1. IDENTIFICATION

Product Identifier
Product Name PENETONE 2012C
Chemical Name Corrosion inhibitor

Recommended use of the chemical and restrictions on use
Recommended use Batch corrosion inhibition
Restrictions on use For industrial use only

Supplier details
West Penetone Inc.
11411-160 Street
Edmonton, AB,
T5M3T7
Tel: 780-454-3919

Emergency Telephone Number
Canutec (613)-996-6666 or 1-888-226-8832 – FOR 24 HOUR TRANSPORT EMERGENCY WITHIN CANADA
Chemtrec 1-800-424-9300 – FOR 24 HOUR TRANSPORT EMERGENCY WITHIN USA

2. HAZARDS IDENTIFICATION

Classification

<table>
<thead>
<tr>
<th>Flammable liquids</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity, oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity, dermal</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity, inhalation - vapors</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Carcinogenocity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>Category 1</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>Category 1</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Category 1</td>
</tr>
<tr>
<td>Hazardous to the aquatic environment, acute hazard</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Label Elements

DANGER

Hazard Statements
Highly flammable liquid and vapor
Harmful if swallowed, in contact with skin, or inhaled
Causes skin and serious eye irritation
Suspected of causing cancer or damaging fertility or the unborn child
Causes damage to organs; through prolonged or repeated exposure
May cause respiratory irritation; drowsiness or dizziness
May be fatal if swallowed and enters airways
Toxic to aquatic life

Precautionary Statements - Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

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

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof electrical/lighting/ventilation equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash face, hands, and any exposed skin thoroughly after handling.

Do not eat, drink, or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

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

Precautionary Statements - Response

IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF exposed or concerned: Call a POISON CENTER or doctor/physician.

In case of fire: Use carbon dioxide, foam, or dry chemical to extinguish.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant according to local, provincial/federal regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylenes</td>
<td>1330-20-7</td>
<td>40-70</td>
</tr>
<tr>
<td>quaternary ammonium compounds</td>
<td>68909-18-2</td>
<td>15-40</td>
</tr>
<tr>
<td>ethanol, 2,2’-oxybis-, reaction products with ammonia, morpholine derivative residues</td>
<td>68909-77-3</td>
<td>7-13</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl-omega-hydroxy-)</td>
<td>9016-45-9</td>
<td>7-13</td>
</tr>
<tr>
<td>methanol</td>
<td>67-56-1</td>
<td>3-7</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Ingestion

Rinse mouth. Do not induce vomiting unless directed by medical personnel. Immediately call a POISON CENTER or doctor/physician.

Skin contact

Take off immediately all contaminated clothing. Rinse skin with water or shower. If skin irritation occurs, get medical advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

Inhalation

If difficulties occur after mist/vapors/spray has been inhaled, remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Most important symptoms and effects, both acute and delayed

Contact with eyes may cause serious irritation leading to discomfort or pain, excess blinking and tear production with marked redness and swelling of the conjunctiva, and blurred vision. Contact with skin may be harmful if absorbed and cause irritation with local redness. Prolonged contact with skin may cause dryness. Inhalation of fume/gas/mist/vapors/spray may be harmful and cause respiratory tract irritation. Inhalation of mist/vapors/spray may be harmful and cause narcotic effects as well as irritation of the mucous membranes and upper respiratory tract leading to a burning sensation of the nose and throat, coughing, and difficulty breathing. Ingestion may be harmful and cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may cause pneumonitis if aspirated into lungs. Material contains ingredients which may cause damage to the nervous system (CNS), liver, kidneys, lungs, ears, skin or testes through prolonged or repeated exposure. See Section 2 for possible delayed effects.
Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
High-volume waterjet.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed including oxides of carbon, nitrogen, and other irritating gases.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Do not breathe vapor or mist. Wear appropriate respirator when ventilation is inadequate. Put on personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental Precautions
Avoid discharge into drains/surface waters/groundwater. Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up
Contain and solidify with inert absorbent material. Keep in suitable, closed containers for disposal. Following product recovery, flush the area with water. For large spills, stop flow of material, prevent product from entering drains, and pump off product where this is without risk and possible. Proceed as above.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Handling
Avoid contact and inhalation of mist/vapors/spray. Avoid contact with skin, eyes, and clothing. Ensure thorough ventilation of work areas. Use personal protective equipment. Smoking, eating, and drinking should be prohibited in the application area.

Conditions for safe storage, including any incompatibilities
Storage
Keep containers tightly closed away from direct sunlight in a dry, cool, and well-ventilated place, away from incompatible materials.

Incompatible Materials
Acids, oxidizing agents

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters
Only constituents with exposure limits are listed. Any constituent not listed has no known exposure limit.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylenes</td>
<td>TWA: 100 ppm/434 mg/m³</td>
<td>TWA: 100 ppm/435 mg/m³</td>
<td>Not available</td>
</tr>
<tr>
<td></td>
<td>STEL: 150 ppm/651 mg/m³</td>
<td>STEL: 150 ppm/655 mg/m³</td>
<td></td>
</tr>
<tr>
<td>methanol</td>
<td>TWA: 200 ppm</td>
<td>TWA: 200 ppm/260 mg/m³</td>
<td>TWA: 200 ppm/260 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL: 250 ppm</td>
<td>STEL: 250 ppm/325 mg/m³</td>
<td>STEL: 250 ppm/325 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment
Eye/face Protection
Safety glasses with side shields or goggles and/or face-shield where splashing hazards may exist.

