Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
METHYLNAPHTHALENE FRACTION

Synonyms
BOTTOM OF COLUMN OIL; METHYLNAPHTHALENE FRACTION #2

Chemical Family
polynuclear, aromatic hydrocarbons

Product Use
process intermediate.

Restrictions on Use
None known.

Details of the supplier of the safety data sheet
KOPPERS INC.
436 Seventh Avenue
Pittsburgh, PA 15219-1800
Mfg Contact: 412-227-2001 (SDS Requests: 866-852-5239)

CHEMTREC: 800-424-9300 (Outside USA: +1 703-527-3887)
Emergencies: (Medical in USA): 877-737-9047
Emergencies: (Medical Outside of USA): 651-632-9269
E-mail: naorgmsds@koppers.com

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Aspiration Hazard - Category 1
Acute Toxicity - Oral - Category 4
Skin Corrosion/Irritation - Category 2
Serious Eye Damage/Eye Irritation - Category 2A
Germ Cell Mutagenicity - Category 2
Carcinogenicity - Category 1B
Specific target organ toxicity - Repeated exposure - Category 1 (blood, liver, nervous system)
Hazardous to the Aquatic Environment - Acute - Category 1
Hazardous to the Aquatic Environment - Chronic - Category 2

GHS Label Elements

Symbol(s)

Signal Word
Danger

Hazard Statement(s)
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing genetic defects.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure. (blood, liver, nervous system)
May be fatal if swallowed and enters airways.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

**Prevention**
Do not breathe vapor or mist.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/clothing and eye/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid release to the environment.

**Response**
IF exposed or concerned: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Do NOT induce vomiting.
Collect spillage.

**Storage**
Store locked up.

**Disposal**
Dispose of contents/container in accordance with local/regional/national/international regulations.

**Statement(s) of Unknown Aquatic Toxicity**
70% of the mixture consists of ingredient(s) of unknown acute aquatic toxicity.
31% of the mixture consists of ingredient(s) of unknown chronic aquatic toxicity.

**Other Hazards**
None known.

**Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1321-94-4</td>
<td>Methylnaphthalene</td>
<td>100</td>
</tr>
<tr>
<td>-</td>
<td>The above listed complex substance contains the following constituents</td>
<td>-</td>
</tr>
<tr>
<td>91-57-6</td>
<td>2-Methylnaphthalene</td>
<td>38.51-38.97</td>
</tr>
<tr>
<td>90-12-0</td>
<td>1-Methylnaphthalene</td>
<td>14.91-15.13</td>
</tr>
</tbody>
</table>
Component Related Regulatory Information
This product may be regulated, have exposure limits or other information identified as the following: Aromatic hydrocarbons, polycyclic (130489-29-2).

Section 4 - FIRST AID MEASURES

Inhalation
If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Skin
Take off immediately all contaminated clothing. Wash with plenty of soap and water. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing before reuse.

Eyes
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention, if needed.

Ingestion
Aspiration hazard. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Get immediate medical attention.

Most Important Symptoms/Effects

Acute
Harmful if swallowed, respiratory tract irritation, skin irritation, eye irritation, lung damage (from aspiration)

Delayed
Mutagenic effects, cancer, blood damage, liver damage, nervous system damage

Indication of any immediate medical attention and special treatment needed
Treat symptomatically and supportively.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
regular dry chemical, carbon dioxide, water spray, regular foam
Safety Data Sheet

Material Name: METHYLNAPHTHALENE FRACTION  

Unsuitable Extinguishing Media
Do not use high-pressure water streams.

Special Hazards Arising from the Chemical
Slight fire hazard. Vapor/air mixtures are explosive above flash point. Empty containers may retain product residue including flammable/explosive vapors.

Hazardous Combustion Products
oxides of carbon, oxides of nitrogen, polynuclear aromatic hydrocarbons

Fire Fighting Measures
Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Avoid inhalation of material or combustion by-products. Dike for later disposal.

Special Protective Equipment and Precautions for Firefighters
Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment. Collect spillage.

Methods and Materials for Containment and Cleaning Up
Avoid heat, flames, sparks and other sources of ignition. Do not touch or walk through spilled material. Stop leak if possible without personal risk. Reduce vapors with water spray. Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. In Canada, report releases to provincial authorities, municipal authorities, or both, as required. Due to the concentration of Acenaphthene and the CERCLA (40 CFR 302.4) reportable quantity of 100 pounds, the release of 847 pounds (98 gallons) of this product requires National Response Center notification. See Section 13 for waste disposal information.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
Do not breathe vapor or mist. Wash exposed areas thoroughly with soap and water, or a waterless hand cleaner, after skin contact and before eating, drinking, using tobacco products, or restrooms. Avoid contact with eyes, skin and clothing. Do not eat, drink, or smoke when using this product. Wear protective gloves/clothing and eye/face protection. Use only outdoors or in a well-ventilated area. Contaminated clothing should be removed and laundered before reuse. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Conditions for Safe Storage, Including any Incompatibilities
Store locked up.
Store and handle in accordance with all current regulations and standards. Label all containers. Store in a well-ventilated area. Keep container tightly closed. Store in a cool, dry place. Keep away from heat, sparks and naked flames. Protect from physical damage. Keep separated from incompatible substances.

Incompatible Materials
bases, metals, oxidizing materials, peroxides

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

| 2-Methylnaphthalene | 91-57-6 |
### ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

<table>
<thead>
<tr>
<th>Compound</th>
<th>ACGIH:</th>
<th>OSHA (US):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthalene</td>
<td>10 ppm TWA</td>
<td>10 ppm TWA ; 50 mg/m3 TWA</td>
</tr>
<tr>
<td>Acetophenone</td>
<td>0.5 ppm TWA</td>
<td>0.2 ppm TWA ; 1 mg/m3 TWA</td>
</tr>
<tr>
<td>1-Methylnaphthalene</td>
<td>0.5 ppm TWA</td>
<td>0.2 ppm TWA ; 1 mg/m3 TWA</td>
</tr>
<tr>
<td>Biphenyl</td>
<td>0.5 ppm TWA</td>
<td>0.2 ppm TWA ; 1 mg/m3 TWA</td>
</tr>
<tr>
<td>Biphenylacetaldehyde</td>
<td>0.5 ppm TWA</td>
<td>0.2 ppm TWA ; 1 mg/m3 TWA</td>
</tr>
</tbody>
</table>

### Industrial Hygiene Standards

**Engineering Controls**
Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

**Individual Protection Measures, such as Personal Protective Equipment**

**Eye/face protection**
ANSI Z87.1-1989 approved safety glasses with side shields. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin Protection**
Wear appropriate clothing. Contaminated clothing should be removed and laundered before reuse.

**Respiratory Protection**
If the applicable TLVs and/or PELs are exceeded, use NIOSH-approved multipurpose air-purifying cartridge respirators, for organic vapors and P-100 particulate.

**Glove Recommendations**
Wear appropriate chemical resistant gloves.

**Protective Materials**
chemical resistant material

### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Physical State</th>
</tr>
</thead>
<tbody>
<tr>
<td>blue to brown Liquid</td>
<td>liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Color</td>
</tr>
<tr>
<td>mothball odor</td>
<td>blue to brown</td>
</tr>
</tbody>
</table>
Odor Threshold | Not available | pH | Not available
---|---|---|---
Melting Point | Not available | Boiling Point | Not available
Boiling Point Range | Not available | Freezing point | Not available
Evaporation Rate | Not available | Flammability (solid, gas) | Not applicable
Autoignition Temperature | Not available | Flash Point | 225 - 235 °F Pensky-Martens Closed Cup
Lower Explosive Limit | Not available | Decomposition temperature | Not available
Upper Explosive Limit | Not available | Vapor Pressure | Not available
Vapor Density (air=1) | Not available | Specific Gravity (water=1) | 1.035 - 1.04
Water Solubility | Not available | Partition coefficient: n-octanol/water | Not available
Viscosity | Not available | Kinematic viscosity | Not available
Solubility (Other) | Not available | Density | Not available
Physical Form | oil | Molecular Weight | Not available
OSHA Flammability Category | 4 | | |

Other Information
No additional information is available.

Section 10 - STABILITY AND REACTIVITY

Reactivity
No reactivity hazard is expected.

Chemical Stability
Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions
Will not polymerize.

Conditions to Avoid
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials
bases, metals, oxidizing materials, peroxides

Hazardous decomposition products
Combustion products: oxides of carbon, oxides of nitrogen, polynuclear aromatic hydrocarbons

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure
Safety Data Sheet

Material Name: METHYLNAPHTALENE FRACTION

Inhalation
irritation, blood damage, liver damage, nervous system damage, cancer

Skin Contact
irritation

Eye Contact
irritation

Ingestion
blood damage, liver damage, aspiration hazard

Acute and Chronic Toxicity

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and the following selected endpoints are published:

Methylnaphthalene (1321-94-4)
Oral LD50 Rat 1110 mg/kg
Dermal LD50 Rat >2500 mg/kg

Product Toxicity Data

Acute Toxicity Estimate

| Oral | 1110 mg/kg |

Immediate Effects
Harmful if swallowed, respiratory tract irritation, skin irritation, eye irritation, lung damage (from aspiration)

Delayed Effects
mutagenic effects, cancer, blood damage, liver damage, nervous system damage

Irritation/Corrosivity Data
respiratory tract irritation, skin irritation, eye irritation

Respiratory Sensitization
No data available.

Dermal Sensitization
No data available.

Component Carcinogenicity

<table>
<thead>
<tr>
<th>Naphthalene</th>
<th>91-20-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH:</td>
<td>A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans</td>
</tr>
<tr>
<td>IARC:</td>
<td>Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))</td>
</tr>
<tr>
<td>NTP:</td>
<td>Reasonably Anticipated To Be A Human Carcinogen</td>
</tr>
</tbody>
</table>

Germ Cell Mutagenicity
Available data characterizes this substance as mutagenic.

Tumorigenic Data
No data available

Reproductive Toxicity
No data available.
Safety Data Sheet

Material Name: METHYLNAPHTHALENE FRACTION

Specific Target Organ Toxicity - Single Exposure
lungs

Specific Target Organ Toxicity - Repeated Exposure
blood, liver, nervous system

Aspiration hazard
Yes.

Medical Conditions Aggravated by Exposure
respiratory disorders, eye disorders, skin disorders and allergies, blood system disorders, central nervous system disorders, kidney disorders, liver disorders, metabolic disorders

Additional Data
In addition to containing information about the product as a whole, this data sheet also contains information about individual components of the product. Information of this nature may not have been derived from studies or data relating to this product and/or may have been derived from studies or data that did not involve human exposure and involved animal exposure only. Some polycyclic aromatic hydrocarbons (PAHs), found in coal tar complex substances, have been reported to cause lung and skin cancer in humans under conditions of poor personal hygiene, prolonged/repeated contact, and exposure to sunlight. The National Toxicology Program (NTP) and IARC have independently classified various PAH compounds present in coal tar substances as reasonably anticipated to be human carcinogens (NTP), probably carcinogenic to humans (IARC Group 2A), possibly carcinogenic to humans (IARC Group 2B), and not classifiable as to carcinogenicity to humans (IARC Group 3). The cancers reported in the studies upon which IARC based its conclusions involved lung, skin, liver, stomach, kidney and blood cancers in animals. Based on the results of animal experiments PAHs may cause injury to the liver, kidneys, lungs, blood and lymph systems. Some PAH's have also been associated with impaired fertility, heritable genetic damage and birth defects in mice. A neoplastic effect was reported in mice with subcutaneous injection of 46 mg/kg of diphenyl.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Component Analysis - Aquatic Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
</tr>
</tbody>
</table>

  | Fish: | LC50 96 h Pimephales promelas 0.509 mg/L [flow-through ]; LC50 96 h Oncorhynchus mykiss 0.6 - 0.75 mg/L [flow-through ]; LC50 96 h Lepomis macrochirus 1.3 - 2.1 mg/L [static ] |
  | Algae: | EC50 96 h Pseudokirchneriella subcapitata 0.23 - 1.15 mg/L EPA |
  | Invertebrate: | EC50 48 h Daphnia magna 41 mg/L IUCLID ; EC50 48 h Daphnia magna 3.45 mg/L IUCLID ; EC50 48 h Daphnia magna 1.102 - 1.475 mg/L [Static ] EPA |
| Quinoline    | 91-22-5 |

  | Fish: | LC50 96 h Pimephales promelas 77.8 mg/L [flow-through ]; LC50 96 h Pimephales promelas 46 mg/L [static ]; LC50 96 h Poecilia reticulata 40 mg/L [static ] |
  | Algae: | EC50 72 h Desmodesmus subspicatus 84 mg/L [static ] EPA ; EC50 96 h Desmodesmus subspicatus 90 mg/L [static ] EPA |
  | Invertebrate: | EC50 48 h Daphnia magna 28.5 mg/L IUCLID ; EC50 48 h Daphnia magna 45.9 - 57.3 mg/L [Static ] EPA |
### Biphenyl 92-52-4

**Fish:**
- LC50 96 h Pimephales promelas 1.65 - 2.29 mg/L [flow-through]; LC50 96 h Pimephales promelas 1.17 - 1.81 mg/L [static]; LC50 96 h Lepomis macrochirus 4.3 - 5.1 mg/L [static]; LC50 96 h Oncorhynchus mykiss 1.4 - 1.6 mg/L [static]

**Invertebrate:**
- EC50 48 h Daphnia magna 0.63 - 0.85 mg/L [Static] (<24 hours old) EPA

### Dibenzoferan 132-64-9

**Fish:**
- LC50 96 h Pimephales promelas 0.84 - 1.31 mg/L [flow-through]; LC50 96 h Pimephales promelas 1.04 - 1.25 mg/L [static]; LC50 96 h Poecilia reticulata 1 - 3.2 mg/L [static]

### Naphthalene 91-20-3

**Fish:**
- LC50 96 h Pimephales promelas 5.74 - 6.44 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 1.6 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 0.91 - 2.82 mg/L [static]; LC50 96 h Pimephales promelas 1.99 mg/L [static]; LC50 96 h Lepomis macrochirus 31.0265 mg/L [static]

**Invertebrate:**
- LC50 48 h Daphnia magna 2.16 mg/L IUCLID; EC50 48 h Daphnia magna 1.96 mg/L [Flow through] EPA; EC50 48 h Daphnia magna 1.09 - 3.4 mg/L [Static] EPA

### Anthracene 120-12-7

**Fish:**
- LC50 96 h Lepomis macrochirus 0 - 0.00318 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 0.00278 mg/L [static]

**Invertebrate:**
- EC50 48 h Daphnia magna 0.081 - 0.112 mg/L EPA

### Persistence and Degradability
No data available.

### Bioaccumulative Potential
No data available.

### Mobility
No data available.

### Other Toxicity
No data available.

### Section 13 - DISPOSAL CONSIDERATIONS

**Disposal Methods**
Dispose in accordance with all applicable regulations.

### Component Waste Numbers
The U.S. EPA has not published waste numbers for this product's components.

### Section 14 - TRANSPORT INFORMATION

**US DOT Information:**
- **Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Contains: ACENAPHTHENE, BIPHENYL)
- **Hazard Class:** 9
Material Name: METHYLNAPHTHALENE FRACTION

UN/NA #: UN3082
Packing Group: III
Required Label(s): 9

IATA Information:
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. , (Contains: ACENAPHTHENE , BIPHENYL )
Hazard Class: 9
UN#: UN3082
Packing Group: III
Required Label(s): 9
Further information: Passenger & Cargo Aircraft - Ltd. Qty. - (Packing Instruction / Max. Net Qty. per Pkg.):
Y964 / 30 kg G Passenger & Cargo Aircraft (Packing Instruction / Max. Net Qty. per Pkg.): 964 / 450 L ERG: 9L

TDG Information:
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. , (Contains: ACENAPHTHENE , BIPHENYL )
Hazard Class: 9
UN#: UN3082
Packing Group: III
Required Label(s): 9

International Bulk Chemical Code
This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS Number</th>
<th>CERCLA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>100 lb final RQ ; 45.4 kg final RQ</td>
</tr>
<tr>
<td>Quinoline</td>
<td>91-22-5</td>
<td></td>
</tr>
<tr>
<td>SARA 313:</td>
<td>1 % de minimis concentration</td>
<td></td>
</tr>
<tr>
<td>CERCLA:</td>
<td>5000 lb final RQ ; 2270 kg final RQ</td>
<td></td>
</tr>
<tr>
<td>Biphenyl</td>
<td>92-52-4</td>
<td></td>
</tr>
<tr>
<td>SARA 313:</td>
<td>1 % de minimis concentration</td>
<td></td>
</tr>
<tr>
<td>CERCLA:</td>
<td>100 lb final RQ ; 45.4 kg final RQ</td>
<td></td>
</tr>
<tr>
<td>Dibenzofuran</td>
<td>132-64-9</td>
<td></td>
</tr>
<tr>
<td>SARA 313:</td>
<td>1 % de minimis concentration</td>
<td></td>
</tr>
<tr>
<td>CERCLA:</td>
<td>100 lb final RQ ; 45.4 kg final RQ</td>
<td></td>
</tr>
</tbody>
</table>
Material Name: METHYLNAPHTHALENE FRACTION

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS Number</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorene</td>
<td>86-73-7</td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td></td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>208-96-8</td>
<td></td>
</tr>
<tr>
<td>Anthracene</td>
<td>120-12-7</td>
<td></td>
</tr>
</tbody>
</table>

CERCLA: 5000 lb final RQ ; 2270 kg final RQ
SARA 313: 0.1 % de minimis concentration
CERCLA: 100 lb final RQ ; 45.4 kg final RQ
CERCLA: 5000 lb final RQ ; 2270 kg final RQ
CERCLA: 5000 lb final RQ ; 2270 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories
Carcinogenicity; Acute toxicity; Skin Corrosion/Irritation; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity; Aspiration Hazard; Germ Cell Mutagenicity

U.S. State Regulations
None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

![WARNING]

This product can expose you to chemicals including Quinoline, Naphthalene, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Canada Regulations

Canadian WHMIS Ingredient Disclosure List (IDL)
Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS Number</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylnaphthalene</td>
<td>1321-94-4</td>
<td>1 %</td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>1 %</td>
</tr>
<tr>
<td>Quinoline</td>
<td>91-22-5</td>
<td></td>
</tr>
</tbody>
</table>
Material Name: METHYLNAPHTHALENE FRACTION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthalene</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Biphenyl</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

The above listed complex substance contains the following constituents (-):

2-Methylnaphthalene (91-57-6)

1-Methylnaphthalene (90-12-0)
<table>
<thead>
<tr>
<th>Name</th>
<th>Yes</th>
<th>DS</th>
<th>L</th>
<th>EIN</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
<th>Yes</th>
<th>No</th>
<th>No</th>
<th>Yes</th>
<th>Yes</th>
<th>No</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acenaphthene (83-32-9)</td>
<td>Yes</td>
<td>DS</td>
<td>L</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Quinoline (91-22-5)</td>
<td>Yes</td>
<td>DS</td>
<td>L</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Biphenyl (92-52-4)</td>
<td>Yes</td>
<td>DS</td>
<td>L</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Dibenzofuran (132-64-9)</td>
<td>Yes</td>
<td>DS</td>
<td>L</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Fluorene (86-73-7)</td>
<td>Yes</td>
<td>DS</td>
<td>L</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
## Safety Data Sheet

**Material Name:** METHYLNAPHTHALENE FRACTION  
**SDS ID:** 00228315

### Naphthalene (91-20-3)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Isoquinoline (119-65-3)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Acenaphthylene (208-96-8)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>NSL</td>
<td>EIN</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Anthracene (120-12-7)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>DSDL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Section 16 - OTHER INFORMATION

NFPA Ratings
Health: 2 Fire: 1 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes
Updated: 7/19/2018; MSDS SUMMARY OF CHANGES: SECTION 15 - CA Proposition 65

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; COPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC – European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR’s Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL – Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH-Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:
The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. While the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.