
		<b>Print Date</b>	4/24/2003
<b>Chemical Name</b>	Rosin ester dispersed in water	<b>EMERGENCY PHONE</b> CHEMTREC: 1-800-424-9300 (transportation and medical)	

## Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight
1) Modified Rosin Ester	Proprietary, NJTSRN-6397	~ 40.0
2) Water	7732-18-5	~ 32.0
3) Synthetic Latex	Proprietary, NJTSRN-6397	~ 16.0
4) Modified Rosin	Proprietary, NJTSRN-6397	~ 10.0
5) N,N-Dimethylethanolamine (DMEA)	108-01-0	< 2.0
6) Surfactant	Proprietary, NJTSRN-6397	< 1.2

See Section 8 for Exposure Controls/ Exposure Limits/ Personal Protection information.

## Section 3. Hazards Identification

### EMERGENCY OVERVIEW

Product is a nonflammable creamy white viscous liquid with a slight odor. Product is irritating to eyes and skin. Irritation may be severe. May be harmful if absorbed through skin. May be harmful if swallowed. Inhalation of mists/vapors/fumes may cause respiratory irritation with throat discomfort, coughing, or difficulty breathing.

### HMIS

**HEALTH:** \* 2

**FIRE:** 0

**REACTIVITY:** 0

**PPE:** see Section 8 of this MSDS.

0=Minimal; 1=Slight; 2=Moderate;  
3=Serious; 4=Severe;  
(\*)=Chronic health hazard.

### Potential Health Effects

<b>Eye Contact</b>	Liquid or vapors are irritating to the eyes. Irritation may be severe. If heated product contacts the eye, thermal burns may result.
<b>Skin Contact</b>	Product is irritating to skin. Irritation may be severe. A component of this product may be absorbed through skin. Prolonged or repeated skin contact may cause irritation and burning. When it is heated, this product may cause thermal burns.
<b>Inhalation</b>	May be harmful if inhaled. Vapors may be irritating. Inhalation of mists/vapors/fumes generated by heating this product may cause respiratory irritation and burning with throat discomfort, coughing and difficulty breathing. A component of this product may cause respiratory sensitization. Repeated or prolonged inhalation of vapors/fumes generated by heating this product may lead to respiratory sensitization reactions, producing an asthma-like condition.
<b>Ingestion</b>	May be harmful if swallowed. Ingestion of large quantities may result in gastrointestinal disturbances including irritation, nausea, and diarrhea.

### Section 4. First Aid Measures

<b>Eye Contact</b>	Immediately flush eyes with flooding amounts of cool, low pressure water for at least 15 minutes. If irritation persists, get medical attention.
<b>Skin Contact</b>	In case of skin contact, wash immediately with soap and water. If irritation develops or persists, get medical attention. Launder contaminated clothing before reuse.
<b>Inhalation</b>	Move person to non-contaminated air. If affected person is not breathing, apply artificial respiration. Seek medical attention.
<b>Ingestion</b>	If swallowed, contact a physician or poison control center immediately. DO NOT induce vomiting unless directed to do so by medical personnel.
<b>Notes to Physician</b>	Provide general supportive measures and treat symptomatically. In case of ingestion, the decision of whether or not to induce vomiting should be made by the attending physician. If burn is present, treat as any thermal burn.

**\*\*\*If victims of chemical over-exposure are taken for medical attention, give a copy of the label or MSDS to the physician/health professional.\*\*\***

### Section 5. Fire and Explosion Data

<b>Flammability of the Product</b>	Nonflammable.
<b>Auto-Ignition Temperature</b>	Not available.
<b>Flash Point</b>	CLOSED CUP: >100°C (212°F). (Setaflash Closed Cup).
<b>Flammable Limits</b>	Not applicable

#### NFPA 704



This information is for people trained in the National Fire Protection Association's (NFPA 704) Identification of the Fire Hazards of Materials.

<b>General Fire Hazards</b>	This product is an aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a moderate fire hazard.
<b>Hazardous Decomposition Products</b>	Solution will boil and primarily emit steam until solid resin remains. If solid resin burns, smoke, carbon monoxide, carbon dioxide, trace oxides of nitrogen and sulfur may be released.
<b>Extinguishing Media</b>	If solid resin burns, use carbon dioxide, dry chemical or water.
<b>Fire Fighting Equipment and Instructions</b>	Wear full protective clothing, including self-contained positive pressure/pressure demand breathing apparatus, helmet, and protective clothing.

### Section 6. Accidental Release Measures

<b>Containment</b>	Contain the discharged material. Do not allow product to enter public drainage systems or open water courses.
<b>Clean-up Procedures</b>	Wear appropriate protective equipment and clothing during clean-up. Do not allow eye, skin contact, and inhalation of vapors during clean-up. Absorb spill with inert material. Shovel material into appropriate container for disposal. Thoroughly wash spill area with water after clean-up. Follow all Local, State, Federal and Provincial regulations for disposal.
<b>Evacuation Procedures</b>	Persons not wearing appropriate protective equipment should be excluded from area of spill until clean-up has been completed.
<b>Special Instructions</b>	Avoid contact with skin and eyes. Remove soiled clothing and launder before reuse.

