1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier
Product Name: H2-D2
Product Number: 2485
Recommended Use: Cleaning agent
Uses Advised Against: For Industrial and Institutional Use Only

Manufacturer/Supplier: Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee, Ohio 43537 USA
800-537-8990 (Business hours)
www.spartanchemical.com

24 Hour Emergency Phone Numbers:
Medical Emergency/Information: 888-314-6171
Transportation/Spill/Leak: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification
Acute Toxicity - Oral: Category 4
Skin Corrosion/Irritation: Category 1 Sub-category B
Serious Eye Damage/Eye Irritation: Category 1
Corrosive to Metals: Category 1

GHS Label Elements
Signal Word: Danger
Symbols:

Hazard Statements: Harmful if swallowed.
Causes severe skin burns and serious eye damage.
May be corrosive to metals.

Precautionary Statements:
Prevention: Wash hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product
Do not breathe mist, vapors or spray.
Wear protective gloves. Wear eye / face protection. Wear protective clothing.
Keep in original or other corrosion resistant container.

Response: IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.
-Eyes IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
-Skin IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse.
-Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
-Ingestion: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
-Specific Treatment: See Safety Data Sheet Section 4: “FIRST AID MEASURES” for additional information.

Spill: Absorb spillage to prevent material damage.
Storage: Store locked up. Store in corrosion resistant container.
Disposal: Dispose of contents and container in accordance with local, state and federal regulations.

Hazards Not Otherwise Classified: Not Applicable

Other Information:
- Corrosive.
- Harmful contact may not cause immediate pain.
- Harmful if absorbed through skin.
- Inhalation of vapors or mist may cause respiratory irritation.
- Take off and destroy contaminated shoes.
- Keep out of reach of children.
- NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>40-70</td>
</tr>
<tr>
<td>Butoxyethanol</td>
<td>111-76-2</td>
<td>10-30</td>
</tr>
<tr>
<td>Sodium Xylenesulfonate</td>
<td>1300-72-7</td>
<td>3-7</td>
</tr>
<tr>
<td>Tetrapotassium Pyrophosphate</td>
<td>7320-34-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Potassium Hydroxide</td>
<td>1310-58-3</td>
<td>1-5</td>
</tr>
<tr>
<td>C9-11 Pareth-6</td>
<td>68439-46-3</td>
<td>1-5</td>
</tr>
<tr>
<td>Sodium Ethylhexyl Sulfate</td>
<td>126-92-1</td>
<td>1-5</td>
</tr>
<tr>
<td>Sodium Nitrite</td>
<td>7632-00-0</td>
<td>1-5</td>
</tr>
<tr>
<td>Acid Orange 7</td>
<td>633-96-5</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

Specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

- **Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.
- **Skin Contact:** Take off immediately all contaminated clothing and shoes. Rinse with water or shower for at least 15 minutes. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN. Wash contaminated clothing before reuse. Discard or destroy contaminated shoes.
- **Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.
- **Ingestion:** Rinse mouth. Do NOT induce vomiting. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN. Never give anything by mouth to an unconscious person.
- **Note to Physicians:** NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Product does not support combustion. Use extinguishing agent suitable for type of surrounding fire

**Specific Hazards Arising from the Chemical:** Dried product is capable of burning. Combustion products are toxic.

**Hazardous Combustion Products:** May include Carbon monoxide Carbon dioxide and other toxic gases or vapors.

**Protective Equipment and Precautions for Firefighters:** Wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear. Cool fire-exposed containers with water spray.
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.
Environmental Precautions: Do not rinse spill onto the ground, into storm sewers or bodies of water.
Methods for Clean-Up: Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE

Advice on Safe Handling: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.
Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing.
Incompatible Materials: Incompatible with strong acids and bases. Incompatible with oxidizing agents.
Suggested Shelf Life: Minimum of 2 years from date of manufacture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butoxyethanol</td>
<td>TWA: 20 ppm</td>
<td>TWA: 50 ppm</td>
<td>IDLH: 700 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 240 mg/m³</td>
<td>TWA: 5 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 25 ppm</td>
<td>TWA: 24 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 120 mg/m³</td>
<td>S*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 240 mg/m³</td>
<td>S*</td>
</tr>
<tr>
<td>Potassium Hydroxide</td>
<td>Ceiling: 2 mg/m³</td>
<td>(vacated) Ceiling: 2 mg/m³</td>
<td>Ceiling: 2 mg/m³</td>
</tr>
<tr>
<td>1310-58-3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Engineering Controls: Provide good general ventilation.
If work practices generate dust, fumes, gas, vapors or mists which expose workers to chemicals above the occupational exposure limits, local exhaust ventilation or other engineering controls should be considered.
Eye wash stations and shower facilities should be readily accessible in areas where the product is handled.