Skin and body protection
Wear protective gloves and protective clothing.

Respiratory Protection
Wear respiratory protection if ventilation is inadequate. Respiratory protection in case of vapor/aerosol release.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Brown liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Aromatic/amine</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>7-8</td>
</tr>
<tr>
<td>Melting Point / Freezing Point</td>
<td>Approx. -26°C (-15°F)</td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>Approx. 138°C (282°F)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&lt;23°C (&lt;-73.4°F)</td>
</tr>
<tr>
<td>Evaporation Rate, n-BuAc = 1</td>
<td>Approx. 0.6</td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure mm Hg AT 20°C (68°F)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour Density (Air = 1)</td>
<td>&gt;3</td>
</tr>
<tr>
<td>Relative Density at 20°C (68°F)</td>
<td>0.85-0.95</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Miscible</td>
</tr>
<tr>
<td>Partition Coefficient, n-Octanol/Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Approx. 432-530°C (810-986°F)</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>Upper: 7.1% Lower: 1.0%</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
Not reactive.

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid
Avoid extreme temperatures. Store away from incompatible materials.

Incompatible Materials
Acids, oxidizing agents

Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition can lead to release of irritating gases and vapors such as oxides of carbon, nitrogen, as well as other low molecular weight hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
ATE_{mix} – LD50 oral – approx. ≥990mg/kg (rat), LD50 dermal – approx. ≥1290mg/kg (rabbit), LC50 inhalation-vapors – ≥18mg/L – 4 h (rat)
Information on likely sources of exposure

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylenes 1330-20-7</td>
<td>3500-4300 mg/kg (rat)</td>
<td>&gt;2000 mg/kg (rabbit)</td>
<td>&gt;20 mg/L (rat) – 4 h 5000 ppm (rat) – 4 h</td>
</tr>
<tr>
<td>quaternary ammonium compounds 68909-18-2</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivative residues 68909-77-3</td>
<td>8750 mg/kg (rat)</td>
<td>3850 mg/kg (rabbit)</td>
<td>Not available</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl-omega-hydroxy-9016-45-9)</td>
<td>2000-5000 mg/kg (rat)</td>
<td>&gt;2000 mg/kg (rabbit)</td>
<td>Not available</td>
</tr>
<tr>
<td>methanol 67-56-1</td>
<td>100 mg/kg (rat)</td>
<td>300 mg/kg (rabbit)</td>
<td>5 mg/L (rat)</td>
</tr>
</tbody>
</table>

Information on likely sources of exposure

- **Ingestion**: May be harmful if swallowed. May cause stomach pains and other delayed effects.
- **Skin corrosion/irritation**: Causes skin irritation and possible redness. Possible dermatitis with prolonged exposure.
- **Inhalation**: May cause coughing, respiratory irritation or narcotic effects, and possible damage.
- **Serious eye damage/irritation**: Causes serious eye irritation. May cause pain, watering, and redness.

### Delayed and immediate effects and also chronic effects from short and long-term exposure

- **Respiratory or skin sensitization**: Not a sensitizer.
- **Germ cell mutagenicity**: None known.
- **Carcinogenicity**: xylenes (CAS 1330-20-7) 2 Suspected of causing cancer (inhalation).
- **Reproductive toxicity**: xylenes (CAS 1330-20-7) 2 Suspected of damaging fertility or the unborn child.
- **STOT - single exposure**: xylenes (CAS 1330-20-7) 3 May cause drowsiness or dizziness; narcotic effects.
- **STOT - repeated exposure**: xylenes (CAS 1330-20-7) 1 Causes damage to organs (nervous system) through prolonged or repeated exposure (inhalation).
- **Aspiration Hazard**: xylenes (CAS 1330-20-7) 1 May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

See Section 2 & 4.

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### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

If available, ecotoxicity values of individual components are shown below.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Fish</th>
<th>Waterflea</th>
<th>Algae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penetone 2012C</td>
<td>ATE_{mix} – 1-10 mg/L: 96 h LC50</td>
<td>ATE_{mix} – 1-10 mg/L: 48 h EC50</td>
<td>Not available</td>
</tr>
</tbody>
</table>

- ** Persistence and degradability**: No information available
- **Bioaccumulative potential**: No information available
- **Mobility in soil**: No information available
- **Other adverse effects**: Do not release untreated into natural waters. No other adverse environmental effects are expected.

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### 13. DISPOSAL CONSIDERATIONS

- **Waste Disposal Method**: Dispose of in accordance with local regulations.
- **Contaminated Packaging**: Empty containers should be taken for local recycling, recovery, or waste disposal.

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### 14. TRANSPORT INFORMATION

| UN Number | 1993 |
UN Proper Shipping Name: Flammable Liquid, N.O.S. (xylenes, methanol)
Transport Hazard Class(es)
   Class: TDG: 3
      US DOT: 3
      IMDG: 3
   Label(s): 3
Packing Group: II
Marine Pollutant: No
Special precautions for user: None established

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not determined

15. REGULATORY INFORMATION

Canada (DSL/NDSL)
All ingredients contained in this product are in compliance with the Canadian Environmental Protection Act and are listed on the DSL or are exempt.

United States (TSCA)
All ingredients contained in this product are listed on the TSCA inventory or are exempt.

HMIS Information:
   Health: 2
   Flammability: 3
   Reactivity: 0

16. OTHER INFORMATION

Preparation Date: 22 May 2020
Revision Date: not applicable
Revision Note: not applicable

Disclaimer
The information provided on this SDS is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS