1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: TAMKO Metalworks Touch up Paint
LABEL: TAMKO
PRODUCT USE & DESCRIPTION: Touch up paint for metal shingles
CHEMICAL FAMILY: Acrylic fluoropolymer

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

SIGNALWORD: Danger
GHS CLASSIFICATION:
Carcinogenicity – Category 1A
Skin Irritation – Category 2
Eye Irritation – Category 2A
Specific Target Organ Toxicity, Repeated Exposure – Category 1
Specific Target Organ Toxicity, Single Exposure – Category 3
Germ Cell Mutagenicity – Category 2
Flammable Liquids – Category 3

HAZARD STATEMENTS:
May cause cancer.
Causes skin irritation.
Causes serious eye irritation.
Causes damage to organs through prolonged or repeated exposure.
May cause respiratory irritation.
Suspected of causing genetic defects
Flammable liquid and vapor.

Additional hazard information: Potential for sensitization by skin contact and inhalation. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

PRECAUTIONARY STATEMENTS:
Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/mist/vapors. Wear protective gloves/protective clothing/eye protection/face protection.
Ground/bond container and receiving equipment. Take precautionary measures against static discharge.
Use only non-sparking tools. Keep away heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof equipment. Do not eat, drink or smoke when using this product.
Use outdoors or in a well-ventilated area.

Response
If on skin: Wash with plenty of water.
Get medical advice/attention: If exposed or concerned or you feel unwell, if eye, skin and or respiratory irritation persists
Specific treatment: See section 4-First Aid
If on skin (or hair): Take off immediately all contaminated clothing, wash before reuse. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If inhaled: Remove person to fresh air and keep comfortable for breathing.

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

Disposal
Dispose in accordance with Federal, State, and Local regulations. (See section 13 for additional information).

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isophorone</td>
<td>78-59-1</td>
<td>15-20</td>
</tr>
<tr>
<td>Propylene glycol monomethyl ether acetate</td>
<td>108-65-6</td>
<td>15-20</td>
</tr>
<tr>
<td>C.I. Pigment Green 17</td>
<td>68909-79-5</td>
<td>10-15</td>
</tr>
<tr>
<td>Diethylene glycol butyl ether</td>
<td>112-34-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>1-5</td>
</tr>
<tr>
<td>Ethylene glycol monobutyl ether acetate</td>
<td>112-07-2</td>
<td>1-5</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>0 – 0.099</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES
EYE CONTACT: In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. If easy to do, remove contact lenses. If medical assistance is not immediately available, flush an additional 15 minutes. Get medical attention immediately.

SKIN CONTACT: Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention, if symptoms develop or persist.

INGESTION: Rinse mouth with water. Give one or two glasses of water. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. DO NOT induce vomiting. Get medical attention immediately.

INHALATION: Move injured person into fresh air and keep person calm under observation. Get medical attention immediately. For breathing difficulties, oxygen may be necessary. If breathing stops, provide artificial respiration. Place unconscious person on the side in the recovery position and ensure breathing.

NOTES TO PHYSICIAN: Treat symptomatically. Contact poison control and/or seek medical attention as needed.

5. FIRE FIGHTING MEASURES
EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam, and/or water fog.

FIREFIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus and turn out gear. Keep containers and surroundings cool with water spray.

UNUSUAL FIRE OR EXPLOSION HAZARDS: None known.

SEE SECTION 10 FOR COMBUSTION PRODUCTS

6. ACCIDENTAL RELEASE MEASURES
PRECAUTIONS IF MATERIAL IS SPILLED OR RELEASED: Ventilate the area. Avoid breathing dust or vapor. Use self-contained breathing apparatus or airmask for large spills in a confined area. Wipe, scrap or soak up inert material and put in a container for disposal. See Section 7 for proper container and storage procedures. Remove all sources of ignition. Soak up with inert absorbent material. Use only non-sparking tools. Avoid contact with eyes.

WASTE DISPOSAL METHODS: Dispose in accordance with applicable Federal, State, and Local regulations. Do not burn.

7. HANDLING AND STORAGE
STORAGE TEMPERATURE: Keep away from heat, sparks and open flame – No smoking. Do not store above 120 degrees F (49 degrees C).

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep away from heat, sparks and open flame – No smoking. Keep container closed when not in use. Based upon flash point and vapor pressure, suitable storage should be provided in accordance with OSHA regulation 1910.106. Empty containers may contain product residue, including flammable or explosive vapors. Do not cut, puncture or weld on or near container. All label warnings must be observed until the container has been commercially cleaned or reconditioned. If the product is used near or above the flashpoint, an ignition hazard may be present. Activities, uses, or operations which liberate vapor (such as mixing or free fall of liquids) may also present an ignition hazard. Please ensure containers and other interconnected equipment are properly bonded and grounded at all times.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>OSHA TWA</th>
<th>STEL</th>
<th>ACGIH TWA</th>
<th>STEL</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isophorone</td>
<td>78-59-1</td>
<td>25</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>ppm</td>
</tr>
<tr>
<td>Propylene glycol monomethyl ether acetate</td>
<td>108-85-6</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>C.I. Pigment Green 17</td>
<td>68909-79-5</td>
<td>0.5*</td>
<td>NE</td>
<td>0.5*</td>
<td>NE</td>
<td>mg/m³</td>
</tr>
<tr>
<td>Diethylene glycol butyl ether</td>
<td>112-34-5</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>5</td>
<td>NE</td>
<td>5</td>
<td>mg/m³</td>
<td></td>
</tr>
<tr>
<td>Ethylene glycol monobutyl ether acetate</td>
<td>112-07-2</td>
<td>NE</td>
<td>NE</td>
<td>20</td>
<td>NE</td>
<td>ppm</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>15**</td>
<td>NE</td>
<td>10</td>
<td>mg/m³</td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>0.75</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>ppm</td>
</tr>
</tbody>
</table>

NE= Not established
*Cr
**Total dust

Personal Protective Equipment
Eye and face protection: Chemical goggles, also wear a face shield if splashing hazard exists.

Skin protection: Appropriate chemical resistant gloves should be worn. To prevent skin contact, wear protective clothing covering all exposed area.

Respiratory protection: If exposure cannot be controlled below applicable limits, use the appropriate NIOSH approved respirator such as an air purifying respirator with organic vapor cartridge and dust/mist filter. Consult the respirator manufacturer’s literature to ensure that the respirator will provide adequate protection. Read and follow all respirator manufacturers’ instructions.

Ventilation: Use only in well-ventilated areas. Ensure adequate ventilation, especially in confined areas. Where the product is used in a hazardous classified area, use explosion-proof electrical/ventilating/lighting/equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Liquid with paint odor

Odor Threshold: No Data Available

pH: No Data Available

Boiling Point: No Data Available

Melting Point: No Data Available

Flash Point: 83°F

Autoignition Temperature: No Data Available

Viscosity: No Data Available

Decomposition Temperature: No Data Available

Upper/Lower Flammability or Explosive Limits: LEL 1% UEL 13%

Vapor Pressure: 3.68 (mmHg) @ 68 ºF

Vapor Density (Air = 1): 6.69

Specific Gravity/Relative Density: 1.31

Solubility (IES): No Data Available

Initial Boiling Point and Boiling Range: No Data Available

Evaporation Rate (Ether=1): 0.34

Flammability(Solid and Gas): GHS Category 3

Partition Coefficient: N-Octanol/Water: No Data Available
10. STABILITY AND REACTIVITY

REACTIVITY: Stable under normal conditions

CHEMICAL STABILITY: Stable under the recommended storage and handling conditions (see Section 7); hazardous polymerization will not occur.

CONDITIONS TO AVOID: Heat.

MATERIALS TO AVOID: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION: Carbon monoxide and carbon dioxide.

SENSITIVITY TO STATIC DISCHARGE: Subject to static discharge hazards. Please see bonding and grounding information in Section 7.

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS No.</th>
<th>Approximate Weight %</th>
<th>NIOSH – Selected LD50s and LC50s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isophorone</td>
<td>78-59-1</td>
<td>15 - 20</td>
<td>1870 mg/kg Oral LD50 Rat&lt;br&gt;1390 mg/kg Dermal LD50 Rat&lt;br&gt;7 mg/L Inhalation LC50 Rat 4 h</td>
</tr>
<tr>
<td>Propylene glycol monomethyl ether acetate</td>
<td>108-65-6</td>
<td>15 - 20</td>
<td>8532 mg/kg Oral LD50 Rat&lt;br&gt;&gt;5000 mg/kg Dermal LD50 Rat</td>
</tr>
<tr>
<td>C.I. Pigment Green 17</td>
<td>68909-79-5</td>
<td>10 - 15</td>
<td>0.5 mg/m3 Cr</td>
</tr>
<tr>
<td>Diethylene glycol butyl ether</td>
<td>112-34-5</td>
<td>1 – 5</td>
<td>3384 mg/kg Oral LD50 Rat&lt;br&gt;2700 mg/kg Dermal LD50 Rat</td>
</tr>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>1 – 5</td>
<td>6800 mg/kg Oral LD50 Rat&lt;br&gt;&gt;4800 mg/kg Dermal LD50 Rat&lt;br&gt;&gt;20 mLAg Dermal LD50 Rabbit</td>
</tr>
<tr>
<td>Ethylene glycol monobutyl ether acetate</td>
<td>112-07-2</td>
<td>1 – 5</td>
<td>1600 mg/kg Oral LD50 Rat&lt;br&gt;1480 mg/kg Dermal LD50 Rabbit</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>0.1 – 1</td>
<td>&gt;10,000 mg/kg Oral LD50 Rat</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>0.0 – 0.099</td>
<td>500 mg/kg Oral LD50 Rat&lt;br&gt;0.578 mg/L Inhalation LC50 Rat 4 h</td>
</tr>
</tbody>
</table>

**Mutagens/Carcinogens:**

Possible mutagen.