Personal Protective Equipment
Eye/Face Protection: Wear splash goggles. For severe use-conditions, wear a face shield over the goggles.
Skin and Body Protection: Wear rubber or other chemical-resistant gloves. Use of impervious apron, boots and other protective equipment should be considered in order to prevent or minimize contact with this product.
Respiratory Protection: Not required with expected use.
If occupational exposure limits are exceeded or respiratory irritation occurs, use of a NIOSH/MSHA approved respirator suitable for the use-conditions and chemicals in Section 3 should be considered.
General Hygiene Considerations: Wash hands and any exposed skin thoroughly after handling.
10. STABILITY AND REACTIVITY

Reactivity:
This material is considered to be non-reactive under normal conditions of use.

Chemical Stability:
Stable under normal conditions.

Possibility of Hazardous Reactions:
Contact with aluminum or other reactive metals may release hydrogen gas.

Conditions to Avoid:
Exposure to air or moisture over prolonged periods.

Incompatible Materials:
Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products:
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:
- Eyes, Skin, Ingestion, Inhalation.

Symptoms of Exposure:
- Eye Contact: Pain, redness, swelling of the conjunctiva and tissue damage. Eye contact may cause permanent damage.
- Skin Contact: Pain, redness, blistering and possible chemical burn.
- Inhalation: Irritation or damage to the mucus membranes of the respiratory tract. Nasal discomfort and coughing.
- Ingestion: Damage or chemical burns to mouth, throat and stomach. Pain, nausea, vomiting and diarrhea.

Immediate, Delayed, Chronic Effects
Product Information: Data not available or insufficient for classification.


Numerical Measures of Toxicity
The following acute toxicity estimates (ATE) are calculated based on the GHS document.

| ATEmix (oral): | 1601 mg/kg |
| ATEmix (dermal): | 7338 mg/kg |
| ATEmix (inhalation-dust/mist): | 9.8 mg/l |

Component Acute Toxicity Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water 7732-18-5</td>
<td>&gt; 90 mL/kg (Rat)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Butoxyethanol 111-76-2</td>
<td>= 470 mg/kg (Rat)</td>
<td>= 99 mg/kg (Rabbit)</td>
<td>= 450 ppm (Rat) 4 h</td>
</tr>
</tbody>
</table>
12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/Aquatic Plants</th>
<th>Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butoxyethanol 111-76-2</td>
<td>Not Available</td>
<td>1490: 96 h Lepomis macrochirus mg/L LC50</td>
<td>Not Available</td>
<td>1000: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Tetrapotassium Pyrophosphate 7320-34-5</td>
<td>Not Available</td>
<td>100: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>Not Available</td>
<td>100: 48 h water flea mg/L EC50</td>
</tr>
<tr>
<td>Sodium Nitrite 7632-00-0</td>
<td>Not Available</td>
<td>0.19: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.092 - 0.13: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.4 - 0.6: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.65 - 1: 96 h Oncorhynchus mykiss mg/L LC50 static 2.3: 96 h Pimephales promelas mg/L LC50 flow-through 20: 96 h Pimephales promelas mg/L LC50 static</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Persistence and Degradability: No information available.
Bioaccumulation: No information available.
Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated Packaging: Do not reuse container.
US EPA Waste Number: D002

14. TRANSPORT INFORMATION

DOT: 
UN/ID No: UN1760
Proper Shipping Name: Corrosive liquids, n.o.s., (contains potassium hydroxide)
Hazard Class: 8
Packing Group: II
Reportable Quantity (RQ): For totes add: RQ, I.B.C.
Special Provisions: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Check with a trained hazardous materials transportation expert for information specific to your situation.

IMDG:
UN/ID No: UN1760
Proper Shipping Name: Corrosive liquids, n.o.s., (contains potassium hydroxide)
Hazard Class: 8
Packing Group: II
Reportable Quantity (RQ): For totes add: RQ, I.B.C.

15. REGULATORY INFORMATION

TSCA Status: (Toxic Substance Control Act Section 8(b) Inventory)
All chemical substances in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA 313
This product contains the following listed substances:
Butoxyethanol
CAS No 111-76-2 applies to R-(OCH2CH2)n-OR', where n = 1, 2, or 3, R=Alkyl C7 or less, or R = Phenyl or Alkyl substituted phenyl, R' = H or Alkyl C7 or less, or OR' consisting of Carboxylic acid ester, Sulfate, Phosphate, Nitrate, or SulfonateChemical Category N230
Sodium Nitrite
CAS No 7632-00-0

SARA 311/312 Hazard Categories
Acute Health Hazard: Yes
Chronic Health Hazard: Yes
Fire Hazard: No
Sudden release of pressure hazard: No
Reactive Hazard: No

California Proposition 65
This product is not subject to warning requirements under California Proposition 65.

16. OTHER INFORMATION

NFPA Health Hazards: 3 Flammability: 0 Instability: 0 Special: N/A
HMIS Health Hazards: 3* Flammability: 0 Physical Hazards: 0

Revision Date: 14-Oct-2019
Reasons for Revision: Revised formula

Disclaimer:
The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet