

MATERIAL SAFETY DATA SHEET – T10N2012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: TAMKO Non-Fibered Aluminum Roof Coating

LABEL: TAMKO

USE & DESCRIPTION: Roof Coating

CHEMICAL FAMILY: Asphalt/Aluminum 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: THIS PRODUCT SHOULD NOT BE HEATED OR BURNED USING A DIRECT FLAME DEVICE.

COMBUSTIBLE.

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

CAN CAUSE SKIN IRRITATION.

CAN 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 - *2 Flammability - 2 Reactivity - 0	<u>NFPA Rating:</u> Health - 2 Flammability - 2 Reactivity - 0
--	---

POTENTIAL HEALTH EFFECTS:

Eye Contact: If cured product particles enter eye, may cause irritation resulting in tearing, stinging, redness or swelling. Vapors, mists, or fumes may be irritating.

Skin Contact: Contact may cause skin irritation. 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. In addition, prolonged and repeated exposure to asphalt fumes has been reported to cause an acne-like skin condition, skin discoloration, and may increase sensitivity to the sun (photosensitization).

Ingestion: Ingestion of this product may cause irritation of the digestive tract followed by vomiting and central nervous system depression (see "inhalation" for symptoms). Avoid aspiration of vomit into the lungs which can cause inflammation or pneumonitis.

Inhalation: Exposure to cured product particles, fumes, vapors, or mists may cause irritation of the nose and throat, and possible signs of central nervous system depression (symptoms may include headache, dizziness, loss of coordination, and drowsiness). Loss of consciousness can occur in poorly ventilated or confined spaces. Additional signs and symptoms of exposure may include

reduced appetite and abnormal fatigue. Use of this product in well-ventilated working conditions is not expected to cause adverse effects.

Chronic Effect/Carcinogenicity/Special/Toxic:

Components can cause cancer.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	% by Weight
Mineral spirits	8052-41-3	<54
Asphalt	8052-42-4	<35
Amorphous silicates	130885-09-5	<16
Aluminum flake	7429-90-5	<15
Solvent naphtha	64742-95-6	<10

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 preferred. Avoid use of straight-stream water.

SPECIAL FIRE FIGHTING PROCEDURES: Combustible. 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. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture. **SEE SECTION 10 FOR COMBUSTION PRODUCTS.**

6. ACCIDENTAL RELEASE MEASURES

PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED: Combustible. Handling equipment must be grounded to prevent sparking. Remove ignition sources, ventilate area, and avoid inhalation or skin contact by using appropriate precautions outlined in this MSDS (see Section 8). Stop leak and contain spilled material with absorbent material. Collect adsorbed product and clean up materials in appropriate container for proper disposal. Move containers from spill area. For larger spills, keep unnecessary people away. Stay upwind of and away from spill. Notify proper authorities. Prevent materials from entering drains, sewers, or waterways. Spills entering surface waters or sewers entering/leading to surface waters that cause a sheen must be reported to the National Response Center 1-800-424-8802.

WASTE DISPOSAL METHODS: This product could be classified as hazardous waste due to ignitability. 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. Avoid all ignition sources. Storage areas should be ventilated to reduce fire and explosion hazards, and possible overexposure of personnel to fumes and vapors. Keep containers closed when not in use. Do not store near food and beverages or smoking materials.

Empty containers retain residue (liquid and/or vapor) and can be dangerous. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.** Do not attempt to clean since residue is difficult to remove. For work on tanks, refer to OSHA regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding or other contemplated operations. See Section 13 for disposal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Components Raw Products	CAS No.	OSHA		ACGIH		Unit
		TWA	STEL	TWA	STEL	
Mineral spirits	8052-41-3	500	NE	100	NE	ppm
Asphalt	8052-42-4	NE	NE	0.5**	NE	mg/m ³
Aluminum flake*	7429-90-5	15/5***	NE	10/3***	NE	mg/m ³
Amorphous silicates*	130885-09-5	15/5***	NE	10/3***	NE	mg/m ³
Solvent naphtha	64742-95-6	500	NE	100	NE	ppm

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

*** 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/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. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Silver liquid with solvent odor.

ODOR THRESHOLD: No Data Available

pH: No Data Available

BOILING POINT: 305 °F

MELTING POINT: No Data Available

INITIAL BOILING POINT AND BOILING RANGE: see BOILING POINT

FLASH POINT: 112 °F COC

EVAPORATION RATE (BUTYL ACETATE = 1): <0.1

FLAMMABILITY (SOLID AND GAS): Not Applicable

UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: 7.0 / 0.8

VAPOR PRESSURE: 2mm @ 70 °F

VAPOR DENSITY (AIR = 1): 5

SPECIFIC GRAVITY/RELATIVE DENSITY: 1.0

SOLUBILITY (IES): Negligible

PARTITION COEFFICIENT: N-OCTANOL/WATER: No Data Available

AUTOIGNITION TEMPERATURE: 460 °F

DECOMPOSITION TEMPERATURE: No Data Available

VISCOSITY: No Data Available

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. Prevent vapor accumulation. **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, halogenated hydrocarbons, and selected amines.

