1. Product and Company Identification

Material name: Dura-Treat 40 Wood Preserver
Revision date: 08-26-2011
Version #: 01
CAS #: Mixture
Product use: Wood preservative.
Synonym(s): None.
Manufacturer/Supplier: KMG- Bernuth, Inc.
9555 W. Sam Houston Parkway S.
Suite 600
Houston, Texas 77099
Phone Number: 713-600-3800

Emergency CHEMTREC: 1-800-424-9300
Emergency medical treatment: 1-800-322-8177

2. Hazards Identification

Physical state: Liquid.
Appearance: Dark liquid.
Emergency overview:
WARNING
May be fatal if inhaled or absorbed through skin. Harmful if swallowed. Causes skin, eye and respiratory tract irritation. Can cause cardiovascular effects. May cause damage to the heart. Combustible liquid and vapor.

OSHA regulatory status: This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure
Eye contact. Skin contact. Inhalation. Ingestion.

Eyes
Causes eye irritation.

Skin
May be fatal if absorbed through skin. Causes skin irritation. The product contains components which may penetrate skin.

Inhalation
May be fatal if inhaled. Causes respiratory tract irritation.

Ingestion
Harmful if swallowed.

Target organs

Chronic effects
Possible cancer hazard - may cause cancer based on animal data. Human exposure to pentachlorophenol may result in the development of chloracne. Mild cases resemble other forms of acne or skin changes observed with aging. May cause blood damage. May cause central nervous system effects. May cause damage to the heart. May cause damage to the liver and kidneys.
Pentachlorophenol has been determined to be embryo and fetotoxic to rats but not to hamsters.
Pentachlorophenol has not been found to cause teratogenic effects (birth defects) in lab animals, but can cause delays in normal fetal development. EPA has expressed an opinion that pentachlorophenol may produce defects in the offspring of lab animals.

Signs and symptoms

Potential environmental effects
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatic Esters and Aldehydes</td>
<td>Mixture</td>
<td>57-61</td>
</tr>
<tr>
<td>Pentachlorophenol</td>
<td>87-86-5</td>
<td>38-42</td>
</tr>
</tbody>
</table>
Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye contact
Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if irritation develops and persists.

Skin contact
In case of accidents: Call an ambulance immediately! Remove contaminated clothes and rinse skin thoroughly with water for at least 15 minutes.

Inhalation
Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Ingestion
Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Only induce vomiting at the instruction of medical personnel. Get medical attention.

Notes to physician
In case of shortness of breath, give oxygen. Keep victim warm.

General advice
Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties
The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Vapors may be ignited by a spark, a hot surface or an ember.

Extinguishing media

Suitable extinguishing media
Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media
None.

Protection of firefighters
Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Fire fighting equipment/instructions
Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials. Containers close to fire should be removed or cooled with water.

Hazardous combustion products

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Stay upwind. Keep people away from and upwind of spill/leak. Ventilate closed spaces before entering. Ensure adequate ventilation. If leakage cannot be stopped, evacuate area. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Avoid any exposure. Wear suitable protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment
Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up

Remove sources of ignition.

Large Spills: Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labeled with correct contents and hazard symbol. Collect and dispose of spillage as indicated in section 13 of the MSDS.

Small Spills: Absorb spillage with non-combustible, absorbent material. Collect in containers and seal securely.

Never return spills in original containers for re-use.

Other information

Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Exposure to pentachlorophenol during pregnancy should be avoided. Local exhaust is recommended. Avoid any exposure. Wear appropriate personal protective equipment. The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. Do not smoke and do not spray near an open flame or other sources of ignition. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Ground container and transfer equipment to eliminate static electric sparks. Observe good industrial hygiene practices.

Storage

Follow rules for combustible liquids. Keep away from heat, sparks and open flame. Do not store near heat sources or expose to high temperatures. Store in closed original container in a dry place. Keep container tightly closed. Keep in a well-ventilated place. Keep this material away from food, drink and animal feed. Store away from incompatible materials.

8. Exposure Controls / Personal Protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentachlorophenol (87-86-5)</td>
<td>TWA</td>
<td>0.5 mg/m3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentachlorophenol (87-86-5)</td>
<td>PEL</td>
<td>0.5 mg/m3</td>
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</table>

<table>
<thead>
<tr>
<th>Canada. Alberta OELs (Occupational Health &amp; Safety Code, Schedule 1, Table 2)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
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<tr>
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<td>TWA</td>
<td>0.5 mg/m3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentachlorophenol (87-86-5)</td>
<td>TWA</td>
<td>0.5 mg/m3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentachlorophenol (87-86-5)</td>
<td>TWA</td>
<td>0.5 mg/m3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentachlorophenol (87-86-5)</td>
<td>TWA</td>
<td>0.5 mg/m3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mexico. Occupational Exposure Limit Values</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pentachlorophenol (87-86-5)</td>
<td>TWA</td>
<td>0.5 mg/m3</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>1.5 mg/m3</td>
</tr>
</tbody>
</table>

Exposure guidelines

No exposure standards allocated.

Engineering controls

Use explosion-proof equipment. Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors.
Personal protective equipment

Eye / face protection
Wear approved safety goggles.

Skin protection
Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier. Wear appropriate chemical resistant clothing to prevent any possibility of skin contact.

Respiratory protection
If enclosed handling cannot be guaranteed, ventilation and protective clothing must be used. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Launder contaminated clothing before reuse. Remove and isolate contaminated clothing and shoes. Observe any medical surveillance requirements.

9. Physical & Chemical Properties

Appearance
Dark liquid.

Color
Dark.

Odor
Phenolic.

Odor threshold
Not available.

Physical state
Liquid.

Form
Liquid.

pH
Not applicable.

Melting point
Not applicable.

Freezing point
Not applicable.

Boiling point
\geq 214 ^\circ F (\geq 101.1 ^\circ C)

Flash point
150 - 200 ^\circ F (65.6 - 93.3 ^\circ C) Pensky-Martens Closed Cup (Approximate)

Evaporation rate
< 1 (n-BuAc = 1)

Flammability limits in air, upper, % by volume
No data available.

Flammability limits in air, lower, % by volume
No data available.

Vapor pressure
> 0.4 mm Hg (60^\circ F)

Vapor density
4.5 (Air=1)

Specific gravity
1.15 - 1.17 (Water = 1.0)

Solubility (water)
Insoluble.

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
No data available.

Decomposition temperature
Not available.

Bulk density
9.6 - 9.76 lb/gal (20^\circ)

Density
1.15 - 1.17

Percent volatile
No data available.

Molecular weight
266.32

Molecular formula
C6Cl5OH

10. Chemical Stability & Reactivity Information

Chemical stability
Stable under normal temperature conditions.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
Possibility of hazardous reactions
Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentachlorophenol (87-86-5)</td>
<td>Acute Dermal LD50 Rat: 96 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Acute Inhalation LC50 Rat: 0.2 mg/l</td>
</tr>
<tr>
<td></td>
<td>Acute Oral LD50 Rat: 146 mg/kg</td>
</tr>
</tbody>
</table>

Acute effects
May be fatal if inhaled or absorbed through skin. Harmful if swallowed. Can cause cardiovascular effects. May cause damage to the heart.

Local effects
Causes skin, eye and respiratory tract irritation.

US ACGIH Threshold Limit Values: Skin designation
Pentachlorophenol (CAS 87-86-5) Can be absorbed through the skin.

Sensitization
Not a skin sensitizer.

Chronic effects
May cause blood damage. May cause central nervous system effects. May cause damage to the heart. May cause damage to the liver and kidneys.

Carcinogenicity
Possible cancer hazard - may cause cancer based on animal data.

ACGIH Carcinogens
Pentachlorophenol (CAS 87-86-5) A3 Confirmed animal carcinogen with unknown relevance to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity
Pentachlorophenol (CAS 87-86-5) 2B Possibly carcinogenic to humans.

Mutagenicity
No data available.

Neurological effects
No data available.

Reproductive effects
Pentachlorophenol has not been found to cause teratogenic effects (birth defects) in lab animals, but can cause delays in normal fetal development. EPA has expressed an opinion that pentachlorophenol may cause defects in the offspring of lab animals.

Teratogenicity
Pentachlorophenol has been determined to be embryo and fetotoxic to rats but not to hamsters.

Symptoms and target organs

Further information
Human exposure to pentachlorophenol may result in the development of chloracne. Mild cases resemble other forms of acne or skin changes observed with aging.

12. Ecological Information

Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentachlorophenol (87-86-5)</td>
<td>EC50 Water flea (Daphnia magna): 0.08 mg/l 48 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Zebra danio (Danio rerio): 0.0004 - 0.0005 mg/l 96 hours</td>
</tr>
</tbody>
</table>

Ecotoxicity
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Persistence and degradability
No data available.

Bioaccumulation / Accumulation
No data available.

Partition coefficient (n-octanol/water)
Not available.

Mobility in environmental media
The product is insoluble in water.

13. Disposal Considerations

Waste codes
D037: Waste Pentachlorophenol
Disposal instructions
Dispose of this material and its container at hazardous or special waste collection point. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

Waste from residues / unused products
Dispose of in accordance with local regulations.

Contaminated packaging
Dispose of in accordance with local regulations.

14. Transport Information

DOT
Basic shipping requirements:
- UN number: UN1306
- Proper shipping name: Wood preservatives, liquid
- Hazard class: 3
- Packing group: II
- Environmental hazards
- Marine pollutant: Yes
- Labels required: 3
- Additional information:
- Special provisions: 149, IB2, T4, TP1, TP8
- Packaging exceptions: 150
- Packaging non bulk: 202
- Packaging bulk: 242
- ERG number: 129

IATA
Basic shipping requirements:
- UN number: 1306
- Proper shipping name: Wood preservatives, liquid
- Hazard class: 3
- Packing group: II
- Environmental hazards
- Marine pollutant: Yes
- Additional information:
- ERG code: 3L

IMDG
Basic shipping requirements:
- UN number: 1306
- Proper shipping name: WOOD PRESERVATIVES, LIQUID
- Hazard class: 3
- Packing group: II
- Environmental hazards
- Marine pollutant: Yes
- EmS No.: F-E, S-D

TDG
Basic shipping requirements:
- Proper shipping name: WOOD PRESERVATIVES, LIQUID
- Hazard class: 3
- UN number: UN1306
- Packing group: II
- Marine pollutant: Yes

General
Read safety instructions, MSDS and emergency procedures before handling.

15. Regulatory Information

US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification(40 CFR 707, Subpt. D)
Not regulated.
US CAA Section 112 Hazardous Air Pollutants (HAPs) List
PENTACHLOROPHENOL (CAS 87-86-5)

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration
Pentachlorophenol (CAS 87-86-5) 0.1%

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
Pentachlorophenol (CAS 87-86-5) Listed.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)
Pentachlorophenol: 10

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
- Immediate Hazard - Yes
- Delayed Hazard - Yes
- Fire Hazard - Yes
- Pressure Hazard - No
- Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CFR 355, Appendix A)
No

Section 311/312 (40 CFR 370)
Yes

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)
Not controlled

Canadian regulations
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status
Controlled

WHMIS classification
- B3 - Flammable/Combustible
- D1A - Immediate/Serious-VERY TOXIC
- D2A - Other Toxic Effects-VERY TOXIC
- D2B - Other Toxic Effects-TOXIC

WHMIS labeling

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

* A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations
WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Hazardous Substances (Director's): Listed substance
Pentachlorophenol (CAS 87-86-5) Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Pentachlorophenol (CAS 87-86-5) Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
Pentachlorophenol (CAS 87-86-5) Listed: January 1, 1990 Carcinogenic.
US - Massachusetts RTK - Substance: Listed substance
Pentachlorophenol (CAS 87-86-5) Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold
Pentachlorophenol (CAS 87-86-5) 500 LBS

US - New Jersey RTK - Substances: Listed substance
Pentachlorophenol (CAS 87-86-5) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance
Pentachlorophenol (CAS 87-86-5) Listed.

US - Pennsylvania RTK - Hazardous Substances: Special hazard
Pentachlorophenol (CAS 87-86-5) Special hazard.

Mexico regulations
This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

16. Other Information

Further information
HMIS® is a registered trade and service mark of the NPCA.
H - Goggles, Gloves, Apron, Vapor Respirator

HMIS® ratings
Health: 3*
Flammability: 2
Physical hazard: 0
Personal protection: H

NFPA ratings
Health: 3
Flammability: 2
Instability: 0

Disclaimer
NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.

Issue date
08-26-2011