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS No.</th>
<th>Approximate Weight %</th>
<th>Carcinogen Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isophorone</td>
<td>78-59-1</td>
<td>15 - 20</td>
<td>NTP Evidence of Carcinogenicity: Male rat: some evidence Female rat: no evidence; Male mice: equivocal evidence Female mice: no evidence ACGIH Carcinogens: A3 – Confirmed animal carcinogen with unknown relevance to humans</td>
</tr>
<tr>
<td>Propylene glycol monomethyl ether acetate</td>
<td>108-65-6</td>
<td>15 - 20</td>
<td>No data available</td>
</tr>
<tr>
<td>C.I. Pigment Green 17</td>
<td>68909-79-5</td>
<td>10 - 15</td>
<td>No data available</td>
</tr>
<tr>
<td>Diethylene glycol butyl ether</td>
<td>112-34-5</td>
<td>1 – 5</td>
<td>No data available</td>
</tr>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
<td>1 – 5</td>
<td>No data available</td>
</tr>
<tr>
<td>Ethylene glycol monobutyl ether acetate</td>
<td>112-07-2</td>
<td>1 – 5</td>
<td>ACGIH Carcinogens: A3 – Confirmed animal carcinogen with unknown relevance to humans</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>0.1 – 1</td>
<td>IARC Group 2B&lt;br&gt;NTP Evidence of Carcinogenicity: Male rat: negative Female rat: negative Male mice: negative Female mice: negative OSHA Hazard Communication Carcinogens: Present</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>0.0 – 0.099</td>
<td>IARC Group 1&lt;br&gt;NTP Suspect Carcinogens: Reasonably anticipated to be a human carcinogen OSHA Hazard Communication Carcinogens: Present OSHA Specifically Regulated Carcinogens: Irritant and potential cancer hazard (29 CFR 1910.1048). ACGIH Carcinogens: A2 – Suspected human carcinogen</td>
</tr>
</tbody>
</table>

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. However, physical forces such as sawing, grinding, and drilling may liberate formaldehyde.

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.

TITANIUM DIOXIDE

Cancer - Titanium dioxide has recently been classified by the International Agency for Research on Cancer (IARC) as Group 2B "possibly carcinogenic to humans". IARC determined that high concentrations of pigment-grade (powdered) and ultratine titanium dioxide dust caused respiratory tract cancer in rats exposed by inhalation and intratracheal instillation. The series of biological events or steps that produced the rat lung cancers (e.g. particle deposition, impaired lung clearance, cell injury, fibrosis, mutations and ultimately cancer) have also been seen in people working in dusty environments. Therefore, IARC considered the animal data relevant to people doing jobs with exposures to titanium dioxide dust.

Acute Effects - Skin exposure to titanium dioxide is a mild irritant and may cause mechanical irritation (irritation from frictional action but is believed not to be absorbed through intact skin). Dust may cause mechanical irritation (irritation from frictional action of eyes). May cause gastrointestinal (digestive) tract irritation with nausea, vomiting and diarrhea if swallowed. It is not absorbed following ingestion. Dust may be harmful if inhaled and causes respiratory tract irritation. May affect respiration and blood.

Chronic Effects - Heavy occupational dust exposures may cause chronic rhinitis, chronic bronchitis, impaired pulmonary function, resemblance of silicosis without any fibrosis, functional change in trachea or bronchi, chronic pulmonary edema.

12. ECOLOGICAL INFORMATION:
No information on ecology is available.

13. DISPOSAL CONSIDERATIONS:
Disposal should be made in accordance with federal, state, and local regulations.

14. TRANSPORT INFORMATION:
UN Number: UN1263
UN Proper Shipping Name: Paint
Transport Class: 3
Packing Group Number: III

U.S. Hazmat and/or International DG shipment exceptions:
The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49 CFR Hazmat Regulations. Please consult 49 CFR to ensure that subsequent shipments comply with these exceptions.

15. REGULATORY INFORMATION
TOXIC SUBSTANCES CONTROL ACT (TSCA): All components of this product are in compliance with the U.S. TSCA Chemical Substance Inventory Requirements.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA): Yes
SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA), TITLE III:
Section 302 Extremely Hazardous Substances: Formaldehyde
Section 311/312 Hazard Categories: Immediate Health; Delayed Health; Fire Hazard
Section 313 Reportable Ingredients: C.I. Pigment Green, Diethylene glycol butyl ether, Dimethyl phthalate, ethylene glycol monobutyl ether acetate, Formaldehyde


16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Rating</th>
<th>NFPA Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health - * 2</td>
<td>Health - 2</td>
</tr>
<tr>
<td>Flammability - 3</td>
<td>Flammability - 3</td>
</tr>
<tr>
<td>Reactivity - 1</td>
<td>Reactivity - 1</td>
</tr>
</tbody>
</table>

Preparation Date: April 2015 Revision Date: February 2017
Revisions: Updated California Proposition 65 warning language in Section 15

Disclaimer of Liability
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