

# MATERIAL SAFETY DATA SHEET - T03K2011

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**TRADE NAME:** TAMKO Rolled Roofing that can be Hot Mopped

**LABEL:** VERSA-CAP FR

**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

**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

**EMERGENCY OVERVIEW:**

**USE OF THIS PRODUCT IN "HOT MOPPED" APPLICATIONS MAY EXPOSE WORKERS AND OTHERS IN THE WORK AREA TO OXIDIZED ASPHALT AND ITS EMISSIONS. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER HAS CLASSIFIED OCCUPATIONAL EXPOSURES TO OXIDIZED ASPHALT AND ITS EMISSIONS DURING ROOFING AS A "PROBABLE HUMAN CARCINOGEN." DURING INSTALLATION AND REMOVAL OF THIS PRODUCT, INCLUDING "HOT MOPPED" APPLICATION, WORKERS MUST TAKE PRECAUTIONS TO ASSURE ADEQUATE VENTILATION AND USE EFFECTIVE PERSONAL PROTECTIVE EQUIPMENT TO PREVENT EXPOSURES TO DUST, FUMES, VAPORS AND MIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND WORKERS TO PROTECT THEMSELVES AND OTHERS IN THE WORK AREA FROM EXPOSURE TO OXIDIZED ASPHALT AND ITS EMISSIONS WHEN APPLYING THIS PRODUCT. THIS PRODUCT SHOULD NOT BE HEATED OR BURNED USING A DIRECT FLAME DEVICE.**

INHALATION OF PRODUCT DUST, FUMES, VAPORS, MIST MAY CAUSE TEMPORARY UPPER RESPIRATORY IRRITATION.

MAY CAUSE SKIN IRRITATION.

MAY CAUSE EYE IRRITATION.

MAY CAUSE HARMFUL EFFECTS IF SWALLOWED.

UNDER NORMAL CONDITIONS OF USE, THE PRODUCT IS NOT EXPECTED TO CREATE ANY EMERGENCY HAZARDS.

<u>HMIS Rating:</u> Health - *1 Flammability - 1 Reactivity - 0	<u>NFPA Rating:</u> Health - 1 Flammability - 1 Reactivity - 0
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### POTENTIAL HEALTH EFFECTS:

**Eye Contact:** If dust enters eye, may cause irritation resulting in tearing, stinging, redness or swelling.

**Skin Contact:** Repeated contact may cause skin irritation due to roughness of product. Redness, drying and cracking of the skin (dermatitis) may occur following prolonged and repeated contact. Prolonged or repeated skin contact could result in absorption of hazardous components.

**Ingestion:** Ingestion of this product may cause irritation of the digestive tract followed by vomiting. Avoid aspiration of vomit into the lungs which can cause inflammation or pneumonitis.

**Inhalation:** Exposure to dust, fumes, vapors, mist may cause irritation of the nose and throat. Use of this product in well-ventilated working conditions is not expected to cause adverse effects.

**Chronic Effect/Carcinogenicity/Special/Toxic:**

Can cause cancer. Can cause silicosis and other permanent lung damage.

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS No.	% by Weight
Mineral Granules*	NE	<40
Oxidized Asphalt	64742-93-4	<30
Ammonium Sulfate	7783-20-2	<25
Coal Slag Fines	68476-96-0	<10
Polymer	NE	<7
<b>Fiberglass Mat</b>		
Fiberglass	65997-17-3	<5
Urea Formaldehyde	9011-05-6	>0.1
<b>Binder</b>		
Formaldehyde	50-00-0	<0.1
*Contains Crystalline Silica		
Quartz	14808-60-7	>0.1

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 dust, fume, vapor, 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, CO<sup>2</sup>, or foam preferred. Avoid use of straight-stream water.

**SPECIAL FIRE FIGHTING PROCEDURES:** Combustible. Avoid breathing fumes. Firefighters should not enter confined spaces without wearing NIOSH approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

**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 will 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 \*

Components Raw Products	CAS No.	OSHA		ACGIH		Unit
		TWA	STEL	TWA	STEL	
Oxidized Asphalt	64742-93-4	NE	NE	0.5***	NE	mg/m <sup>3</sup>
Ammonium Sulfate	7783-20-2	15/5**	NE	10/3**	NE	mg/m <sup>3</sup>
Fiberglass	65997-17-3	15/5**	NE	5	NE	mg/m <sup>3</sup>
Formaldehyde	50-00-0	0.75	2	NE	0.3	ppm
Coal Slag Fines	68476-96-0	15/5**	NE	10/3**	NE	mg/m <sup>3</sup>
Crystalline Silica						
Quartz	14808-60-7	See 1910.1000 Table Z3	NE	0.025	NE	mg/m <sup>3</sup>

NE= Not established

\* Note: Due to the form of the product, hazardous exposures arising from this product are not expected to occur. Gloves must be worn when handling and adequate ventilation must be provided during roofing related activities.

