SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier
   Trade Name: Heavy Duty Nozzle Dip Gel
   Product Number: 007094, 007095

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against
   Product Use: Welding Process Aid

1.3 Details of the Supplier of the Safety Data Sheet
   Manufacturer: Weld-Aid Products
   14650 Dequindre
   Detroit, Michigan
   Information Phone Number: +1 (313) 883-6977
   +1 (313) 883-4930
   E-mail: info@weldaid.com

1.4 Emergency Telephone Number
   Emergency Spill Information: +1 (800) 255-3924

SDS Date of Preparation: November 19, 2014

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

<table>
<thead>
<tr>
<th>Physical:</th>
<th>Health:</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Skin Irritation Category 2</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Eye Irritation Category 2A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specific Target Organ Toxicity – Repeat Exposure Category 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carcinogenicity Category 2</td>
<td></td>
</tr>
</tbody>
</table>

EU Classification (67/548/EEC): Not classified as dangerous

2.2 Label Elements
   WARNING! Contains Diethylenolamine, Cocamide Diethanolamine

Hazard Phrases
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H373 May cause damage to liver, kidneys and blood through prolonged or repeated exposure by ingestion.
- H351 Suspected of causing cancer by ingestion.

Precautionary Phrases
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe mist, vapors or spray.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves and eye protection.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P332 + P313 If skin irritation occurs: Get medical attention.
2.3 Other Hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS# / EINECS#</th>
<th>EU Classification (67/548/EEC)</th>
<th>GHS Classification Regulation (EC) No 1272/2008</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocamide Diethanolamine</td>
<td>68603-42-9</td>
<td>Proprietary</td>
<td>Xi R36/38</td>
<td>5-10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irritation Category 2 (H319)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irritation Category 2 (H315)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carcinogen Category 2 (H351)</td>
<td></td>
</tr>
<tr>
<td>Oleic Acid</td>
<td>112-80-1</td>
<td>204-007-1</td>
<td>Xi R36</td>
<td>1-5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irritation Category 2 (H319)</td>
<td></td>
</tr>
<tr>
<td>Diethanolamine</td>
<td>111-42-2</td>
<td>203-868-0</td>
<td>Xi, Xa, R22, R38, R41, R48/22</td>
<td>1-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Toxicity Category 4 (H302)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irritation Category 2 (H315)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Damage Category 1 (H318)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Specific Target Organ Toxicity – Repeat Exposure Category 2 (H373)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carcinogenicity Category 2 (H351)</td>
<td></td>
</tr>
</tbody>
</table>

See Section 16 for further information on EU and GHS Classification.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures
   Eye: Rinse thoroughly with water for several minutes, holding the eye lids open to be sure the material is washed out. Get medical attention if irritation persists.
   Skin: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.
   Inhalation: Move to fresh air. Seek medical attention if irritation or other symptoms persist.
   Ingestion: Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

4.2 Most Important symptoms and effects, both acute and delayed: Causes eye and skin irritation. Mists may cause upper respiratory irritation. May cause cancer based on animal data. Risk of cancer depends on duration and level of exposure.

4.3 Indication of any immediate medical attention and special treatment needed: None required.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media:
   Use water, carbon dioxide, universal foam and dry chemical.

5.2 Special Hazards Arising from the Substance or Mixture
   Unusual Fire and Explosion Hazards: None known.
   Hazardous Decomposition Products: Combustion may produce oxides of carbon and nitrogen.

5.3 Advice for Fire-Fighters:
   Firefighters should always wear self-contained breathing apparatus and full protective clothing for fires involving chemicals or in confined spaces. Cool fire exposed containers with water.
Safety Data Sheet

Heavy Duty Nozzle Dip Gel

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Wear appropriate eye protection and gloves.

6.2 Environmental Precautions:
Report spill as required by local and federal regulations.

6.3 Methods and Material for Containment and Cleaning Up:
Contain and collect using an absorbent material and place in an appropriate container for disposal.

6.4 Reference to Other Sections:
Refer to Section 8 for protective equipment and Section 15 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wash thoroughly after handling.

