1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>DOH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Identification Number(s):</td>
<td>03771-0D</td>
</tr>
<tr>
<td>Manufacturer/Supplier:</td>
<td>Eastman Chemical Company, Kingsport, Tennessee 37662</td>
</tr>
<tr>
<td>MSDS Prepared by:</td>
<td>Eastman Product Safety &amp; Stewardship</td>
</tr>
<tr>
<td>Chemical Name:</td>
<td>2,5-bis(1,1,3,3-tetramethylbutyl)hydroquinone</td>
</tr>
<tr>
<td>Synonym(s):</td>
<td>905382</td>
</tr>
<tr>
<td>Molecular Formula:</td>
<td>C22H38O2</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>334.6</td>
</tr>
<tr>
<td>UN Number</td>
<td></td>
</tr>
<tr>
<td>Product Use:</td>
<td>photographic chemical</td>
</tr>
<tr>
<td>OSHA Hazardous:</td>
<td>hazardous</td>
</tr>
</tbody>
</table>

For emergency health, safety & environmental information, call 800-EASTMAN.

For emergency transportation information, call CHEMTREC at 800-424-9300 or call 800-EASTMAN.

2. COMPOSITION INFORMATION ON INGREDIENTS

(Typical composition is given, and it may vary. A certificate of analysis can be provided.)

<table>
<thead>
<tr>
<th>Weight %</th>
<th>Component</th>
<th>CAS Registry No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>98.5%</td>
<td>2,5-di-tert-octylhydroquinone</td>
<td>903-19-5</td>
</tr>
<tr>
<td>1.5%</td>
<td>2-tert-octylhydroquinone</td>
<td>719-03-9</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

WARNING!
HARMFUL IF INHALED OR SWALLOWED
MAY CAUSE BLOOD DISORDERS BASED ON ANIMAL DATA
CAUSES EYE IRRITATION

HMIS® Hazard Ratings: Health - 2*, Flammability -1, Chemical Reactivity - 0

NFPA® Hazard Ratings: Health - 2, Flammability - 1, Instability - 0

NOTE: HMIS® and NFPA® ratings involve data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

4. FIRST-AID MEASURES

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention.

Eyes: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Skin: Wash with soap and water. Get medical attention if symptoms occur.

Ingestion: Call a physician or poison control center immediately. Induce vomiting as directed by
medical personnel. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

**Extinguishing Media:** water spray, dry chemical  
**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing.  
**Hazardous Combustion Products:** carbon dioxide, carbon monoxide  
**Prevention of Fire and Explosion:** Keep from contact with oxidizing materials. Minimize dust generation and accumulation. Refer to NFPA® Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries." Powdered material may form explosive dust-air mixtures.

6. ACCIDENTAL RELEASE MEASURES

Use personal protective equipment. (See Section 8, EXPOSURE CONTROLS/PERSONAL PROTECTION.) Sweep up and place in a container for chemical waste.

7. HANDLING AND STORAGE

**Personal Precautionary Measures:** Avoid breathing dust. Avoid contact with eyes. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.  
**Storage:** Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

*Exposure limits have not been established or are not applicable unless listed below.*

**Ventilation:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels to an acceptable level.  
**Respiratory Protection:** If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: air-purifying respirator with a high efficiency particulate filter  
**Eye Protection:** Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.  
**Skin Protection:** It is a good industrial hygiene practice to minimize skin contact.  
**Recommended Decontamination Facilities:** eye bath, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical Form:** solid  
**Color:** white  
**Odor:** odorless  
**Solubility in Water:** negligible  
**Melting Point:** 130 - 131 °C  
**Flash Point:** not applicable, combustible solid  
**Thermal Decomposition Temperature:** > 400 °C (HPDTA)
10. STABILITY AND REACTIVITY

Stability: Stable.
Incompatibility: Material reacts with strong oxidizing agents.
Hazardous Polymerization: will not occur

11. TOXICOLOGICAL INFORMATION

Toxicity data are not available unless listed below.
- Oral LD-50: (rat) >3,200 mg/kg (highest dose tested)
- Oral LD-50: (mouse) >3,200 mg/kg (highest dose tested)
- Dermal LD-50: (guinea pig) > 5,000 mg/kg (highest dose tested)
- Skin Irritation (guinea pig) slight irritation
- Skin Sensitization (guinea pig) none

12. ECOLOGICAL INFORMATION

This material has not been tested for environmental effects.

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

DOT (USA): Class not regulated
ICAO Status: Class not regulated
IMDG Status: Class not regulated

15. REGULATORY INFORMATION

SARA 313: none unless listed below

Carcinogenicity Classification (components present at 0.1% or more):
- IARC (International Agency for Research on Cancer): not listed
- ACGIH (American Conference of Governmental Industrial Hygienists): not listed
- NTP (National Toxicology Program): not listed
- OSHA (Occupational Safety and Health Administration): not listed

TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is not listed on the DSL.

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EINECS (European Inventory of Existing Commercial Chemical Substances): This product is listed on EINECS.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**16. OTHER INFORMATION**

For other information, call your Eastman representative or the Eastman operator at

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.

The symbol "|" in the left margin denotes a revision in this section.