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MATERIAL SAFETY DATA SHEET

HYDROQUINONE 99% AR MSDS CAS: 123-31-9

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product Product Name: HYDROQUINONE AR CAS#: 123-31-9 Synonym: Chemical Name: Not available. Chemical Formula: C6H6O2 Molecular Weight: 110.11g/mol Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

<u>Company identification</u>: OXFORD LAB FINE CHEM LLP Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6, Navghar, Vasai (East). Palghar - 401 210. Mumbai, Maharashtra, INDIA. Tel: 91-250-2390989 Tel/Fax: 91-250-2390032

Section 2: Composition and Information on Ingredients

Composition:

| Name | CAS # | % by Weight |
|--------------|----------|-------------|
| HYDROQUINONE | 123-31-9 | 99% |

<u>Toxicological Data on Ingredients</u>: Hydroquinone: ORAL (LD50): Acute: 320 mg/kg [Rat.]. DERMAL (LD50): Acute: 5970 mg/kg [Mammal].

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Section 3: Hazards Identification

<u>Potential Acute Health Effects</u>: Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, the nervous system, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

<u>Serious Skin Contact</u>: Wash with a disinfectant soap and cover the contaminated skin with an antibacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available

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Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 515.56°C (960°F)

Flash Points: CLOSED CUP: 165°C (329°F).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of open flames and sparks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Combustible when exposed to heat or flame.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at aconcentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents, alkalis

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Section 7: Handling and Storage (continued)

Storage:

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agent

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self- contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 0.4 (ppm) TWA: 2 (mg/m3) Consult local authorities for acceptable exposure limits

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Section 9: Physical and Chemical Properties

| Physical state | : Solid |
|----------------------------------------------------|-------------------------------|
| Colour | : White powder. |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH: 3.7 Relative evaporation rate (butylacetate=1) |) : No data available |
| Melting point | : 172 - 175 |
| Freezing point | : No data available |
| Boiling point | : 285 °C |
| Flash point | : 165 °C |
| Auto-ignition temperature | : 499 °C |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : 1 mm Hg at 132 $^{\circ}$ C |
| Relative vapour density at 20 °C | : 3.8 |
| Relative density | : No data available |
| Density | : 1.332 g/cm ³ |
| Solubility | : Water: Soluble in water |
| Log Pow | : 0.59 |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : No data available |

Section 10: Stability and Reactivity Data

<u>Stability</u>: The product is stable.

Instability Temperature: Not available.

<u>Conditions of Instability</u>: Not available.

Incompatibility with various substances: Reactive with oxidizing agents, alkalis.

<u>Corrosivity</u>: Non-corrosive in presence of glass.

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Section 10: Stability and Reactivity Data(Continued)

Special Remarks on Reactivity: Air and light sensitive.

<u>Special Remarks on Corrosivity</u>: Not available. <u>Polymerization</u>: Not available.

Section 11: Toxicological Information

<u>Routes of Entry</u>: Dermal contact. Eye contact. Inhalation. Ingestion.

<u>Toxicity to Animals:</u> Acute oral toxicity (LD50): 320 mg/kg [Rat.]. Acute dermal toxicity (LD50): 5970 mg/kg [Mammal].

<u>Chronic Effects on Humans</u>: The substance is toxic to lungs, the nervous system, mucous membranes.

<u>Other Toxic Effects on Humans</u>: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: An allergen.

<u>Special Remarks on other Toxic Effects on Humans</u>: Material is irritating to mucous membranes and upper respiratory tract.

Section 12: Ecological Information

Eco toxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

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Section 12: Ecological Information(Continued)

<u>Toxicity of the Products of Biodegradation</u>: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

| Land transport (ADR-RID) | | |
|------------------------------|--------------------------------------------------------|--|
| Proper shipping name | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S | |
| UN N° | : 3077 | |
| ADR - Class | :9 | |
| Labelling - Transport | : 9 : ENVIRONMENTALLY HAZARDOUS SUBSTANCE. | |
| ADR - Group | : III | |
| Sea transport (IMDG) | | |
| Proper shipping name | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S | |
| UN N° | : 3077 | |
| IMO-IMDG - Class or division | : 9 : MARINE POLLUTANT | |
| IMO-IMDG - Packing group | : III | |

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Section 14: Transport Information (Continued)

<u>Air transport (ICAO-IATA)</u> Proper shipping name

UN N° IATA - Class or division IATA - Packing group : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

: 3077

: 9 : ENVIRONMENTALLY HAZARDOUS SUBSTANCE.

: III

Section 15: Other Regulatory Information

Federal and State Regulations: Pennsylvania RTK: Hydroquinone Massachusetts RTK: Hydroquinone TSCA 8(b) inventory: Hydroquinone SARA 302/304/311/312 extremely hazardous substances: Hydroquinone SARA 313 toxic chemical notification and release reporting: Hydroquinone CERCLA: Hazardous substances.: Hydroquinone Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). Other Classifications: WHMIS (Canada): CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC). DSCL (EEC): R36/38- Irritating to eyes and skin.HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1 Reactivity: 0 Personal Protection: E National Fire Protection Association (U.S.A.): Health: 2 Flammability: 1 Reactivity: 0 Specific hazard:

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Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16 - Additional Information

<u>References</u>: Not available.

Other Special Considerations: Not available

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