SECTION 1: IDENTIFICATION

Product Identifier
Product Form: Mixture
Product Name: Econo-Max-PCS
Synonyms: Clay Control Agent

Intended Use of the Product
Permanent Clay Stabilizer

Name, Address, and Telephone of the Responsible Party

Customer
Economy Polymers & Chemicals
435 E. Anderson Road
Houston, TX 77047
713-723-8416; 1-800-231-2066
www.economypolymers.com

Emergency Telephone Number

Emergency Number: CHEMTREC 1-800-424-9300 (US); 703-527-3887 (International, collect calls are accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)
Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT SE 3 H336

Full text of H-phrases: see section 16

Label Elements

GHS-US Labeling
Hazard Pictograms (GHS-US)

Signal Word (GHS-US) : Warning
Hazard Statements (GHS-US) : H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.

Precautionary Statements (GHS-US) : P261 - Avoid breathing vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear eye protection, face shield, protective clothing, protective gloves.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a poison center or doctor if you feel unwell.
P321 - Specific treatment (see section 4 on this SDS).
P332+P331 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Name</th>
<th>Product Identifier</th>
<th>% (w/w)</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-Propanol, zirconium(4+) salt</td>
<td>(CAS No) 23519-77-9</td>
<td>25.9</td>
<td>Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H336</td>
</tr>
<tr>
<td></td>
<td>Poly(diallyldimethylammonium chloride)</td>
<td>(CAS No) 26062-79-3</td>
<td>17</td>
<td>Aquatic Chronic 3, H412</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

**Description of First Aid Measures**

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If exposed or concerned: Get medical advice/attention.

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Obtain medical attention if irritation persists.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.

**Most Important Symptoms and Effects Both Acute and Delayed**

**General:** Causes serious eye irritation. Causes skin irritation. May cause drowsiness and dizziness.

**Inhalation:** May cause drowsiness or dizziness. In high concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination.

**Skin Contact:** Causes skin irritation. Symptoms may include: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

**Eye Contact:** Causes serious eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision.

**Ingestion:** May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Symptoms:** None expected under normal conditions of use.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media:** Dry powder, alcohol-resistant foam, water in large amounts, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Not considered flammable but will burn at high temperatures.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions are unlikely to occur under normal circumstances.

**Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.
**Econo-Max-PCS**

**Safety Data Sheet**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations


**Reference to Other Sections**
Refer to section 9 for flammability properties.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid all contact with skin, eyes, or clothing. Avoid breathing vapor, mist, or spray.

**For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

**For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Stop leak if safe to do so. Ventilate area.

**Environmental Precautions**

Prevent entry to sewers and public waters. Contact competent authorities after a spill.

**Methods and Material for Containment and Cleaning Up**

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: sawdust or cellulosic material. Contact competent authorities after a spill.

**Reference to Other Sections**

See heading 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for Safe Handling**

**Additional Hazards When Processed:** Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands, forearms, and other exposed areas thoroughly after handling.

**Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool, and well-ventilated place. Keep container closed when not in use. Store away from incompatible materials. Keep away from ignition sources.


**Specific End Use(s)**

Permanent Clay Stabilizer.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control Parameters**

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

<table>
<thead>
<tr>
<th>Zirconium compounds (RR-00624-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico OEL TWA (mg/m³)</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Mexico OEL STEL (mg/m³)</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>USA ACGIH ACGIH TWA (mg/m³)</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>USA ACGIH ACGIH STEL (mg/m³)</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>USA ACGIH ACGIH chemical category</td>
<td>Not Classifiable as a Human Carcinogen</td>
</tr>
<tr>
<td>USA OSHA OSHA REL (TWA) (mg/m³)</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>USA NIOSH NIOSH REL (TWA) (mg/m³)</td>
<td>5 mg/m³ (except Zirconium tetrachloride)</td>
</tr>
<tr>
<td>USA NIOSH NIOSH REL (STEL) (mg/m³)</td>
<td>10 mg/m³ (except Zirconium tetrachloride)</td>
</tr>
<tr>
<td>USA IDLH US IDLH (mg/m³)</td>
<td>25 mg/m³ (except Zirconium tetrachloride)</td>
</tr>
<tr>
<td>Alberta OEL STEL (mg/m³)</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>
Econo-Max-PCS
Safety Data Sheet
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

06/03/2015
EN (English US) 4/7

### Alberta
- OEL TWA (mg/m³): 5 mg/m³

### British Columbia
- OEL TWA (mg/m³): 10 mg/m³
- OEL STEL (mg/m³): 5 mg/m³

### Manitoba
- OEL TWA (mg/m³): 10 mg/m³
- OEL STEL (mg/m³): 5 mg/m³

### New Brunswick
- OEL TWA (mg/m³): 5 mg/m³
- OEL STEL (mg/m³): 10 mg/m³

### Newfoundland & Labrador
- OEL TWA (mg/m³): 5 mg/m³
- OEL STEL (mg/m³): 10 mg/m³

### Nova Scotia
- OEL TWA (mg/m³): 5 mg/m³
- OEL STEL (mg/m³): 10 mg/m³

### Northwest Territories
- OEL TWA (mg/m³): 5 mg/m³
- OEL STEL (mg/m³): 10 mg/m³

### Ontario
- OEL TWA (mg/m³): 5 mg/m³
- OEL STEL (mg/m³): 10 mg/m³

### Prince Edward Island
- OEL TWA (mg/m³): 5 mg/m³
- OEL STEL (mg/m³): 10 mg/m³

### Québec
- VECD (mg/m³): 10 mg/m³
- VEMP (mg/m³): 5 mg/m³

### Saskatchewan
- OEL TWA (mg/m³): 5 mg/m³
- OEL STEL (mg/m³): 10 mg/m³

### Yukon
- OEL TWA (mg/m³): 5 mg/m³
- OEL STEL (mg/m³): 10 mg/m³

### Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Protective clothing, Gloves. Protective goggles. Insufficient ventilation: wear respiratory protection.

