



# Central Pollution Control Board

Ministry of Environment & Forests, Govt of India, Parivesh Bhawan, East Arjun Nagar, Delhi - 110032

## MATERIAL SAFETY DATA SHEETS

39

Anthraquinone

### 1. CHEMICAL IDENTITY

**Chemical Name :** Anthraquinone

**Chemical Classification:** Toxic

**Trade Name :**

**Synonyms:** 9,10-Dioxoanthracene, Anthra-9,10-quinone

**Formula :** C<sub>14</sub>H<sub>8</sub>O<sub>2</sub>

**CAS No:** 84-65-1

**UN No:** 1325 / 3143

#### Regulated Identification

**Shipping Name :**

**Hazchem Code :** 1Z / 2X

**Codes / Label :** Class 4.1/ Class 6.1, Toxic

**Hazardous Waste ID No :**

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
1 Anthraquinone	84-65-1	3	
2		4	

### 2. PHYSICAL / CHEMICAL DATA

**Boiling Pt. °C:** 377

**Physical State:** Solid

**Appearance:** Yellow crystals or powder.

**Melting Pt °C:** 286 (sublimes)

**Vapour Pressure @ 35°C mmHg:** 1.16X10<sup>-7</sup> mm Hg at 25 deg C

**Odour:** Aromatic odor

**Vapour Density(Air =1):** 7.16

**Solubility in water at 30°C g/100ml:** 1.353 mg/L at 25 deg C

**Others:**

**Specific Gravity (Water =1 ):** 1.42-1.44 at 20 deg C/4 deg C

**pH :**

### 3. FIRE / EXPLOSION HAZARD DATA

**Flammability :** Combu stible

**LEL:** 0.8

**Flash Point °C in OC:**

**TDG Flammability:**

**UEL:** 4.8

**Flash Point °C in CC:** 185

**Autoignition Temperature °C :** 650

**Explosion sensitivity to impact:**

**Explosion sensitivity to static Electricity:**

**Hazardous Combustion Products :** Fire may produce irritating and/or toxic gases.

**Hazardous Polymerization :**

**Combustible Liquid:**

**Explosive Material:**

**Corrosive Material**

**Flammable Material:**

**Oxidiser :**

**Others:**

**Pyrophoric Material:**

**Organic Peroxide :**

### 4. REACTIVITY DATA

**Chemical Stability :** Stable to acids and alkalis.

**Incompatibility with other material :** Strong oxidizing agents, carbon dioxide.

**Reactivity :** Decomposed by hydrogen peroxide and ferrous sulphate at pH 4.5

**Hazardous** : Carbon monoxide, carbon dioxide.

**Reaction Products**

**5. HEALTH HAZARD DATA**

**Routes of entry:** Inhalation, skin, eyes and ingestion

**Effects of Exposure / Symptoms:**

Inhalation: Causes respiratory tract irritation. May be harmful if inhaled. Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Causes eye irritation. Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.

**Emergency Treatment :**

**Inhalation:** Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Ingestion:** Get medical aid. Wash mouth out with water.

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<b>LD50 (oral-rat) mg/kg:</b>	>5000 mg/kg	<b>STEL:</b>	
<b>LC50 (rat) mg/kg:</b>	>1.327 mg/L/4 hr	<b>Odour Threshold:</b>	
<b>Permissible Exposure Limit:</b>		<b>TLV (ACGIH) :</b>	

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<b>NFPA Hazard Signals</b>	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Special</b>
	2	1	0	

**6. PREVENTIVE MEASURES**

**Personal Protective Equipment** : Wear appropriate protective gloves to prevent skin exposure. Wear appropriate protective clothing to prevent skin exposure.

**Handling** : Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing. Use only in a chemical fume hood.

**Storage** : Store in a cool, dry place. Store in a tightly closed container. Store protected from moisture.

**Precautions** :

**7. EMERGENCY / FIRST AID MEASURES**

**FIRE:**

**Fire Extinguishing Media** : To fight fire use water, foam, carbon dioxide, water spray or mist, dry chemical.

**Special Procedure** : Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Unusual Hazards** :

**EXPOSURE: First Aid Measures:**

**Inhalation:** Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Ingestion:** Get medical aid. Wash mouth out with water.

## Antidotes / Dosages:

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### SPILLS :

**Steps To Be Taken** : Vacuum or sweep up material and place into a suitable disposal container.

**Waste Disposal Method:**

## 8. ADDITIONAL INFORMATION / REFERENCES

## 9. MANUFACTURERS / SUPPLIERS DATA

**NAME OF FIRM :**

**Contact person**

**MAILING ADDRESS :**

**in Emergency :**

**TELEPHONE / TELEX NOS :**

**Local Bodies involved :**

**TELEGRAPHIC ADDRESS :**

**Standard Packing :**

**OTHERS :**

**Trem Card Details / Ref :**

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