1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: TAMKO Rolled Roofing that can be Hot Mopped
LABEL: TAM-GLASS PREMIUM, TAM-PLY IV
USE & DESCRIPTION: Rolled Asphalt Roofing Products approved for Hot Mopping

CHEMICAL FAMILY: Mixture

MANUFACTURED BY: TAMKO Building Products, Inc.
P. O. Box 1404
Joplin, MO 64802-1404
www.TAMKO.com

EMERGENCY TELEPHONE NUMBERS:
General Information: 1-417-624-6644 (8 a.m. - 5 p.m. CST)
Chemtrec: 1-800-424-9300 (24 HOURS)

2. HAZARDS IDENTIFICATION

SIGNAL WORD: Danger
GHS CLASSIFICATION:
Carcinogenicity – Category 1B
Sensitization (Skin) – Category 1B
Eye Irritation – Category 2B

HAZARD STATEMENTS:
May cause cancer.
Causes eye irritation.
May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS:
Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Avoid breathing dust. Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and exposed skin thoroughly after handling.

Response
If on skin: Wash with plenty of water. Get medical advice/attention: If exposed or concerned or you feel unwell, if eye and or skin irritation persists.
Specific treatment: See section 4-First Aid
In case of fire: See Section 5.
Take off immediately all contaminated clothing and wash before reuse.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxidized Asphalt</td>
<td>64742-93-4</td>
<td>60-75</td>
</tr>
<tr>
<td>Fiberglass Mat*</td>
<td>NE</td>
<td>20-30</td>
</tr>
<tr>
<td>Contains Fiberglass</td>
<td></td>
<td>20-30</td>
</tr>
<tr>
<td>*Urea Formaldehyde Binder</td>
<td>9011-05-6</td>
<td>0-1</td>
</tr>
<tr>
<td>*Formaldehyde</td>
<td>50-00-0</td>
<td>0-1</td>
</tr>
</tbody>
</table>

NE=Not established

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of cool water for at least 20 minutes, occasionally lifting the eye lids to ensure thorough rinsing. Get medical attention if irritation persists.
SKIN CONTACT: Clean any exposed skin with warm soapy water if possible. If not, and a waterless hand cleaner is used, it should be without pumice.
Do not use solvents or thinners to remove material from skin. Get medical attention if irritation persists or develops.
INGESTION: If swallowed, do not induce vomiting. If vomiting occurs, keep head lower than hips to avoid aspiration of vomit into the lungs which can cause inflammation or pneumonitis. Call poison control center or get immediate medical attention.
INHALATION: If inhalation of cured product particles, fumes, vapors, or mist occurs, remove person to fresh air. Drink water to clear throat or blow nose to clear. If not breathing, give artificial respiration or give oxygen by trained personnel and get immediate medical attention.
NOTES TO PHYSICIAN: Treatment should be based on removing the source of irritation with treatment of symptoms as necessary.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry chemical, CO₂, or foam fire extinguisher should be used. Avoid use of straight-stream water.
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should not enter confined spaces without wearing a National Institute for Occupational Safety and Health (NIOSH) approved positive pressure self-contained breathing apparatus (SCBA) with full face mask and full protective equipment. Water may be used to cool containers in a fire-exposed area.
UNUSUAL FIRE OR EXPLOSION HAZARDS: When heated, fumes may burn if ignition source is provided. Petroleum asphalt fumes can explode if emitted in an enclosed environment and supplied with an ignition source. Burning product may cause thick black smoke.
SEE SECTION 10 FOR COMBUSTION PRODUCTS
6. ACCIDENTAL RELEASE MEASURES
PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED: Pick up large pieces. Do not dry sweep dusts or blow with air in confined area.
WASTE DISPOSAL METHODS: Dispose in accordance with applicable Federal, State, and Local regulations. Do not burn.

7. HANDLING AND STORAGE
STORAGE TEMPERATURE: Store away from heat and all ignition sources and open flames in accordance with applicable laws and regulations.
THIS PRODUCT SHOULD NOT BE HEATED OR BURNED USING A DIRECT FLAME DEVICE.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Follow recommended work practices and use recommended personal protective clothing and equipment. See Section 8 of this MSDS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
EXPOSURE LIMITS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>OSHA</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>STEL</td>
</tr>
<tr>
<td>Oxidized Asphalt</td>
<td>64742-93-4</td>
<td>NE</td>
<td>NE 0.5**I NE mg/m³</td>
</tr>
<tr>
<td>Fiberglass</td>
<td>6597-17-3</td>
<td>15/5**</td>
<td>NE 5 NE mg/m³</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>.75</td>
<td>2 NE 3 ppm</td>
</tr>
</tbody>
</table>

NE= Not established
Note: Due to the form of the product, hazardous exposures from this product are not expected to occur. Gloves must be worn when handling and adequate ventilation must be provided during roofing related activities.
** Asphalt Fume as benzene-soluble inhalable aerosol (Bitumen)
I = Inhalable Fraction
*** Total Nuisance Dust/Respirable Dust

RESPIRATORY PROTECTION: Normally not needed in well-ventilated areas. If applicable exposure standards are exceeded or can be exceeded, use a NIOSH approved air-purifying respirator. If concentrations are sufficiently high that this respirator is inadequate, or high enough to cause oxygen deficiency, use a positive pressure self-contained breathing apparatus (SCBA). Follow all applicable respirator/SCBA use, fitting, training standards and regulations.
VENTILATION: Use only with adequate ventilation to maintain exposures below applicable exposure limits. Local exhaust ventilation and/or enclosure of the process may be required. All equipment must be explosion proof.
EYE PROTECTION: Chemical safety goggles with side-shields or face shield must be used if eye contact is possible.
SKIN: Chemical resistant gloves, apron, or other protective clothing needed to prevent skin contact. Must wear leather or heat-resistant gloves, long-sleeve cotton shirt, long pants with no cuffs, and non-skid shoes or boots with 6-inch leather uppers during application and/or tear off activities.

9. PHYSICAL AND CHEMICAL PROPERTIES
Appearance and Odor: Asphalt Coated Mat.
Odor Threshold: Not Applicable
pH: Not Applicable
Boiling Point: >700 ºF
Melting Point: >200 ºF
Flash Point: Not Applicable
Autoignition Temperature: >460ºC/860ºF
Viscosity: Not Applicable
Decomposition Temperature: Not Applicable
Upper/Lower Flammability or Explosive Limits: Not Applicable
Vapor Pressure: Not Applicable
Vapor Density (Air = 1): Not Applicable
Specific Gravity/Relative Density: Variable
Solubility (IES): No data available
Initial Boiling Point and Boiling Range: Not Applicable
Evaporation Rate (Butyl Acetate = 1): <0.1
Flammability(Solid and Gas): Not Applicable
Partition Coefficient: N-Octanol/Water: Not Applicable

10. STABILITY AND REACTIVITY
STABILITY: Stable
REACTIVITY: Reactivity will not occur.
CONDITIONS TO AVOID: Keep from heat, sparks, open flame and other sources of ignition. Avoid contact with strong oxidizing agents.
HAZARDOUS REACTION: Polymerization will not occur.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong acids or bases, oxidizing agents and selected amines.
HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, carbon dioxide, ozone, hydrogen sulfide, oxides of sulfur and various hydrocarbons. These combustion products are not expected unless product is heated or burned.

11. TOXICOLOGICAL INFORMATION
EYE – Can cause eye irritation.
SKIN – Can cause skin irritation.
INHALATION – Dust may cause upper respiratory irritation.
INGESTION – May cause harmful effects if swallowed.
THE FOLLOWING COMPONENT DATA IS PROVIDED FOR USER INFORMATION:

FORMALDEHYDE
Cancer - This product may contain formaldehyde. IARC and NTP have classified formaldehyde as a human carcinogen based on sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, limited evidence for cancer of the nasal cavity and paranasal sinuses, and "strong but not sufficient evidence" for leukemia. The finding for leukemia reflects the epidemiologists' finding of strong evidence in human studies coupled with an inability to identify a mechanism for induction of leukemia. The physical nature of this product may help limit any inhalation hazard from formaldehyde during application and in its hardened state.

Acute Effects - The major acute toxic effects caused by formaldehyde exposure via inhalation are eye, nose, and throat irritation and effects on the nasal cavity. Other effects seen from exposure to high levels of formaldehyde in humans are coughing, wheezing, chest pains, and bronchitis. Ingestion exposure to formaldehyde in humans has resulted in corrosion of the gastrointestinal tract and inflammation and ulceration of the mouth, esophagus, and stomach.

Chronic Effects - In addition to cancer, exposure to formaldehyde by inhalation in humans has been associated with respiratory symptoms and eye, nose, and throat irritation. Repeated contact with liquid solutions of formaldehyde has resulted in skin irritation and allergic contact dermatitis in humans.

OXIDIZED ASPHALT
Cancer - This product may contain oxidized asphalt. Occupational exposures to oxidized asphalt and its emissions during roofing activities has been classified by the International Agency for Research on Cancer (IARC) as "probably carcinogenic to humans" (Group 2A). IARC based this classification on its finding that available data from studies in humans points to an association between exposures to oxidized asphalts during roofing and cancers of the lung and upper aerodigestive tract. IARC also determined that there was sufficient evidence of carcinogenicity of extracts and condensates of oxidized asphalts in experimental animals. The oxidized asphalt in this product may contain small amounts of Polycyclic Aromatic Hydrocarbons (PAH’s) some of which are recognized carcinogens in humans or experimental animals. Oxidized asphalt may also cause irritation of the respiratory tract. The physical nature of this product may help limit any inhalation hazard from oxidized asphalt during application in its hardened state. However, physical forces such as grinding, drilling and other demolition work on this product may liberate dust containing oxidized asphalt. Burning or heating of the product may cause fumes, vapors or mists.

Acute Effects - Inhalation of dust may cause nose, throat, respiratory tract, and mucous membrane irritation. Eye contact may cause severe irritation, redness, tearing, and blurred vision. If ingested, may cause mouth, throat and gastrointestinal tract irritation and upset with possible nausea, vomiting and diarrhea. See Section 8 for exposure controls.

Chronic Effects - In addition to cancer, prolonged or repeated skin contact may result in dryness and irritation of the skin. Long term skin exposure to asphalt can increase sensitivity to the sun, and may cause discoloration. Oxidized asphalt may also cause irritation of the upper respiratory tract.

12. ECOLOGICAL INFORMATION
Ecotoxicity – No data available
Persistence and degradability – No data available
Bioaccumulative potential – No data available
Mobility in Soil – No data available
Other adverse effects (GHG, Ozone) - No data available

13. DISPOSAL CONSIDERATIONS
This product has not been regulated as a hazardous waste by the USEPA. Dispose in accordance with Federal, State, and Local regulations.

14. TRANSPORT INFORMATION
This product is not regulated as a hazardous material for transport under 49 CFR or for vessel transport under the IMDG Code.

DOT PROPER SHIPPING NAME: Not Applicable
DOT HAZARD CLASSIFICATION: Not Applicable
DOT LABELING REQUIREMENTS: Not Applicable
UN/NA NUMBER: Not Applicable
PACKING GROUP: Not Applicable
IMDG CODE: Not Applicable
IMDG SHIPPING NAME: Not Applicable
IMDG HAZARD CLASS: Not Applicable
UN/ID NUMBER: Not Applicable
PACKING GROUP NUMBER: Not Applicable

15. REGULATORY INFORMATION
TOXIC SUBSTANCES CONTROL ACT (TSCA): Some components in this product are listed on the TSCA Inventory.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA): None
SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA), TITLE III:
Section 302 Extremely Hazardous Substances: None
Section 311/312 Hazard Categories: Immediate Health; Delayed Health; Fire Hazard
Section 313 Reportable Ingredients: This material contains the following chemicals which are subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Concentration (% by Wt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

California Proposition 65: WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.
### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Rating</th>
<th>NFPA Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health - * 1</td>
<td>Health - 1</td>
</tr>
<tr>
<td>Flammability - 1</td>
<td>Flammability - 1</td>
</tr>
<tr>
<td>Reactivity - 0</td>
<td>Reactivity - 0</td>
</tr>
</tbody>
</table>

Preparation Date: April 2015

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**Disclaimer of Liability**

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