1. Identification

1.1. Product identifier
Product Identity 111, Asphalt Primer/Coatings
Alternate Names 111, Asphalt Primer/Coatings

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use See Technical Data Sheet.
Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet
Company Name Karnak Corporation
330 Central Ave.
Clark, NJ 07066 USA

Emergency www.karnakcorp.com
CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No. OUTSIDE THE U.S AND CANADA 1-202-483-7616
Customer Service: Karnak Corporation 1-800-526-4236

2. Hazard(s) identification

2.1. Classification of the substance or mixture
Flam. Liq. 3;H226 Flammable liquid and vapor.
Acute Tox. 5;H313 May be harmful in contact with skin. (Not adopted by US OSHA)
STOT RE 1;H372 Causes damage to organs through prolonged or repeated exposure. Specific Target Organs: (central nervous system )

2.2. Label elements
Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

H226 Flammable liquid and vapor.
H313 May be harmful in contact with skin.
H372 Causes damage to organs through prolonged or repeated exposure.

[Prevention]:
P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
P235 Keep cool.
P240 Ground / bond container and receiving equipment.
P241 Use explosion-proof electrical / ventilating / light / equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe mist / vapors / spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves / eye protection / face protection.

[Response]:
P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.
P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
P312 Call a POISON CENTER or doctor / physician if you feel unwell.
P314 Get Medical advice / attention if you feel unwell.
P331 Do NOT induce vomiting.
P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]:
P403+233 Store in a well ventilated place. Keep container tightly closed.

[Disposal]:
P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

<table>
<thead>
<tr>
<th>Ingredient/Chemical Designations</th>
<th>Weight %</th>
<th>GHS Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stoddard solvent</td>
<td>50 - 75</td>
<td>STOT RE 1:H372</td>
<td>[1][2]</td>
</tr>
<tr>
<td>Bitumen(containing aromatic oils)</td>
<td>25 - 50</td>
<td>Not Classified</td>
<td>[1]</td>
</tr>
</tbody>
</table>

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.
[1] Substance classified with a health or environmental hazard.
4. First aid measures

4.1. Description of first aid measures

General  In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation  If respiratory discomfort occurs, remove to fresh air. If discomfort continues, administer oxygen and get medical attention.

Eyes  Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin  If this product comes in contact with skin, remove material with mineral oil, then wash with soap and plenty of water.

Ingestion  If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Overview  

Inhalation: Irritating to respiratory tract. Prolonged or repeated breathing of very high vapor concentrations may cause euphoria, excitation, and dizziness, headaches, nausea, and vomiting, abdominal pain, fatigue, muscular weakness. Aspiration into the lungs can cause CNS (central nervous system) and subsequent aspiration into the lungs can cause pulmonary edema and chemical pneumonia depression. Chronic overexposure in high concentrations may produce CNS depression. May cause irritation to the nose, throat and upper respiratory tract.

Ingestion: Swallowing large amounts may be harmful. Irritation of the mouth, esophagus and stomach can develop following ingestion. Symptoms include burning of the mouth, sore throat, vomiting, nausea, dizziness, loss of consciousness. Due to its light viscosity, there is danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

Skin Contact: Prolonged or repeated skin contact may cause moderate irritation including itching and redness of the skin, defatting, and/or dermatitis. This product can also be absorbed through the skin and could produce CNS symptoms, but it is unlikely that this would result in harmful effects during safe handling and use.

Effects of long-term (chronic) exposure: Chronic effects of ingestion and subsequent aspiration into the lungs can cause pneumatocele (lung cavity) formation and chronic lung dysfunction.

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from
the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. See section 2 for further details.

5. Fire-fighting measures

5.1. Extinguishing media
Carbon dioxide (CO2), foam, or dry chemical. Water may be used to cool containers exposed to heat.

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition: High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

Keep away from heat / sparks / open flames / hot surfaces - No smoking.
Keep cool.
Ground / bond container and receiving equipment.
Use explosion-proof electrical / ventilating / light / equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe mist / vapors / spray.
Do not get in eyes, on skin, or on clothing.

5.3. Advice for fire-fighters
When heated above flash point, material will release flammable vapors which can burn or be explosive in confined spaces if ignited. Do not mix with strong oxidants such as liquid chlorine or concentrated oxygen.
Minimize breathing vapors, gases or fumes of decomposition products. Do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions
Do not allow spills to enter drains or waterways.
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up
Eliminate sources of ignition, and ventilate the area. Add sand or earth or absorb spill with suitable absorbent material and place in a closed container.
Keep product out of sewers and waterways by diking or impounding. Advise authorities if product has entered or may enter sewers or waterways. Assure conformity with applicable governmental regulations.

7. Handling and storage

7.1. Precautions for safe handling
The requirements of the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations apply if the flashpoint is between 21°C and 32°C. See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities
Handle containers carefully to prevent damage and spillage.
Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.
Incompatible materials: Strong acids, alkalis, and oxidizers such as liquid chlorine, halogens, hydrogen peroxide, oxygen.
Vapors are heavier than air and may travel along the ground or be moved by ventilation to locations distant from the point of material handling. To prevent fumes from entering buildings or confined areas, close all air intake sources near the material handling or the work area. To prevent ignition, avoid smoking, keep away from heat, open flames and sources of static or electrical sparking. Use explosion proof motors and equipment. Tank trucks or other containers should be grounded and/or bonded when the material is transferred.
Avoid prolonged or repeated inhalation of vapors or spray mists. Avoid prolonged or repeated skin contact. Adhere to good hygienic practices. Avoid open flames. Use with adequate ventilation.
Store in a cool, dry place, out of direct sunlight and away from heat, sparks, and flame.
See section 2 for further details. - [Storage]:

7.3. Specific end use(s)
Health studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

8. Exposure controls and personal protection

8.1. Control parameters
Exposure

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0008052-41-3</td>
<td>Stoddard solvent</td>
<td>OSHA</td>
<td>TWA 500 ppm (2900 mg/m3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TWA: 290 mg/m3 STEL: 580 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>TWA 350 mg/m3 C 1800 mg/m3 [15-minute]</td>
</tr>
<tr>
<td>Supplier</td>
<td>No Established Limit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0064742-93-4</td>
<td>Bitumen(containing aromatic oils)</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
</tbody>
</table>
8.2. Exposure controls

Respiratory If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes Safety glasses or face shield for liquid material.

Skin Solvent-resistant gloves.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices Long sleeves and impervious clothing to protect against splashing. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Dark Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Mild Petroleum</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not Measured</td>
</tr>
<tr>
<td>pH</td>
<td>Not Measured</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>NA</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>300-350F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>(PMCC): 104F min. (Butyl Acetate=1)@77F: 0.2</td>
</tr>
</tbody>
</table>
Flammability (solid, gas) Not Applicable
Upper/lower flammability or explosive limits
Lower Explosive Limit: Not Measured
Upper Explosive Limit: Not Measured
Vapor pressure (Pa) 3
Vapor Density (Air=1): > 4
Specific Gravity (H2O=1): 0.8 - 0.99
Solubility in Water Insoluble
Partition coefficient n-octanol/water (Log Kow) Not Measured
Auto-ignition temperature Not Measured
Decomposition temperature Not Measured
Viscosity (cSt) Not Measured
9.2. Other information
No other relevant information.

10. Stability and reactivity

10.1. Reactivity
Hazardous Polymerization will not occur.
10.2. Chemical stability
Stable under normal circumstances.
10.3. Possibility of hazardous reactions
No data available.
10.4. Conditions to avoid
Excessive heat and open flame.
10.5. Incompatible materials
Strong acids, alkalis, and oxidizers such as liquid chlorine, halogens, hydrogen peroxide, oxygen.
10.6. Hazardous decomposition products
High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

11. Toxicological information

Acute toxicity

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in
dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral LD50, mg/kg</th>
<th>Skin LD50, mg/kg</th>
<th>Inhalation Vapor LC50, mg/L/4hr</th>
<th>Inhalation Dust/Mist LC50, mg/L/4hr</th>
<th>Inhalation Gas LC50, ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stoddard solvent - (8052-41-3)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Bitumen(containing aromatic oils) - (64742-93-4)</td>
<td>5,000.00, Rat - Category: 5</td>
<td>2,000.00, Rabbit - Category: 4</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
<th>Hazard Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>5</td>
<td>May be harmful in contact with skin. (Not adopted by US OSHA)</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>1</td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**12. Ecological information**

**12.1. Toxicity**
No additional information provided for this product. See Section 3 for chemical specific data.

**Aquatic Ecotoxicity**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>96 hr LC50 fish, mg/l</th>
<th>48 hr EC50 crustacea, mg/l</th>
<th>ErC50 algae, mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stoddard solvent - (8052-41-3)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>
12.2. Persistence and degradability
There is no data available on the preparation itself.

12.3. Bioaccumulative potential
Not Measured

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects
No data available.

13. Disposal considerations

13.1. Waste treatment methods
Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

<table>
<thead>
<tr>
<th>DOT (Domestic Ground Transportation)</th>
<th>IMO / IMDG (Ocean Transportation)</th>
<th>ICAO/IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>UN1999</td>
<td>UN1999</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Tars, liquid including road oils and cutback bitumens</td>
<td>Tars, liquid including road oils and cutback bitumens</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>IMDG: 3</td>
<td>Air Class: 3</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>EmS No. F-E, S-E</td>
<td>ERG Guide 130</td>
</tr>
<tr>
<td>14.6. Special precautions for user</td>
<td>IMDG: Marine Pollutant: No ERG Guide 130</td>
<td></td>
</tr>
</tbody>
</table>
15. Regulatory information

Regulatory Overview
The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA)
All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification
B3  D2A

US EPA Tier II Hazards
- Fire: Yes
- Sudden Release of Pressure: No
- Reactive: No
- Immediate (Acute): Yes
- Delayed (Chronic): Yes

EPCRA 311/312 Chemicals and RQs:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

California Proposition 65 (>0.0%):
⚠ WARNING: This product can expose you to chemicals including asphalt, which is known to the State of California to cause cancer and/or reproductive hazards. For more information, go to www.P65Warnings.ca.gov.

New Jersey RTK Substances (>1%):
- Bitumen(containing aromatic oils)
- Stoddard solvent

Pennsylvania RTK Substances (>1%):
- Stoddard solvent

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:
H304 May be fatal if swallowed and enters airways.
H372 Causes damage to organs through prolonged or repeated exposure.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

Disclaimer: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The information has been completed to the best of our knowledge and is believed to be accurate and reliable as from the date indicated. However, no warranty is made as to its accuracy, reliability or completeness. It is the user’s responsibility to satisfy oneself as to the suitability and completeness of such information for his own particular use.

End of Document