Section 1 – Identification
Product Identifier: Dyna-Plex 21C Semi-Kut 70
Other means of identification: Not available
Recommended use: Metalworking
Supplier Information:
Miller Industrial Fluids, A PetroChoice Company  Email: customerservice@millерif.com
1751 W. Raymond Street  Website: www.petrochoice.com
Indianapolis, IN 46221  Emergency: CHEMTREC, U.S.: 1-800-424-9300
Phone: (317) 634-7300  International: +1-703-527-3887
Fax: (317) 636-6761  Hours of Operation: 8am – 5pm

Section 2 – Hazards Identification
GHS Classification: Serious Eye Damage/Eye Irritation – Category 1
Skin Corrosion/Irritation – Category 1
Skin Sensitization – Category 1

GHS Label Elements

Hazard pictograms:
Signal Word: Danger.
Hazard Statement: Causes serious eye damage. Causes severe skin burns and eye damage. May cause an allergic skin reaction.

Precautionary Statements
Prevention:
Do not breathe gas, mists, vapors or spray.
Wear chemical resistant gloves, protective clothing, eye protection and face protection.
Contaminated work clothing must not be allowed out of the workplace.
Wash thoroughly after handling with plenty of soap and water.

Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse.
If skin irritation or rash occurs, get medical attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or physician.
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, seek medical attention.

Storage: Store locked up.
Dyna-Plex 21C Semi-Kut 70

Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other Hazards: None known.

Section 3 – Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substance/Mixture:</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name:</td>
<td>None</td>
</tr>
<tr>
<td>Other means of Identification:</td>
<td>None</td>
</tr>
<tr>
<td>CAS number/other Identifiers:</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Percent</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated heavy naphthenic</td>
<td>10-15</td>
<td>64742-52-5</td>
</tr>
<tr>
<td>Petroleum distillates, hydrotreated light naphthenic</td>
<td>5-10</td>
<td>64742-53-6</td>
</tr>
<tr>
<td>2-Aminooethanol</td>
<td>10-15</td>
<td>141-43-5</td>
</tr>
<tr>
<td>Ethanolamine and triethanolamine borate</td>
<td>5-10</td>
<td>68512-53-8</td>
</tr>
<tr>
<td>Sodium Sulfonate</td>
<td>1-5</td>
<td>Confidential</td>
</tr>
<tr>
<td>Alkanolamide</td>
<td>1-5</td>
<td>Confidential</td>
</tr>
<tr>
<td>Nonylphenol ethoxylated</td>
<td>1-5</td>
<td>9016-45-9</td>
</tr>
<tr>
<td>4-(2-Nitrobutyl)morpholine</td>
<td>1-5</td>
<td>2224-44-4</td>
</tr>
<tr>
<td>Carbamic acid, butyl-, 3-iodo-2-propynyl ester</td>
<td>0.1-1</td>
<td>55406-53-6</td>
</tr>
</tbody>
</table>

Section 4 – First Aid Measures

Description of necessary first aid measures:

Eye Contact: Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses, if safe and possible to do. Protect unharmed eye. Keep impacted eye(s) wide open while rinsing. Seek medical attention.

Inhalation: Move person to an area with fresh air. If breathing has stopped, give artificial respiration and call for emergency services immediately.

Skin Contact: Take off contaminated clothing and shoes immediately. Wash off with plenty of soap and water. If symptoms persist, call a physician.

Ingestion: Rinse mouth with plenty of water and drink plenty of water afterwards. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If large quantities are swallowed, call a physician immediately.

Most Important Symptoms/Effects, Acute and Delayed:

Eyes: May cause pain, redness, excessive tearing, light sensitivity and decrease of vision.
Skin: May cause pain, blisters and inflammation.
Indication of any immediate medical attention and special treatment needed:
If necessary, treat symptomatically.

Section 5 – Fire-fighting Measures
Extinguishing Media
Suitable Extinguishing Media: Use water fog or spray, foam, dry chemical or carbon dioxide (CO₂).

Unsuitable Extinguishing Media: None known.

Special Hazards arising from this mixture: Thermal decomposition products include oxides of carbon, nitrogen and sulfur.

Special protective equipment and precautions for firefighters: Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Section 6 – Accidental Release Measures
Personal Precautions, Protective Equipment, Emergency Procedures: Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and Materials for Containment and Cleaning up: Stop the flow of material, if this is without risk. Dike the spilled material, where possible. Absorb with an inert absorbent material and place in a suitable container for disposal. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Do not let product enter drains, sewer, rivers or lakes.

Section 7 – Handling and Storage
Precautions for Safe Handling: Wash hands after handling and before eating. Do not get this material in contact with eyes. Avoid contact with skin. Remove and wash contaminated clothing promptly.

Conditions for Safe Storage: Keep container tightly closed in a dry and well-ventilated place.

Section 8 – Exposure Controls/Personal Protection
Occupational Exposure Limits:
Dyna-Plex 21C Semi-Kut 70

ACGIH

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil mist</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Morpholine</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
<tr>
<td>1-Nitropropane</td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
</tbody>
</table>

OSHA

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil mist</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Morpholine</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
<tr>
<td>1-Nitropropane</td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
</tbody>
</table>

NIOSH

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil mist</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Morpholine</td>
<td>TWA</td>
<td>70 mg/m³</td>
</tr>
<tr>
<td>1-Nitropropane</td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
</tbody>
</table>

Appropriate Engineering Controls: Adequate ventilation should be provided whenever the material is heated or mists are generated. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Individual Protection Measures, such as Personal Protective Equipment:

Eye/Face Protection: Goggles/face shield are recommended.

Hand Protection: Neoprene or nitrile rubber gloves are recommended.

Skin & Body Protection: Chemical resistant long-sleeve clothing is recommended. Launder contaminated clothing before reuse.

Respiratory Protection: If vapors/mist concentration exceed the exposure limit(s), an appropriate certified respirator must be used.

General Hygiene Considerations: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Section 9 – Physical and Chemical Properties

Appearance: Clear, light amber

Physical State: Liquid

Odor: Mild

Odor Threshold: Not Available

pH: 9 - 10
Melting/Freezing Point: 32°F (0°C)
Initial Boiling Point: Not Available
Flash Point: >392 °F (200°C)
Evaporation Rate: Not Available
Flammability (solid, gas): Not Available
Upper/Lower Flammability or Explosive Limits
Flammability Limit
  Lower %: Not Available
  Upper %: Not Available
Explosive Limit
  Lower %: Not Available
  Upper %: Not Available
Vapor Pressure: Not Available
Vapor Density: Not Available
Relative Density: 1.03 @60°F (15.56°C)
Solubility (water): Miscible
Partition Coefficient
  (n-octanol/water): Not Available
Auto-ignition Temperature: >400 °F (204.4°C)
Decomposition Temperature: Not Available
Viscosity: Not Available

Section 10 – Stability and Reactivity
Reactivity: No data available.
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Conditions to Avoid: Temperatures above the flash point. Do not store near open flame.
Incompatible Materials: Strong acids and oxidizing agents.
Hazardous Decomposition Products: Oxides of sulfur, carbon, and nitrogen.

Section 11 – Toxicological Information
Information on Likely Routes of Exposure
  Ingestion: May cause severe gastrointestinal irritation or burning and discomfort if swallowed. Do not induce vomiting.
  Inhalation: May cause damage to the eyes and respiratory tract.
  Skin Contact: May cause burns to the skin.
  Eye Contact: May cause serious damage of the eyes.
  Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Not Available
Information on Toxicological Effects
Acute Toxicity:

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Aminoethanol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1,515 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>2,504 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation</td>
<td>Rat</td>
<td>&gt;1.3 mg/L, 6hrs</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>6400 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;2000 mg/kg</td>
</tr>
<tr>
<td>Nonylphenol ethoxylated</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>2573 mg/kg</td>
</tr>
<tr>
<td>4-(2-Nitrobutyl)morpholine</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>620 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>420 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation</td>
<td>Rat</td>
<td>&gt;2.33 mg/L, 4hrs</td>
</tr>
<tr>
<td>Carbamic acid, butyl-,3-iodo-</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1,400 mg/kg</td>
</tr>
<tr>
<td>2-propynyl ester</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;2,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation</td>
<td>Rat</td>
<td>0.67 mg/L, 4 hrs</td>
</tr>
</tbody>
</table>