\*\* Total Nuisance Dust/Respirable Dust

\*\*\* Asphalt Fume

**NIOSH GUIDELINES:** The National Institute for Occupational Safety and Health (NIOSH) has published detailed guidelines for roofing contractors and workers applying asphalt roofing systems using hot liquid asphalt to minimize the asphalt fume exposures of workers and others near the roofing operation. The guidelines are contained in DHHS (NIOSH) Publication No. 2003-107, entitled “Reducing Roofers’ Exposure to Asphalt Fumes”. The publication is available on NIOSH’s website at: <http://www.cdc.gov/niosh/docs/2003-107/pdfs/2003-107.pdf>.

**RESPIRATORY PROTECTION:** Normally not needed in well-ventilated areas. However, if product is being installed using hot liquid asphalt, NIOSH guidelines recommend use of appropriate respirator to limit inhalation of fumes. If not using hot liquid asphalt, and applicable exposure standards are exceeded or can be exceeded, introduce ventilation to remove dust. If increased ventilation is not possible, use a NIOSH/MSHA 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 use, fitting, and training standards and regulations.

**VENTILATION:** Use only with adequate ventilation to maintain exposures below applicable exposure limits. Where the product is applied using hot liquid asphalt, follow NIOSH recommended practices for controlling inhalation exposures to asphalt fumes.

**EYE PROTECTION:** Chemical safety goggles with side-shields or face shield must be used if eye contact is possible.

**SKIN:** 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:** Granular surface on oxidized asphalt coated mat.

**ODOR THRESHOLD:** Not Applicable

**pH:** Not Applicable

**BOILING POINT:** >700 °F

**MELTING POINT/ Freezing Point:** >200 °F

**INITIAL BOILING POINT AND BOLING RANGE:** Not Applicable

**FLASH POINT:** Not Applicable

**EVAPORATION RATE (BUTYL ACETATE = 1):** <0.1

**FLAMMABILITY (SOLID AND GAS):** 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

**PARTITION COEFFICIENT: N-OCTANOL/WATER:** Not Applicable

**AUTOIGNITION TEMPERATURE:** >460°C/860°F

**DECOMPOSITION TEMPERATURE:** Not Applicable

**VISCOSITY:** Not Applicable

## **10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Keep from heat, sparks, open flame and other sources of ignition. Avoid contact with strong oxidizing agents. **THIS PRODUCT SHOULD NOT BE HEATED OR BURNED USING A DIRECT FLAME DEVICE.**

**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 during heating or burning. These combustion products are not expected unless product is heated or burned.

## **11. TOXICOLOGICAL INFORMATION**

**EYE** – May cause eye irritation.

**SKIN** – May 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.

### **SILICA**

**Cancer** - This product contains crystalline silica (quartz). IARC has determined that crystalline silica inhaled in the form of quartz from occupational sources is carcinogenic to humans (Group 1). IARC concluded that there was sufficient evidence in humans and animals for the carcinogenicity of inhaled crystalline silica in the form of quartz from occupational sources. The NTP has classified silica as known to be a human carcinogen. The physical nature of this product may help limit any inhalation hazard from crystalline silica during application and in its hardened state. However, physical forces such as sawing, grinding, drilling and other demolition work on this product may liberate crystalline silica dust.

**Acute Effects** - Exposure to silica dust can cause irritation of the eyes, nose and throat. Exposure to high concentrations can also cause Accelerated Silicosis causing progressive shortness of breath, fever, coughing, and weight loss.

**Chronic Effects** – In addition to cancer, breathing of silica over a period of time can cause damage to the lung tissue or silicosis after long exposure at low concentrations causing shortness of breath, fever, coughing, and weight loss. Prolonged and repeated exposure to respirable silica-containing dust may also cause autoimmune disease, kidney disease, tuberculosis, nonmalignant respiratory disease, and bronchitis.

### **OXIDIZED ASPHALT**

**Cancer** - This product contains 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 the oxidized asphalt in this product during application in its hardened state. However, physical forces such as sawing, 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, fumes, vapors, mist may cause nose, throat, 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 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.

**UN number:** Not applicable

**UN Proper Shipping Name:** Not applicable

**Packing Group, if applicable:** Not applicable

**Environmental Hazards:** Not applicable

**Transport in bulk:** Not applicable

**Special Precautions:** 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 Formaldehyde (CAS# 50-00-0), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

**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**

- Preparation Date: December, 2011 (Replaces previous version of MSDS for product due to IARC Oxidized Asphalt classification and warning language improvement.)

**Disclaimer of Liability**

The information and recommendations contained herein are to the best of **TAMKO Building Products, Inc.'s** knowledge and belief, accurate and reliable as of the date issued. **TAMKO Building Products, Inc.** does not warrant or guarantee their accuracy or reliability, and **TAMKO Building Products, Inc.** shall not be liable for any loss or damage arising out of the use thereof.

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