MATERIAL SAFETY DATA SHEET

PRODUCT  ZINCAL NCZ - 400 A

1. INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS  None

2. PHYSICAL AND CHEMICAL PROPERTIES

1. PHYSICAL STATE  liquid
2. COLOUR  Off white
3. SPECIFIC GRAVITY  1.030 - 1.032
4. SOLUBILITY IN WATER  Soluble in all proportion
5. ODOUR  Nothing characteristic
6. OTHER (pH)  6.0 - 7.0

3. HEALTH HAZARD IDENTIFICATION ACUTE TOXICITY

1. INHALATION  Mist or vapor may irritate respiratory tract.
2. INGESTION  Can cause severe burns to mouth, throat, Esophagus and stomach.
3. SKIN  Can cause irritation
4. EYES  Can cause irritation
5. CHRONIC EXPOSURE  Chronic exposure effects not established
6. CARCINOGEN REFERENCE  Not listed by NTP, IARC, OSHA

4. EMERGENCY AND FIRST AID MEASURES

1. INHALATION  Remove victim to fresh air. If breathing has stopped, administer oxygen if available. Seek medical attention.
2. INGESTION  Never give anything by mouth to an unconscious person. Seek medical attention. Induce vomiting.
3. EYES  Flush with plenty of water, holding eye lids apart to ensure flushing of entire eye surface.
4. SKIN  Immediately wash contaminated skin with plenty of water. Remove contaminated clothing and footwear. If irritation or burn develops seek medical attention.

5. FIRE FIGHTING MEASURES
1. **FLASH POINT C**
   Not applicable

2. **EXTINGUISING MEDIA**
   Water fog or spray / Carbon dioxide/ chemical foam

3. **SPECIAL FIRE FIGHTING PROCEDURES**
   Wear protective clothing & self contained breathing apparatus. Keep containers cool to prevent rupture and release of material.

4. **UNUSUAL FIRE AND EXPLOSION HAZARD**
   Not flammable. If involved in a fire, it will generate toxic oxides of carbon, nitrogen and miscellaneous organic vapors.

### 6. ACCIDENTAL RELEASE MEASURES
Avoid contact with skin, eyes and clothing. Contain spill and soak up in suitable absorbent. Shovel up into plastic containers and cover. Dispose of in accordance with local and state regulations.

### 7. HANDLING AND STORAGE

#### HANDLING
No special measures necessary provided the product is used correctly.

#### STORAGE
Store in cool & dry place (preferably within 25 - 35 ºC under closed condition to avoid any contaminations) keep away from oxidizers. Loosen cover cautiously when opening. Keep container closed when not in use. Keep only in original containers. Store above freezing temperature.

### 8. PERSONAL PROTECTIVE EQUIPMENT

#### VENTILATION
Local exhaust or general ventilation.

#### RESPIRATOR
Use Niosh approved respirator whenever necessary

#### EYE PROTECTION
Chemical safety goggles or face shields

#### GLOVES
Neoprene / Natural Rubber

#### OTHER PROTECTIVE CLOTHINGS
Chemically resistant coveralls, hat & shoes or boots.

#### GENERAL SAFETY AND HYGIENE MEASURES.
Handle in accordance with good industrial hygiene and safety practice. Safety showers and eye wash stations should be provided in areas where this product is used. Wash with soap and water after use.

#### DISPOSAL CONSIDERATIONS
Wash thoroughly the empty packing material/ drum/ carboys and collect the washing in suitable containers & dispose the same in accordance to the local state and national regulations

### 9. STABILITY AND REACTIVITY DATA

#### STABILITY
Stable
2 CONDITIONS TO AVOID

Stable under normal conditions.

3 INCOMPATABILITY

Oxidizers

4 HAZARDOUS DECOMPOSITION

Toxic oxides of carbon, sulphur and miscellaneous organic vapors.

5 HAZARDOUS POLYMERIZATION

Will not occur.

T. S : Trade Secret as per 29 CFR 1910.1200
CAS : Chemical Abstract Service
PEL : OSHA Permissible Exposure Limit
TLV : ACGIH Threshold Limit Value
NTP : National Toxicology Program
IARC : Int'l Agency for Research on Cancer

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MATERIAL SAFETY DATA SHEET

PRODUCT        ZINCAL NCZ - 400 B

1. INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS
Aromatic Aldehyde (TS)
Alkali Metal Acid Sulphite (TS)

2. PHYSICAL AND CHEMICAL PROPERTIES

| 1 | PHYSICAL STATE | liquid |
| 2 | COLOUR         | Colorless to pale yellow |
| 3 | SPECIFIC GRAVITY | 1.030 - 1.032 |
| 4 | SOLUBILITY IN WATER | Soluble in all proportion |
| 5 | ODOUR | Nothing characteristic |
| 6 | OTHER (pH) | 1.5 - 3.0 |