Skin Corrosion / Irritation: May cause burns to skin.
Serious Eye Damage / Eye Irritation: May cause serious damage to eyes.
Respiratory or Skin Sensitization:
   Respiratory Sensitization: No data available.
   Skin Sensitization: No data available.
Mutagenicity: No data available.
Carcinogenicity: No data available.
Reproductive Toxicity: No data available.
Specific Target Organ Toxicity:
   Not classified
   - Single Exposure
   Specific Target Organ Toxicity: Not classified
   - Repeated Exposure
Aspiration Hazard: Not classified
Potential Chronic Health Effects:
   General: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Numerical Values of Acute Toxicity:

<table>
<thead>
<tr>
<th>Exposure Route</th>
<th>ATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>2941 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>3427 mg/kg</td>
</tr>
<tr>
<td>Inhalation</td>
<td>71 mg/L</td>
</tr>
</tbody>
</table>

Section 12 – Ecological Information

Ecotoxicity:

<table>
<thead>
<tr>
<th>Component</th>
<th>Test</th>
<th>Species</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Aminoethanol</td>
<td>LC50, 96h</td>
<td>Carassius auratus</td>
<td>170 mg/L</td>
</tr>
<tr>
<td></td>
<td>EC50, 48h</td>
<td>Daphnia magna</td>
<td>65 mg/L</td>
</tr>
<tr>
<td></td>
<td>LC50, 96h</td>
<td>EC50, 48h</td>
<td>Fish</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>Nonylphenol ethoxylated</td>
<td>1.2-9.3 mg/L</td>
<td>1.6-10 mg/L</td>
<td></td>
</tr>
<tr>
<td>Triethanolamine</td>
<td></td>
<td></td>
<td>11,800 mg/L</td>
</tr>
<tr>
<td>4-(2-Nitrobutyl)morpholine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbamic acid, butyl, 3-iodo-2-propynyl ester</td>
<td>0.2 mg/L</td>
<td>0.16 mg/L</td>
<td></td>
</tr>
</tbody>
</table>

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

**Bioaccumulative Potential:** No data available.

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

**Other Adverse Effects:** No data available.

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**Section 13 – Disposal Considerations**

**Disposal Instructions:** Disposal of waste material should comply with all local, state, federal and provincial environmental regulations. See Section 7 for safe handling procedures and section 8 for personal protective equipment recommendations. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Empty containers or liners may retain some product residues. Follow label warnings even after container is emptied. Avoid contact of any spilled material or runoff with soil, waterways, drains and sewers.

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**Section 14 – Transport Information**

**DOT:** Not regulated as a dangerous good.

**IMDG:** Not regulated as a dangerous good.

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**Section 15 – Regulatory Information**

**U.S. Federal Regulations:** This product is considered hazardous as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**United States Inventory:** All components are listed or exempted.

**(TSCA 8b)**

**SARA 302/304:**

*Composition/Information on Ingredients*

No products were found

**SARA 311/312 Hazard Categories:**

- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
Dyna-Plex 21C Semi-Kut 70

Fire Hazard: No
Sudden Release of Pressure Hazard: No
Reactive Hazard: No

SARA 313:
The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbamic acid, butyl-3-iodo-2-propynyl ester</td>
<td>55406-53-6</td>
</tr>
<tr>
<td>2,2’-iminodiethanol</td>
<td>111-42-2</td>
</tr>
</tbody>
</table>

CERCLA:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Component RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,4-Dioxane</td>
<td>123-91-1</td>
<td>100</td>
</tr>
<tr>
<td>2,2’-iminodiethanol</td>
<td>111-42-2</td>
<td>100</td>
</tr>
</tbody>
</table>

State Regulations:
California Proposition 65
Warning: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Cancer</th>
<th>Reproductive</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2’-iminodiethanol</td>
<td>111-42-2</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Section 16 – Other Information

Date of Preparation: 12/13/16
Date of Last Revision: 12/13/16
Version: 1.0

Notice to reader:
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. The information is not considered as a warranty or quality specification. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

End of Safety Data Sheet