Material Name: **PURPLE PRIMER/CLEANER**

*** Section 1 - Product and Company Identification ***

MSDS #1401E
Part Numbers: 019150

Manufacturer Information
William H. Harvey Company
4334 South 67th Street
Omaha, NE 68117

Phone: 402-331-1175

For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.

*** Section 2 - Hazards Identification ***

GHS Classification:
- Flammable Liquids - Category 2
- Acute Toxicity Oral - Category 4
- Acute Toxicity Dermal - Category 4
- Acute Toxicity Inhalation - Category 4
- Eye Damage/Irritation - Category 2A
- Carcinogenicity - Category 2
- Specific Target Organ Toxicity Single Exposure - Category 3

GHS LABEL ELEMENTS
Symbol(s)

Signal Word
Danger

Hazard Statements
- Highly flammable liquid and vapor.
- Harmful if swallowed.
- Harmful in contact with skin.
- Harmful if inhaled.
- Causes serious eye irritation.
- Contains a chemical classified by the US EPA as a suspected possible carcinogen.
- May cause respiratory irritation.
- May cause drowsiness or dizziness.
Material Name: PURPLE PRIMER/CLEANER

Precautionary Statements

Prevention
Keep away from heat/sparks/open flames and hot surfaces. - No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/eye protection/face protection
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/gas/mist/vapors.
Use only outdoors or in a well-ventilated area.

Response
If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.
If inhaled: Remove victim to fresh air and keep at rest in a position 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. Immediately call a poison center or doctor/physician.
If exposed or concerned: Get medical advice/attention.
In case of fire: Use dry chemical, CO2, or foam to extinguish fire.

Storage
Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 3 - Composition / Information on Ingredients ***

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>60-90</td>
</tr>
<tr>
<td>78-93-3</td>
<td>Methyl ethyl ketone</td>
<td>10-20</td>
</tr>
<tr>
<td>108-94-1</td>
<td>Cyclohexanone</td>
<td>3-10</td>
</tr>
<tr>
<td>109-99-9</td>
<td>Tetrahydrofuran</td>
<td>0-10</td>
</tr>
</tbody>
</table>

*** Section 4 - First Aid Measures ***

First Aid: Eyes
If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

First Aid: Skin
Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.
Material Name: PURPLE PRIMER/CLEANER

First Aid: Ingestion
DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

First Aid: Inhalation
If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards
See Section 9 for Flammability Properties. Highly flammable liquid and vapor. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

Hazardous Combustion Products
Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Extinguishing Media
Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Unsuitable Extinguishing Media
Nore.

Fire Fighting Equipment/Instructions
Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

*** Section 6 - Accidental Release Measures ***

Recovery and Neutralization
Stop leak if it can be done without risk.

Materials and Methods for Clean-Up
Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers.

Emergency Measures
Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment
Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

Environmental Precautions
Prevent liquid from entering watercourses, sewers and natural waterways.

Prevention of Secondary Hazards
None
Material Name: PURPLE PRIMER/CLEANER

*** Section 7 - Handling and Storage ***

Handling Procedures
Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. "Empty" containers retain product residue and can be hazardous. Follow all SDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Storage Procedures
Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Incompatibilities
Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

*** Section 8 - Exposure Controls / Personal Protection ***

Component Exposure Limits

Acetone (67-64-1)
ACGIH: 500 ppm TWA
750 ppm STEL
OSHA: 1000 ppm TWA; 2400 mg/m3 TWA
NIOSH: 250 ppm TWA; 590 mg/m3 TWA

Methyl ethyl ketone (78-93-3)
ACGIH: 200 ppm TWA
300 ppm STEL
OSHA: 200 ppm TWA; 590 mg/m3 TWA
NIOSH: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL

Cyclohexanone (108-94-1)
ACGIH: 20 ppm TWA
50 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 50 ppm TWA; 200 mg/m3 TWA
NIOSH: 25 ppm TWA; 100 mg/m3 TWA
Potential for dermal absorption

Tetrahydrofuran (109-99-9)
ACGIH: 50 ppm TWA
100 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 200 ppm TWA; 590 mg/m3 TWA
NIOSH: 200 ppm TWA; 590 mg/m3 TWA
250 ppm STEL; 735 mg/m3 STEL
Material Name: PURPLE PRIMER/CLEANER

Engineering Measures
Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Personal Protective Equipment: Respiratory
For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Personal Protective Equipment: Hands
Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Personal Protective Equipment: Eyes
Safety glasses with side shields or safety goggles.

Personal Protective Equipment: Skin and Body
No additional protective equipment needed.

*** Section 9 - Physical & Chemical Properties ***

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Purple</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>145 mmHg @ 20°C</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>151°F (66°C)</td>
</tr>
<tr>
<td>Solubility (H2O)</td>
<td>Negligible</td>
</tr>
<tr>
<td>Evaporation Rate (BUAC = 1)</td>
<td>5.5 - 8.0</td>
</tr>
<tr>
<td>Octanol/H2O Coeff.</td>
<td>ND</td>
</tr>
<tr>
<td>Flash Point Method</td>
<td>CCCFP</td>
</tr>
<tr>
<td>Odor</td>
<td>Ether-like</td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>2.5</td>
</tr>
<tr>
<td>Melting Point</td>
<td>NA</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.81 +/- 0.02 @ 20°C</td>
</tr>
<tr>
<td>VOC</td>
<td>99.96%</td>
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<tr>
<td>Flash Point</td>
<td>14-23°F (-10 to -5°C)</td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>11.8</td>
</tr>
<tr>
<td>(UFL):</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>1.8</td>
</tr>
<tr>
<td>(LFL):</td>
<td></td>
</tr>
<tr>
<td>Auto Ignition</td>
<td>ND</td>
</tr>
<tr>
<td>Burning Rate</td>
<td>ND</td>
</tr>
</tbody>
</table>

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability
This is a stable material.

Hazardous Reaction Potential
Will not occur.

Conditions to Avoid
Avoid heat, sparks, flames and other sources of ignition.

Incompatible Products
Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

Hazardous Decomposition Products
Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Material Name: PURPLE PRIMER/CLEANER

*** Section 11 - Toxicological Information ***

Acute Toxicity

Component Analysis - LD50/LC50
  Acetone (67-64-1)
  Oral LD50 Rat 5800 mg/kg

  Methyl ethyl ketone (78-93-3)
  Inhalation LC50 Mice 32 g/m3 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

  Cyclohexanone (108-94-1)
  Inhalation LC50 Rat 10.7 mg/L 4 h; Inhalation LC50 Rat 8000 ppm 4 h; Oral LD50 Rat 800 mg/kg; Dermal LD50 Rabbit 948 mg/kg

  Tetrahydrofuran (109-99-9)
  Inhalation LC50 Rat 53.9 mg/L 4 h; Inhalation LC50 Rat 180 mg/L 1 h; Oral LD50 Rat 1650 mg/kg

Potential Health Effects: Skin Corrosion Property/ Stimulativeness
  May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Potential Health Effects: Eye Critical Damage/ Stimulativeness
  Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Potential Health Effects: Ingestion
  Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Potential Health Effects: Inhalation
  Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Respiratory Organs Sensitization/Skin Sensitization
  This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity
  Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Carcinogenicity
A: General Product Information
  In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.
Material Name: PURPLE PRIMER/CLEANER

B: Component Carcinogenicity

Acetone (67-64-1)
ACGIH: A4 - Not Classifiable as a Human Carcinogen

Cyclohexanone (108-94-1)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Tetrahydrofuran (109-99-9)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive Toxicity
Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Specified Target Organ General Toxicity: Single Exposure
May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Specified Target Organ General Toxicity: Repeated Exposure
This product is not reported to have any specific target organ toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard
Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

*** Section 12 - Ecological Information ***

Ecotoxicity
A: General Product Information
This product is not expected to be toxic to aquatic organisms.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Acetone (67-64-1)
Test & Species   Conditions
96 Hr LC50 Oncorhynchus mykiss    4.74 - 6.33 mL/L
96 Hr LC50 Pimephales promelas 6210 - 8120 mg/L
[static]
96 Hr LC50 Lepomis macrochirus 6300 mg/L
48 Hr EC50 Daphnia magna 10294 - 17704 mg/L
[Static]
48 Hr EC50 Daphnia magna 12600 - 12700 mg/L

Methyl ethyl ketone (78-93-3)
Test & Species   Conditions
96 Hr LC50 Pimephales promelas 3130-3320 mg/L
[flow-through]
48 Hr EC50 Daphnia magna >520 mg/L
48 Hr EC50 Daphnia magna 5091 mg/L
[Static]
48 Hr EC50 Daphnia magna 4025 - 6440 mg/L
Material Name: PURPLE PRIMER/CLEANER

Cyclohexanone (108-94-1)

Test & Species       Conditions
96 hr LC50 Pimephales promelas 481-578 mg/L [flow-through]
96 hr LC50 Pimephales promelas 8.9 mg/L
96 hr EC50 Chlorella vulgaris 20 mg/L
24 hr EC50 Daphnia magna 800 mg/L

Tetrahydrofuran (109-99-9)

Test & Species       Conditions
96 Hr LC50 Pimephales promelas 1970-2360 mg/L
(flow-through)
96 Hr LC50 Pimephales promelas 2700-3600 mg/L
(static)
24 Hr EC50 Daphnia magna 5930 mg/L

Persistence/Degradability
No information available for the product.

Bioaccumulation
No information available for the product.

Mobility in Soil
No information available for the product.

*** Section 13 - Disposal Considerations ***

Waste Disposal Instructions
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging
Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 14 - Transportation Information ***

DOT Information
For Greater than 1 liter (0.3 gal):
Shipping Name: Flammable Liquid, n.o.s (Methyl Ethyl Ketone, Acetone)
UN #: 1993 Hazard Class: 3 Packing Group: II
Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):
Shipping Name: Consumer Commodity, ORM-D

IMDG Information
For Greater than 1 liter (0.3 gal):
Shipping Name: Flammable Liquid, n.o.s (Methyl Ethyl Ketone, Acetone)
UN #: 1993 Hazard Class: 3 Packing Group: II
Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal):
Shipping Name: Flammable Liquid, n.o.s (Limited Quantity)
UN #: 1993 Hazard Class: 3 Packing Group: II
Material Name: PURPLE PRIMER/CLEANER

Required Label(s): None (Limited Quantities are expected from labeling)

*** Section 15 - Regulatory Information ***

Regulatory Information
US Federal Regulations

Component Analysis
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

**Acetone (67-64-1)**
CERCLA: 5000 lb final RQ; 2270 kg final RQ

**Methyl ethyl ketone (78-93-3)**
CERCLA: 5000 lb final RQ; 2270 kg final RQ

**Cyclohexanone (108-94-1)**
CERCLA: 5000 lb final RQ; 2270 kg final RQ

**Tetrahydrofuran (109-99-9)**
CERCLA: 1000 lb final RQ; 454 kg final RQ

State Regulations

Component Analysis - State
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>78-93-3</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>108-94-1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Tetrahydrofuran</td>
<td>109-99-9</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Component Analysis - WHMIS IDL
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>Minimum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>1 %</td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>78-93-3</td>
<td>1 %</td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>108-94-1</td>
<td>0.1 %</td>
</tr>
<tr>
<td>Tetrahydrofuran</td>
<td>109-99-9</td>
<td>1 %</td>
</tr>
</tbody>
</table>

Additional Regulatory Information
A: General Product Information
This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.
Material Name: PURPLE PRIMER/CLEANER

B: Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>TSCA</th>
<th>CAN</th>
<th>EEC</th>
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</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>78-93-3</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>108-64-1</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
<tr>
<td>Tetrahydrofuran</td>
<td>109-99-9</td>
<td>Yes</td>
<td>DSL</td>
<td>EINECS</td>
</tr>
</tbody>
</table>

*** Section 16 - Other Information ***

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

NFPA and HMIS:
NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:
The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

End of Sheet