3. HEALTH HAZARD IDENTIFICATION ACUTE TOXICITY

1 INHALATION Mist or vapor may irritate respiratory tract.
2 INGESTION Can cause severe burns to mouth, throat, Esophagus and stomach.
3 SKIN Can cause irritation
4 EYES Can cause irritation
5 CHRONIC EXPOSURE Chronic exposure effects not established
6 CARCINOCGEN REFERENCE Not listed by NTP, IARC, OSHA

4. EMERGENCY AND FIRST AID MEASURES

1 INHALATION Remove victim to fresh air. If breathing has stopped, administer oxygen if available. Seek medical attention.
2 INGESTION Never give anything by mouth to an unconscious person. Seek medical attention. Induce vomiting.
3 EYES Wash with plenty of water, holding eye lids apart to ensure flushing of entire eye surface.
4 SKIN Immediately wash contaminated skin with plenty of water. Remove contaminated clothing and footwear. If irritation or burn develops seek medical attention.

5. FIRE FIGHTING MEASURES
<table>
<thead>
<tr>
<th></th>
<th>FLASH POINT C</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>EXTINGUISING MEDIA</td>
<td>Water fog or spray / Carbon dioxide / chemical foam</td>
</tr>
<tr>
<td>3</td>
<td>SPECIAL FIRE FIGHTING PROCEDURES</td>
<td>Wear protective clothing &amp; self contained breathing apparatus. Keep containers cool to prevent rupture and release of material.</td>
</tr>
<tr>
<td>4</td>
<td>UNUSUAL FIRE AND EXPLOSION HAZARD</td>
<td>Not flammable. If involved in a fire, it will generate toxic oxides of carbon, nitrogen and miscellaneous organic vapors.</td>
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</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with skin, eyes and clothing. Contain spill and soak up in suitable absorbent. Shovel up into plastic containers and cover. Dispose of in accordance with local and state regulations.

7. HANDLING AND STORAGE

1. HANDLING
   No special measures necessary provided the product is used correctly.

2. STORAGE
   Store in cool & dry place (preferably within 25 - 35 °C under closed condition to avoid any contaminations) keep away from oxidizers. Loosen cover cautiously when opening. Keep container closed when not in use. Keep only in original containers. Store above freezing temperature.

8. PERSONAL PROTECTIVE EQUIPMENT

1. VENTILATION
   Local exhaust or general ventilation.

2. RESPIRATOR
   Use Niosh approved respirator whenever necessary

3. EYE PROTECTION
   Chemical safety goggles or face shields

4. GLOVES
   Neoprene / Natural Rubber

5. OTHER PROTECTIVE CLOTHINGS
   Chemically resistant coveralls, hat & shoes or boots.

6. GENERAL SAFETY AND HYGIENE MEASURES.
   Handle in accordance with good industrial hygiene and safety practice. Safety showers and eye wash stations should be provided in areas where this product is used. Wash with soap and water after use.

7. DISPOSAL CONSIDERATIONS
   Wash thoroughly the empty packing material/ drum/ carboys and collect the washing in suitable containers & dispose the same in accordance to the local state and national regulations.
## 9. STABILITY AND REACTIVITY DATA

<table>
<thead>
<tr>
<th></th>
<th>Stability</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>STABILITY</td>
<td>Stable</td>
</tr>
<tr>
<td>2</td>
<td>CONDITIONS TO AVOID</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>3</td>
<td>INCOMPATABILITY</td>
<td>Oxidizers</td>
</tr>
<tr>
<td>4</td>
<td>HAZARDOUS DECOMPOSITION</td>
<td>Toxic oxides of carbon, sulphur and miscellaneous organic vapors.</td>
</tr>
<tr>
<td>5</td>
<td>HAZARDOUS POLYMERIZATION</td>
<td>Will not occur.</td>
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</table>

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PRODUCT ZINCAL NCZ - 400 C

1. INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS None

2. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>1. PHYSICAL STATE</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. COLOUR</td>
<td>Colourless</td>
</tr>
<tr>
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<td>1.02 - 1.04</td>
</tr>
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3. EYES Wash with plenty of water, holding eye lids apart to ensure flushing of entire eye surface.
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5. FIRE FIGHTING MEASURES

1. FLASH POINT C Not applicable
2 EXTINGUISING MEDIA
Water fog or spray / Carbon dioxide/ chemical foam

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9. STABILITY AND REACTIVITY DATA
1 STABILITY
Stable
2 CONDITIONS TO AVOID Stable under normal conditions.

3 INCOMPATABILITY Oxidizers (Material to avoid)

4 HAZARDOUS Toxic oxides of carbon, sulphur and miscellaneous organic decomposition vapors.

5 HAZARDOUS Will not occur.

POLYMERIZATION

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