### Section 7. Handling and Storage

<b>Handling</b>	Do not breathe vapors or mists. Do not allow product to come into contact with skin or eyes. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet or applying cosmetics.
<b>Storage</b>	Store at ambient temperature and atmospheric pressure. Do not allow product to freeze. Store above 40 F.

## Section 8. Exposure Controls/Personal Protection

**Engineering Controls** Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, ACGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Use local and general exhaust ventilation to effectively remove and prevent buildup of mists/vapors/fumes generated from the handling of this product.

### Personal Protection

**Eye/Face:** Wear chemical goggles and face shield if splashing is possible. Ensure compliance with OSHA's personal protective equipment (PPE) standard for eye and face protection, 29 CFR 1910.133.

**Skin:** Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves. For heated/molten product, use any type thermal insulating gloves and other clothing as necessary to protect from thermal burns. Ensure compliance with OSHA's personal protective equipment (PPE) standard, 29 CFR 1910.132 (general) and 138 (hand protection).

**Respiratory:** GAS/VAPOR: Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit-testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage, must be implemented. For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in Publication No. 87-116 or ANSI Z88.2-1992. Warning! Air-purifying respirators do not protect workers in oxygen deficient atmospheres.

**General:** Use good industrial hygiene practices in handling this material. Eye wash fountains and emergency showers are recommended. Launder contaminated clothing before reuse.

Chemical Name or Product Name	CAS #	OSHA PEL	ACGIH TLV
1) Modified Rosin Ester	Proprietary, NJTSRN-6397	Not established	Not established
2) Water	7732-18-5	Not established	Not established
3) Synthetic Latex	Proprietary, NJTSRN-6397	Not established	Not established
4) Modified Rosin	Proprietary, NJTSRN-6397	Not established	Not established
5) N,N-Dimethylethanolamine (DMEA)	108-01-0	Not established	Not established
6) Surfactant	Proprietary, NJTSRN-6397	Not established	Not established

*NOTE: The 1989 OSHA PELs were vacated in 1993 and are not currently enforceable by Federal OSHA. However, some state OSHA programs may still enforce the 1989 limits.*

## Section 9. Physical and Chemical Properties

<b>Physical state and appearance</b>	Liquid. (Viscous liquid.)	<b>Vapor Density</b>	<1 (Air = 1)
<b>Odor</b>	Amine like. (Slight.)	<b>Percent Volatile (EPA Method 24)</b>	<2%
<b>Color</b>	Creamy White	<b>Solubility (water)</b>	Dilutable.
<b>Molecular Weight</b>	Not applicable.	<b>Density (vs. water)</b>	Not available.
<b>Specific Gravity</b>	1.02 (Water = 1)	<b>Flash Point</b>	CLOSED CUP: >100°C (212°F). (Setaflash Closed Cup).
<b>Boiling Point</b>	100°C (212°F)	<b>R/B Softening Point</b>	Not applicable.
<b>pH</b>	8.8 - 9.0 [Basic.]	<b>Acid No. (per ASTM D-465)</b>	Not available

**Section 10. Stability and Reactivity Data**

<b>Chemical Stability</b>	The product is stable.
<b>Conditions to avoid</b>	Avoid strong oxidizing agents. Do not freeze.
<b>Incompatibility</b>	May react with strong oxidizing agents.
<b>Hazardous Decomposition Products</b>	Solution will boil and primarily emit steam until solid resin remains. If solid resin burns, smoke with carbon monoxide, carbon dioxide, trace oxides of nitrogen and sulfur may be released.
<b>Hazardous Polymerization</b>	Hazardous polymerization will not occur.

**Section 11. Toxicological Information**

<b>Toxicity to Animals</b>	<p>No data is available for the product as a whole, however information on a component(s) is as follows:</p> <p><b>Rosin Ester:</b>  ORAL, rat: LD50 = &gt; 5000 mg/kg - &gt; 10,000 mg/kg;  DERMAL, rabbit: LD50 = &gt;5000 mg/kg.</p> <p>In laboratory tests, rabbits exhibited mild eye irritation that was reversible after 72 hours when product was administered into the eyes. Skin irritation study in rabbits showed minimal to mild irritation. Product was not found to be a skin sensitizer in guinea pigs. Product was non-mutagenic in the Ames Salmonella Assay.</p> <p><b>N,N-Dimethylethanolamine:</b>  ORAL, rat, LD50 = 2340 mg/kg  DERMAL, rabbit, LD50 = 1370 mg/kg</p> <p>This component was found to be a severe eye irritant and a mild skin irritant in rabbits. Component was non-mutagenic in the Ames Salmonella Assay.</p> <p><b>Surfactant:</b>  ORAL, rat, LD50 = 1310 mg/kg;  DERMAL, rat, LD50 = 2000 mg/kg.</p> <p><b>Latex:</b>  ORAL, rat, LD50 = &gt; 90 g/kg.</p>
<b>Toxicity to Humans</b>	<p>Contact may cause severe skin or eye irritation. A component of this product (N,N-Dimethylethanolamine) may be absorbed through skin. May be harmful if inhaled. Vapors may be irritating. Inhalation of vapor/fumes generated by heating this product may cause respiratory irritation and burning with throat discomfort, coughing, and difficulty breathing. May be harmful if swallowed. Ingestion may cause nausea, vomiting, and diarrhea.</p> <p>A component of this product, N,N-Dimethylethanolamine under laboratory conditions produced asthmatic responses using a 2% solution. Repeated or prolonged inhalation of vapors/fumes generated by heating this product may lead to respiratory sensitization reactions, producing an asthma-like condition.</p> <p><b>CARCINOGENIC EFFECTS:</b> None of this product's components are listed as carcinogens by ACGIH, IARC, NIOSH, NTP or OSHA. <b>MUTAGENIC EFFECTS:</b> Not available. <b>TERATOGENIC EFFECTS:</b> Not available. No information available on the toxicity of this product to the reproductive system.</p>

**Section 12. Ecological Information**

<b>Ecotoxicity</b>	The pH range of 5-9 is unlikely to be harmful to any species. However, large spills or concentrated discharges of this product to water may result in suspended or settleable solids which lower the dissolved oxygen content of the water body. Sedimentation to the bottom of a body of water may result in detrimental effects to fish life by reducing their growth rate, preventing the successful development of fish eggs and larvae, or reducing the abundance of food available to the fish.
<b>Environmental Fate</b>	No information is available.

**Section 13. Disposal Considerations**

<b>Waste Disposal</b>	Wastes must be tested using methods described in 40 CFR 261 to determine if it meets applicable definitions of hazardous waste. No EPA Waste Numbers are applicable for this product's components. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Write to the address listed in Section 1 for information on heavy metals analysis and other disposal information.
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**Section 14. Transport Information**

<b>DOT Classification</b>	Not a DOT controlled material (United States).
<b>Proper Shipping Name</b>	Not applicable.
<b>DOT Identification Number</b>	Not applicable.
<b>Packing Group</b>	Not applicable.
<b>Hazardous Substances Reportable Quantity</b>	Not available.
<b>Special Provisions for Transport</b>	Not applicable.
<b>Additional Shipping Information</b>	Not Determined
<b>International Transportation Regulations</b>	Not Determined

**Section 15. Regulatory Information**

<b>Federal and State Regulations</b>	<p>OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).</p> <p>SARA TITLE III:  SARA Section 302 (40 CFR 355 Appendix A): <b>None of this product's components are listed;</b>  SARA Section 311/312: <b>Immediate (Acute) Health Hazard;</b>  SARA Section 313 (40 CFR 372.65): <b>None of this product's components are listed;</b>  CERCLA (40 CFR 302.4): <b>None of this product's components are listed.</b></p> <p>TSCA Inventory: All of this product's components are listed.</p> <p>International Inventories: All of this product's components are on or exempt from these inventories: Canada DSL, EINECS, Japan, Australia and the Philippines.</p> <p>The following components are on the State of Massachusetts Right to Know List:  <b>N,N-Dimethylethanolamine</b></p> <p>The following components are on the State of Pennsylvania Right to Know List:  <b>N,N-Dimethylethanolamine</b></p> <p>The following components are on the State of Florida Hazardous Substances List:  <b>N,N-Dimethylethanolamine</b></p> <p>The following components are on the State of New Jersey Right to Know List:  <b>N,N-Dimethylethanolamine</b></p> <p><b>WARNING:</b> THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM:  <b>trace impurities - toluene; butadiene; dioxane; ethylene oxide; acetaldehyde;</b></p>
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**Section 16. Other Information****Key/Legend**

ACGIH = American Conference of Governmental Industrial Hygienists. ANSI = American National Standards Institute. ASTM = American Society for Testing and Materials. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. DOT = Department of Transportation. EPA = Environmental Protection Agency. IARC = International Agency for Research on Cancer. LD = Lethal Dose. NIOSH = National Institute of Occupational Health and Safety. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. PEL = Permissible Exposure Limit. SARA = Superfund Amendments and Reauthorization Act. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act.

Validated by Richard Moye on 4/24/2003.

Verified by Richard Moye.

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**Supersedes Date** 12/20/01 **Reason for Revision** Updated Section 9.**Notice to Reader**

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