7.2 Conditions for Safe Storage, Including any Incompatibilities
Store in a cool, dry well ventilated area.

7.3 Specific end use(s):
Welding applications.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocamide Diethanolamine</td>
<td>None Established</td>
</tr>
<tr>
<td>Oleic Acid</td>
<td>None Established</td>
</tr>
<tr>
<td>Diethanolamine</td>
<td>1 mg/m³ TWA (skin) ACGIH TLV (inhalable fraction and vapor)</td>
</tr>
<tr>
<td></td>
<td>1 mg/m³ TWA (skin) DFG MAK (inhalable)</td>
</tr>
</tbody>
</table>

Refer to local regulations if exposure limits are not listed above.

8.2 Exposure Controls:
Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.
Respiratory Protection: None required for normal use. Use an approved respirator with organic vapor cartridges if exposure levels exceed the applicable exposure limits. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.
Skin Protection: Impervious gloves are recommended if needed to avoid prolonged or repeated contact. Suggested materials for protective gloves include: Rubber, Neoprene or Nitrile.
Eye Protection: Chemical safety goggles recommended if splashing is possible. Follow facility requirements.
Other: Impervious clothing as needed to prevent prolonged skin contact.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance: Amber clear gel.</td>
<td></td>
</tr>
<tr>
<td>Odor: No appreciable odor.</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold: No data available</td>
<td></td>
</tr>
<tr>
<td>pH: Not available</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point: Not available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density: Not available</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity: 1.0</td>
<td></td>
</tr>
<tr>
<td>Water Solubility: 100%</td>
<td></td>
</tr>
<tr>
<td>Octanol/Water Partition Coefficient: Not available</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temperature: Not available</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature: Not available</td>
<td></td>
</tr>
</tbody>
</table>
9.2 Other Information:
None

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:
Not reactive under normal conditions of use.

10.2 Chemical Stability:
Stable under normal storage and handling conditions.

10.3 Possibility of Hazardous Reactions:
None known.

10.4 Conditions to Avoid:
None known.

10.5 Incompatible Materials:
Avoid contact with oxidizing agents and bases.

10.6 Hazardous Decomposition Products:
Thermal decomposition may produce carbon and nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:
Eye: May cause irritation with redness and tearing. Corneal injury is unlikely.
Skin: May cause skin irritation.
Inhalation: No adverse effects are expected unless the product is aerosolized. Mists may cause mucous membrane and upper respiratory tract irritation.
Ingestion: Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute Toxicity Values:
Cocamide Diethanolamine: Oral rat LD50 >5,000 mg/kg; Skin rabbit LD50 >2,000 mg/kg
Oleic Acid: Oral rat LD50 >2000 mg/kg
Diethanolamine: Oral rat LD50 1100 mg/kg

Irritation: Oleic acid has been shown to cause irritation to human eyes. Cocamide diethanolamine is not irritating to rabbit skin, irritating to eyes. Diethanolamine is irritating to rabbit skin and severely irritating to rabbit eyes.

Corrosivity: This is not a corrosive product.

Sensitization: This product is not expected to cause sensitization.

Repeat Dose Toxicity: Diethanolamine has been shown to cause damage to the blood, kidneys and liver.

Carcinogen Status: Diethanolamine and cocamide diethanolamine are listed by IARC as “Possibly Carcinogenic to Humans”, Group 2B. Diethanolamine is listed as a “Confirmed Animal Carcinogen with Unknown Relevance to Humans”, A3 by ACGIH. None of the other components greater than 0.1% are listed as a carcinogen by IARC, NTP, ACGIH, OSHA or EU Substances Directive.

Germ Cell Mutagenicity: Diethanolamine was negative in an in vitro mammalian chromosome aberration test, in vitro sister chromatid exchange assay in mammalian cells and in vivo micronucleus assay.
Safety Data Sheet
Heavy Duty Nozzle Dip Gel

Toxicity for Reproduction: In a developmental study, diethanolamine applied to rat skin on day 6-15 of gestation. Maternal toxicity such as severe skin irritation and effects to the kidney and blood occurred at 500 mg/kg. No developmental effects were seen to 1500 mg/kg. NOAEL: 1500 mg/kg teratogenicity, LOAEL 150 mg/kg maternal toxicity.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:
Cocamide Diethanolamine: 96 hr LC50 brachydanio rerio 6.7 mg/L; 24 hr EC50 daphnia magna 3.3 mg/L.
Diethanolamine: 96 hr Pimephales promelas LC50 1460 mg/kg; 48 hr daphnia magna EC50 55 mg/L

12.2 Persistence and Degradability:
Diethanolamine and oleic acid are readily biodegradable.

12.3 Bioaccumulative Potential:
Diethanolamine has a BCF of <1 which indicates bioaccumulation is expected to be low in aquatic animals.

12.4 Mobility in Soil:
No data available.

12.5 Results of PBT and vPvB Assessment:
Not required.

12.6 Other Adverse Effects:
None known.

SECTION 13: DISPOSAL INFORMATION

13.1 Waste Treatment Methods
Dispose in accordance with local and national environmental regulations.

SECTION 14: TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>41.1 UN Number</th>
<th>41.2 UN Proper Shipping Name</th>
<th>14.3 Transport Hazard Class(s)</th>
<th>14.4 Packing Group</th>
<th>14.5 Environmental Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>US DOT</td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU ADR/RID</td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMDG</td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.6 Special Precautions for User:
None

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:
Not applicable – product is transported only in packaged form.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

International Inventories:
US EPA TSCA Inventory: All of the components are listed on the TSCA inventory.
Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List.
European Union: All of the components of this product are listed on the European Inventory of New and Existing Chemical Substances (EINECS) inventory.
Australia: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances (AICS).
China: All of the ingredients of this product are listed on the Inventory of Existing Chemical Substance in China (IECSC).
Korea: All of the components of this product are listed on the Korean Existing Chemical List (KECL).
Japan: All of the components of this product are listed on the Japanese Existing and New Chemical Substances List (ENCS).
New Zealand: All of the components of this product are listed on the New Zealand Inventory of Chemicals (NZIoC).

Philippines: All of the components of this product are listed on the Philippine Inventory of Chemicals and Chemical Substances (PICCS).

U.S. REGULATIONS
CERCLA: This product has a Reportable Quantity (RQ) of 5,000 lbs. based on the RQ for diethanolamine of 100 lbs. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA SARA 302: This product does not contain chemicals regulated under SARA Section 302.

EPA SARA 311 Hazard Classification: Acute Health, Chronic Health

EPA SARA 313: This product contains the following chemicals that are regulated under SARA Title III, section 313:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS Number</th>
<th>Percentage</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethanolamine</td>
<td>111-42-2</td>
<td>1-2%</td>
<td>cancer</td>
</tr>
<tr>
<td>Cocamide Diethanolamine</td>
<td>68603-42-9</td>
<td>5-10%</td>
<td>cancer</td>
</tr>
</tbody>
</table>

California Proposition 65: This product contains the following chemicals which are known to the State of California to cause cancer, reproductive toxicity or birth defects:

- Diethanolamine 111-42-2 1-2% cancer
- Cocamide Diethanolamine 68603-42-9 5-10% cancer

INTERNATIONAL REGULATIONS

WHMIS Classification: Class D-2A (Toxic materials causing other chronic effects)

15.2 Chemical Safety Assessment:
Not required

SECTION 16: OTHER INFORMATION

SDS Revision History:
12/2/11: Converted US SDS to EU REACH SDS
11/19/14: Section 2.1 Classification, Section 2.2 Hazard Phrases and Precautionary Phrases, Section 4.1 Most important phrases, Section 11 Carcinogen Status, Section 12.1 Toxicity, Section 15 California Proposition 65.

GHS Phrases for Reference (See Section 2 and 3):

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation
- H373 May cause damage to liver, kidneys and blood through prolonged or repeated exposure by ingestion.
- H351 Suspected of causing cancer by ingestion.

EU Classes and Risk Phrases for Reference (See Sections 2 and 3):

- Xi Irritant
- Xn Harmful
- R22 Harmful if swallowed.
- R36/38 Irritating to eyes and skin.
- R38 Irritating to skin.
- R41 Risk of serious damage to eyes.
- R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

This sheet was compiled from the latest available information and reliable sources. Procedures are based on accepted usage. They are not necessarily all-inclusive and may vary in every circumstance. Weld-Aid provides no warranties either expressed or implied and assumes no responsibility for the accuracy or completeness of the data herein.