SECTION 1: PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: Timberline® HDZ
Timberline® HD™ Lifetime Shingles
Timberline® Ultra HD™ Lifetime Shingles
Timberline® American Harvest™ Shingles
Timberline® Natural Shadow™ Shingles
Timberline® ArmorShield™ II Shingles
Timberline® Cool Series Shingles
Timberline® HD Reflector Series Shingles
Timberline® HD Reflector Series Plus Shingles
Timberline® Ultra HD Reflector Series Shingles
Fortitude

TRADE NAME: Asphalt / Fiberglass Shingles

MANUFACTURER: GAF

ADDRESS: 1 Campus Drive, Parsippany, NJ 07054

24-HOUR EMERGENCY PHONE (CHEMTREC): 800 – 424 – 9300

INFORMATION ONLY: 800 – 766 – 3411

PREPARED BY: Corporate EHS

APPROVED BY: Corporate EHS

SECTION 2: HAZARDS IDENTIFICATION

As defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200, the products listed below are considered articles and do not require an SDS. In addition, articles are not included in the scope of the Globally Harmonization System (GHS). As such, the GHS labeling elements are not included on this SDS. All components listed for this product are bound within the product. When handled as intended and under normal conditions of use, there is no evidence that any of the ingredients are released in amounts that pose a significant health risk. Although these products are not subject to the OSHA Standard or GHS labeling elements, GAF would like to disclose as much health and safety information as possible to ensure that this product is handled and used properly. This SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and be made available for employees and other users of this product. In addition, the recommendations for handling and use of these products should be included in worker training programs.

ADDITIONAL HAZARD IDENTIFICATION INFORMATION:

PRIMARY ROUTE OF EXPOSURE: Occasional nuisance dust, Inhalation if dust is generated.

SIGNS & SYMPTOMS OF EXPOSURE
Eyes: May cause irritation to the eyes if dust is generated.

Skin: May cause irritation to the skin if dust is generated.

Ingestion: This product is not intended to be ingested. If ingested, it may cause temporary irritation to the gastrointestinal (digestive) tract.

Inhalation: May cause irritation to the respiratory tract.

**ACUTE HEALTH HAZARDS:**

NIOSH has found that studies of workers exposed to asphalt fumes have repeatedly found irritation of the serous membranes of the conjunctivae (eye irritation) and the mucous membranes of the upper respiratory tract (nasal and throat irritation).

**CHRONIC HEALTH HAZARDS:**

Studies in humans have found that exposure to respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis is a serious and irreversible disease; it may be progressive even after exposure has ceased; it can lead to disability and death. Human studies also have found that silicosis is a risk factor for tuberculosis, and that occupational exposure to respirable crystalline silica is associated with chronic obstructive pulmonary disease, including bronchitis and emphysema. Some studies show excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease in workers exposed to respirable crystalline silica.

**CARCINOGENICITY:**

IARC has determined that occupational exposure to oxidized asphalt and its emissions is probably carcinogenic to humans (Group 2A). IARC concluded that available data from cancer studies in humans points to an association between exposures to oxidized asphalts during roofing and lung cancer and tumors in the upper aero-digestive tract. In addition, IARC found sufficient evidence of carcinogenicity in experimental animals for extracts and fume condensates of oxidized asphalts.

NIOSH has concluded that the collective data from human, animal, genotoxicity and exposure studies provide sufficient evidence that roofing asphalt fumes are a potential occupational carcinogen.

Occupational exposure to respirable crystalline silica is classified as a known carcinogen in humans. IARC has determined that respirable crystalline silica is carcinogenic to humans (Group 1), based on findings of sufficient evidence of carcinogenicity in both humans and experimental animals. NTP has classified respirable crystalline silica as a known human carcinogen based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to respirable crystalline silica and increased lung cancer rates in workers exposed to crystalline silica dust. NIOSH has determined that respirable crystalline silica is a potential occupational carcinogen.

IARC has determined that occupational exposure to Titanium Dioxide is possibly carcinogenic to humans (Group 2B). IARC concluded lung tumors were observed in rats following high dose exposure by inhalation and in female rats exposed by intra-
tracheal instillation. Other studies have shown no tumors in rats following inhalation exposure and no tumors in mice or rats following oral exposure.

