

GHS SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: CPT ANTHRAQUINONE DRY

SYNONYMS: AQ; 9-10 Anthraquinone; 9,10 Dioxoanthracene;
9-10 Anthracenedione; Anthradione

Molecular formula for Anthraquinone: $C_{14}H_8O_2$

CAS No: 84-65-1

EINECS No: 201-549-0

Recommended for industrial use only as:

- An additive in the paper pulping industry,
- A raw material for the production of dyes and pigments

Industrial uses advised against: None.

SUPPLIER: CPT Pulp and Paper, LLC
P.O. Box 2275
102 Old Mill Road
Cartersville, Georgia 30120-1688
Telephone: 770-606-8166

TRANSPORTATION EMERGENCY: CHEMTREC, 800-424-9300

2. HAZARDS IDENTIFICATION



WARNING

MAY CAUSE AN ALLERGIC SKIN REACTION H317

Irritating to eyes, respiratory system and skin

P261 **Avoid breathing dust/ mist/ spray.**

P272 **Contaminated work clothing should not be allowed out of the workplace.**

P280 **Wear protective gloves/protective clothing/eye protection/face protection.**

P302 + P352 **IF ON SKIN: Wash with plenty of soap and water.**

CPT ANTHRAQUINONE DRY

P321 Specific treatment (see supplemental first aid instructions on this label).

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified or not covered by GHS:

Combustible dust

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>Classification</u>	<u>Concentration</u>
Anthraquinone	Skin Sens. 1	90 - 100 %
Formula : C ₁₄ H ₈ O ₂		
Molecular weight : 208.21 g/mol		
CAS No. : 84-65-1		
EC No. : 201-549-0		

4. FIRST AID MEASURES

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

Skin: Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash skin with soap and water. Wash clothing before reuse. Seek medical attention if irritation develops or persists.

Ingestion: Wash out mouth with water if victim is conscious and alert, give 2-4 cupfuls of milk or water and induce vomiting. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, get medical aid.

Notes to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

General Information: Anthraquinone is an organic compound which will burn after the water has evaporated from CPT AQ 515 aqueous slurry. As in any fire, wear a self-contained breathing apparatus (NIOSH approved or equivalent), and full protective gear.

During a fire, irritating and toxic gases may be generated by thermal decomposition and incomplete combustion.

CPT ANTHRAQUINONE DRY

Extinguishing Media: Any extinguishing media is suitable - use water, dry chemical, chemical foam, or CO₂.

Explosion Limits:

Lower: Not available.

Upper: Not available.

Flashpoint: 185 degrees C

Autoignition Temperature: 650 degrees C

General Hazard: As with any organic powder, high concentrations of dust in the air may lead to a dust explosion. Minimize airborne dust.

Fire Fighting Instructions: Limit water runoff if it is likely to contain this material.

Fire Fighting Equipment: No special equipment is required.

Hazardous Combustion Products: Carbon monoxide and other toxic gases may be generated from incomplete combustion.

6. ACCIDENTAL RELEASE MEASURES

General: Use appropriate Personal Protective Equipment (PPE). Contain the spilled material and clean up spills immediately.

Small Spill: Carefully shovel up or sweep up spilled material and place in suitable container for disposal.

Large Spill: Try to prevent material from entering storm sewers or ditches leading to natural waterways. Dispose of large amounts in an approved landfill.

7. HANDLING AND STORAGE

Storage Temperature: Ambient. Avoid temperature extremes.

Storage Pressure: Ambient.

General: Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Keep container closed when not in use. Use with adequate ventilation.

CPT ANTHRAQUINONE DRY**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below permissible nuisance dust / mist exposure limits.

Respiratory Protection: Use a NIOSH-approved dust mask if excessive dust is present.

Skin Protection: Cover exposed skin areas and wear general-purpose gloves.

Eye Protection: Wear safety glasses. Use chemical goggles if excessive dust is present.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Solid – tan to yellowish colored powder

Odor: None.

Vapor Pressure: Approximately 1 mm Hg at 190°C

Specific Gravity: Approximately 1.44

Solubility in Water: Insoluble

pH: Not Available.

Vapor Density: Not Available

pH: Not available.

Evaporation Rate: Not available – negligible.

Boiling Point: 379-381 deg C @ 760 mm Hg

Freezing/Melting Point: 283-288 deg C

Decomposition Temperature: Not available.

Specific Gravity/Density: Not available.

Molecular Formula: C₁₄H₈O₂

Molecular Weight: 208.22

CPT ANTHRAQUINONE DRY**10. STABILITY AND REACTIVITY**

Chemical Stability: Stable under normal temperatures and pressures. Keep away from intense heat. Product loses water through evaporation/boiling and may "pop" and "spit" when heated rapidly.

Incompatibility: Strong oxidizing agents.

Hazardous Polymerization: Does not occur.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases from incomplete combustion, carbon dioxide.

11. TOXICOLOGICAL INFORMATION

RTECS NUMBER: CB4725000

Inhalation, rat: LC50 = >1300 mg anthraquinone/m³/4 hours
(>2600 mg/m³/4 hours for this product).

Oral, mouse: LD50 = >5 gm anthraquinone/kg
(>10 gm/kg for this product).

Skin, rat: LD50 = >1 gm anthraquinone/kg (>2 gm/kg for this product).

Neurotoxicity: No information found

Teratogenic: 150 mg Anthraquinone/kg/day had no effect on parturition data, litter size, or pup survival to LD 4
(OECD Guideline 421, Reproduction/Developmental Toxicity Screening Test)

Reproductive: Mating, fertility, and fecundity indices for both treated males and females were unaffected by treatment with 2400 mg Anthraquinone/kg/day for 14 days (OECD Guideline 421, Reproduction/Developmental Toxicity Screening Test).

Mutagenicity: Anthraquinone is not mutagenic in *Salmonella typhimurium* strains TA 100, TA 102, TA 1537, or TA 98, with or without exogenous metabolic activation.

Carcinogenicity: There is no credible scientific evidence that Anthraquinone is carcinogenic. Incorrect information was presented by U.S. National Toxicology Program (NTP) staff during the third peer review of NTP Technical Report 494 to finally obtain approval for the report's conclusion that clear evidence was found that Anthraquinone caused cancers in rats and mice.

CPT ANTHRAQUINONE DRY

An earlier National Cancer Institute study in mice did not find any evidence that Anthraquinone caused cancers.

NTP unknowingly purchased and tested a commercial anthraquinone produced by an obsolete process and contaminated with a strong mutagen in the mid-1990s. The NTP test article was manufactured by nitric acid oxidation of anthracene which resulted in 9-nitroanthracene contamination; this manufacturing process is no longer practiced anywhere in the world. The presence of this strong mutagen was not recognized until years after animal testing had been completed.

Nine years after NTP's animal testing was completed, the biological significance of contamination by the potent mutagen, 9-nitroanthracene, was obscured by NTP's presentation of a negative mutagenicity assay for a sample of unknown origin which NTP staff presented as a retained sample of the Anthraquinone it fed to rats and mice.

Other toxicologists reviewing the NTP report have stated, "**The data for anthraquinone are considered suspect because other carcinogenicity studies were negative...Certainly, it can be said that the material used by the NTP was mutagenic...**" [Boobis et al.; Toxicologic Pathology; Vol. 37, No. 6; page 719; 2009]. Professor Alan R. Boobis is a Fellow of the British Toxicology Society.

CPT AQ 515 has never been contaminated with 9-nitroanthracene..

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Anthraquinone) citing the NTP study described above.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

12. ECOLOGICAL INFORMATION

Toxicity to fish: LC50 - Pimephales promelas (fathead minnow) -
> 0.4 mg/l - 96 h Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates:
flow-through test EC50 - Daphnia magna (Water flea) -
> 0.048 mg/l - 48 h Remarks: No toxicity at the limit of solubility

CPT ANTHRAQUINONE DRY**Persistence and degradability**

Biodegradability anaerobic - Exposure time 28 d

Result: 62 % - Not readily biodegradable.

Bioaccumulative potential

No data available

Mobility in soil

No data available

13. WASTE MANAGEMENT INFORMATION - DISPOSAL

Do not dump into sewers, on the ground, or into any body of water. If discarded, this product would not be a hazardous waste under US EPA guidelines in 40 CFR Parts 261.3. Chemical waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Disposal must be in compliance with local, state, and federal laws and regulations.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Hazard Class: Not a hazardous material.

U.N./N.A. Number: None.

Product Label.....: **CPT AQ DRY**

Air transport ICAO-TI and IATA-DGR:

(ICAO: International Civil Aviation Organization)

ICAO/IATA Class: None

Maritime transport IMDG/GGVSea:

(IMDG: International Maritime Code for Dangerous Goods)

IMDG/GGVSea Class: None

15. REGULATORY INFORMATION

TSCA: listed on the TSCA inventory.

TSCA Significant New Use Rule

None of the chemicals in this material are subject to a SNUR.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

CPT ANTHRAQUINONE DRY**SARA Title III:**

Section 302, Extremely Hazardous Substances.... : None.

Section 311/312, Hazard Categories

Immediate (Acute) Health Hazard - Yes

Delayed (Chronic) Health Hazard - Yes

Fire Hazard - No

Reactive Hazard - No

Sudden Release of Pressure Hazard - No

Section 313: No chemicals in this product are reportable.

Clean Air Act:

This product does not contain any hazardous air pollutants.

This product does not contain any Class 1 Ozone depletors.

This product does not contain any Class 2 Ozone depletors.

Clean Water Act:

No chemicals in this product are listed as Hazardous Substances

None of the chemicals in this product are listed as Priority Pollutants

None of the chemicals in this product are listed as Toxic Pollutants

None of the chemicals in this product are considered highly hazardous by OSHA.

16. OTHER INFORMATION

National Fire Protection Association (NFPA) Ratings: This information is intended solely for the use of individuals trained in the NFPA system.

Health: 2

Flammability: 1

Reactivity: 0

Revision Indicator: Revised to comply with GHS requirements.

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