**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical safety goggles.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

**Other Information:** When using, do not eat, drink, or smoke.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on Basic Physical and Chemical Properties**

- **Physical State:** Liquid
- **Appearance:** Light yellow, Transparent
- **Odor:** Fishy
- **Odor Threshold:** Not available
- **pH:** 5 - 7
- **Evaporation Rate:** Not available
- **Melting Point:** -20 °C (-4.0 °F)
- **Freezing Point:** Not available
Econo-Max-PCS
Safety Data Sheet
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 100 °C (&gt; 212 °F)</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Vapor Density at 20 °C</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.09</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosion Data – Sensitivity to Mechanical Impact</td>
<td>Not expected to present an explosion hazard due to mechanical impact.</td>
</tr>
<tr>
<td>Explosion Data – Sensitivity to Static Discharge</td>
<td>Not expected to present an explosion hazard due to static discharge.</td>
</tr>
</tbody>
</table>

### SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Hazardous reactions are unlikely to occur under normal circumstances.

**Chemical Stability:** Stable at standard temperature and pressure.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, ignition sources, combustible materials, incompatible materials.


**Hazardous Decomposition Products:** Carbon oxides (CO, CO₂). Hydrocarbons. Zirconium oxides. Chlorine oxides.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Causes skin irritation.

**pH:** 5 - 7

**Serious Eye Damage/Irritation:** Causes serious eye irritation.

**pH:** 5 - 7

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** May cause drowsiness or dizziness.

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** May cause drowsiness or dizziness. In high concentrations may cause narcotic effects.

Symptoms may include: dizziness, headache, nausea and loss of co-ordination.

**Symptoms/Injuries After Skin Contact:** Causes skin irritation. Symptoms may include: Redness, pain, swelling, itching, burning, dryness, and dermatitis.

**Symptoms/Injuries After Eye Contact:** Causes serious eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision.

**Symptoms/Injuries After Ingestion:** May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Symptoms:** None expected under normal conditions of use.

#### Information on Toxicological Effects - Ingredient(s)

**LD50 and LC50 Data:**
### Econo-Max-PCS

**Safety Data Sheet**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

| Poly(diallyldimethylammonium chloride) (26062-79-3) | 3000 mg/kg |

### SECTION 12: ECOLOGICAL INFORMATION

**Toxicity**  No additional information available

**Persistence and Degradability**  Not available

**Bioaccumulative Potential**  Not available

**Mobility in Soil**  Not available

**Other Adverse Effects**

**Other Information:** Avoid release to the environment.

### SECTION 13: DISPOSAL CONSIDERATIONS

**Sewage Disposal Recommendations:** Do not empty into drains; dispose of this material and its container in a safe way.

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

### SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/DOT/TDG

14.1. **UN Number**  Not regulated for transport

14.2. **UN Proper Shipping Name**  Not regulated for transport

14.3. **Additional Information**  Not regulated for transport

**Transport by Sea**  Not regulated for transport

**Air Transport**  Not regulated for transport

### SECTION 15: REGULATORY INFORMATION

#### US Federal Regulations

**Econo-Max-PCS**

1-Propanol, zirconium(4+) salt (23519-77-9)

*Listed on the United States TSCA (Toxic Substances Control Act) inventory*

Zirconium compounds (RR-00624-6)

*EPA TSCA Regulatory Flag*

P - P - indicates a commenced PMN substance.

Poly(diallyldimethylammonium chloride) (26062-79-3)

*Listed on the United States TSCA (Toxic Substances Control Act) inventory*

#### US State Regulations

Neither this product nor its chemical components appear on any US state lists.

#### Canadian Regulations

**Econo-Max-PCS**

1-Propanol, zirconium(4+) salt (23519-77-9)

*Listed on the Canadian NDSL (Non-Domestic Substances List)*

**WHMIS Classification**

Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Class B Division 3 - Combustible Liquid

Poly(diallyldimethylammonium chloride) (26062-79-3)

*Listed on the Canadian DSL (Domestic Substances List)*

**WHMIS Classification**

Uncontrolled product according to WHMIS classification criteria
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

**SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION**

**Revision Date** : 06/03/2015

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**GHS Full Text Phrases:**

<table>
<thead>
<tr>
<th>Aquatic Chronic 3</th>
<th>Hazardous to the aquatic environment - Chronic Hazard Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Flam. Liq. 3</td>
<td>Flammable liquids Category 3</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapor</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

**Party Responsible for the Preparation of This Document**

Economy Polymers & Chemicals
435 E. Anderson Road Houston, TX 77047
713-723-8416; 1-800-231-2066

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*