SECTION 3: HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS #</th>
<th>%</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Granules</td>
<td>-</td>
<td>20 – 45</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>25 – 45</td>
<td>5 mg/m3 – resp. 15 mg/m3 – total</td>
<td>3 mg/m3 – resp. 10 mg/m3 – total</td>
<td>REL: 5 mg/m3 – resp. 10 mg/m3 – total</td>
</tr>
<tr>
<td>Oxidized Asphalt</td>
<td>64742-93-4</td>
<td>10 – 30</td>
<td>NE</td>
<td>0.5 mg/m3 (inhalable fraction, as benzene-soluble aerosol)</td>
<td>5 mg/m3 – ceiling (15 min. fumes)</td>
</tr>
<tr>
<td>Crystalline Silica</td>
<td>14808-60-7</td>
<td>0 – 10</td>
<td>50 μg/m³</td>
<td>0.025 mg/m3</td>
<td>REL: 0.05 mg/m3 – resp.</td>
</tr>
<tr>
<td>Fiberglass Mat</td>
<td>65997-17-3</td>
<td>1 – 3</td>
<td>1 f/cc – resp.</td>
<td>1 f/cc – resp.</td>
<td>REL: 5 mg/m3 – total fibers</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>0 – 4</td>
<td>15 mg/m3 – total</td>
<td>10 mg/m3 – total</td>
<td>REL: lowest feasible concentration</td>
</tr>
</tbody>
</table>

NE = Not Established

SECTION 4: FIRST AID MEASURES

FIRST AID PROCEDURES

EYES: Hold eyelids open and wash with gentle stream of water for at least 15 minutes preferably at eyewash fountain.

SKIN: Wash affected area thoroughly with soap and water.

INHALATION: Remove to fresh uncontaminated air.

INGESTION: Not expected to be ingested.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: No information available
### SECTION 5: FIRE FIGHTING PROCEDURES

**SUITABLE EXTINGUISHING MEDIA:** Water spray, Alcohol foam, Carbon Dioxide, or Dry chemical.

**HAZARDOUS COMBUSTION PRODUCTS:** Carbon dioxide and carbon monoxide.

**RECOMMENDED FIRE FIGHTING PROCEDURES:** NIOSH-approved self-contained breathing apparatus is recommended for smoke protection.

**UNUSUAL FIRE & EXPLOSION HAZARDS:** N/A

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**ACCIDENTAL RELEASE MEASURES:** Pick up large pieces. Avoid creating dusts during clean up.

### SECTION 7: HANDLING AND STORAGE

**HANDLING AND STORAGE:** No specific handling or storage requirements.

**OTHER PRECAUTIONS:** None

### SECTION 8: EXPOSURE CONTROLS/PERSOAl PROTECTION

**ENGINEERING CONTROLS / VENTILATION:** N/A

**RESPIRATORY PROTECTION:** N/A under normal use conditions. In circumstances where dust or fumes are generated and may exceed recognized allowable exposure levels, appropriate NIOSH approved respiratory protection is recommended.

**EYE PROTECTION:** Safety glasses with side shields

**SKIN PROTECTION:** Cotton or leather gloves are recommended when handling.

**OTHER PROTECTIVE EQUIPMENT:** None

**WORK HYGIENIC PRACTICES:** Wash exposed skin prior to eating, drinking or smoking and at the end of each shift.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
### APPEARANCE & ODOR:
Granule coated shingle; no appreciable odor.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>&gt; 550 °F</td>
</tr>
<tr>
<td>Method Used</td>
<td>No data</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data</td>
</tr>
<tr>
<td>pH (undiluted product)</td>
<td>No data</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>No data</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data</td>
</tr>
<tr>
<td>VOC with Water (LBS/GAL)</td>
<td>No data</td>
</tr>
<tr>
<td>VOC without Water (LBS/GAL)</td>
<td>No data</td>
</tr>
</tbody>
</table>

### SECTION 10: STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Conditions To Avoid (Stability)</td>
<td>None known</td>
</tr>
<tr>
<td>Incompatibility (Material To Avoid)</td>
<td>None known</td>
</tr>
<tr>
<td>Hazardous Decomposition Or By-Products</td>
<td>Carbon Dioxide and Carbon Monoxide</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will Not Occur</td>
</tr>
</tbody>
</table>

### SECTION 11: TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicological Information</td>
<td>None available for the product. See section 3.</td>
</tr>
</tbody>
</table>

### SECTION 12: ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecological Information</td>
<td>No information available.</td>
</tr>
</tbody>
</table>
SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: This product, as supplied, is not regulated as a hazardous waste by the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. Comply with state and local regulations for disposal.

RCRA HAZARD CLASS: None

SECTION 14: TRANSPORTATION INFORMATION

DOT Not regulated as dangerous goods.

IATA Not regulated as dangerous goods.

IMDG Not regulated as dangerous goods.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA: This product and its components are listed on the TSCA 8(b) inventory.

CERCLA: None

SARA None

311 / 312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS: None

CALIFORNIA PROPOSITION 65: This product contains silica and titanium dioxide, chemicals known to the State of California to cause cancer.

Other state regulations may apply. Check individual state requirements. The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Chemical Name</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>Limestone</td>
<td>1317-65-3</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
SECTION 16: OTHER INFORMATION

ADDITIONAL COMMENTS: None.

DATE OF PREVIOUS SDS: July 2019

CHANGES SINCE PREVIOUS SDS: Addition of HD Reflector Series

This information relates to the specific material designated and may not be valid for such material used on combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee, expressed or implied, is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license of valid patents.