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, carbon dioxide, ozone, hydrogen sulfide, oxides of aluminum, sulfur and various hydrocarbons.

11. TOXICOLOGICAL INFORMATION

EYE – Can cause eye irritation.

SKIN – Can cause skin irritation.

INHALATION – Cured product particles, fume, vapor, or mist may cause upper respiratory irritation.

INGESTION – May cause harmful effects if swallowed.

THE FOLLOWING COMPONENT DATA IS PROVIDED FOR USER INFORMATION:

ASPHALT

Cancer - This product contains cutback asphalt. IARC has classified "extracts of steam and air-refined bitumens" (cutback asphalt) as Group 2B, "possibly carcinogenic to humans." NIOSH has also concluded that the fumes of heated roofing asphalt are a potential occupational carcinogen. Asphalt may also cause irritation of the respiratory tract. The physical nature of this product may help limit any inhalation hazard from asphalt after curing. However, physical forces such as sawing, grinding, drilling and other demolition work on this product may liberate cured product particles containing asphalt. Burning or heating of the product may cause fumes, vapors or mists.

Acute Effects - Inhalation of cured product particles, fumes, vapors, or 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.

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. Asphalt may also cause irritation of the respiratory tract.

PETROLEUM HYDROCARBON SOLVENT (MINERAL SPIRITS, SOLVENT NAPHTHA)

Cancer - This product contains petroleum hydrocarbon solvent. This product also may contain small amounts of polyaromatic hydrocarbons and other hydrocarbons that are recognized carcinogens in humans and experimental animals.

Acute Effects - Inhalation of cured product particles, fumes, vapors, or mist may cause nose, throat, lung, and mucous membrane irritation. Inhalation may cause central nervous system depression. Eye contact may cause irritation, stinging, tearing, redness, and swelling. If ingested, may cause mouth, throat and gastrointestinal tract irritation and upset with possible nausea, vomiting and dizziness, staggering gait, drowsiness, loss of consciousness, and delirium, as well as additional central nervous system effects. Aspiration into the lungs during vomiting may result in severe lung damage or death.

Chronic Effects - Chronic effects may include damage to the following target organs: kidneys, lungs, liver, mucous membranes, upper respiratory tract, skin, central nervous system, eye, lens or cornea, and/or auditory system. Reports have associated prolonged or repeated occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as "Solvent or Painter's Syndrome"). Intentional misuse by deliberately inhaling vapors of this product may be harmful or fatal. Chronic effects of ingestion and subsequent aspiration into the lungs may cause chronic lung dysfunction.

OTHER INGREDIENTS

This product contains small amounts of aluminum powder. It has been suggested, but not confirmed, that very high levels of aluminum dust may affect the brain and lungs (pneumoconiosis). The physical nature of this product may help limit any inhalation hazard from aluminum powder during installation and in its hardened state. However, physical forces such as grinding, drilling and other demolition work on the hardened product may liberate aluminum dust.

12. ECOLOGICAL INFORMATION

Ecotoxicity – No specific data available on this product. Product may cause mechanical damage to aquatic organisms. The naphtha and mineral spirit components are expected to volatilize in the environment and to be moderately toxic to both freshwater and marine organisms.

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 could be classified as a hazardous waste due to ignitability. Dispose in accordance with Federal, State, and Local regulations. Prevent materials from entering drains, sewers, or waterways. Do not dump on the ground. Do not burn.

14. TRANSPORT INFORMATION

This product is regulated as a hazardous material for transport under 49 CFR and for vessel transport under the IMDG Code.

DOT PROPER SHIPPING NAME: COMBUSTIBLE, LIQUID, N.O.S.

DOT HAZARD CLASSIFICATION: Combustible liquid, non-hazardous in non-bulk quantities (less than 119 gallons each). This exception to 49 CFR cited at 173.150(f).

DOT LABELING REQUIREMENTS: Combustible liquid

UN/NA NUMBER: NA 1993

PACKING GROUP: PG III

IMDG CODE: Hazardous for vessel transport under the IMDG Code

IMDG SHIPPING NAME: Coating Solution

IMDG HAZARD CLASS: 3

UN/ID NUMBER: UN 1139

PACKING GROUP NUMBER: PG III

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:

Chemical Name	CAS Number	Concentration (% by Wt.)
Aluminum (fume or dust)	7429-90-5	<19

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

- Original Preparation Date: March 15, 1997
- Revised:
 - July 2002
 - October 2002 (Formatting issues)
 - May 2004 (Prop 65 language)
 - August 2004 (DOT Transport Information)
 - August 2005 (Changes in emergency contact information)
 - June 2006 (Company name change)
 - May 2007 (Formatting issues)
 - July 2012 (Replaces previous version of MSDS for 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.

The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy his or herself that they are suitable and complete for the user's particular use.