

GHS SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

NAME: **CPT AQ-60** Anthraquinone aqueous suspension

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

Molecular formula for Anthraquinone: C₁₄H₈O₂

CAS No: 84-65-1

EINECS No: 201-549-0

Recommended for industrial use only as:

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

Industrial uses advised against: None.

MANUFACTURER: CPT Pulp and Paper, LLC
102 Old Mill Road
Cartersville, Georgia 30120-1688
Telephone: 1-770-606-8166

EMERGENCY: CHEMTREC, 800-424-9300 (24 Hours every day)

2. HAZARD IDENTIFICATION



DANGER

May cause cancer if ingested (H350)

May cause an allergic skin reaction (H317)

Suspected of damaging the unborn child (H361d)

Irritating to eyes, respiratory system and skin.

P202: Do not handle until all safety precautions have been read and understood.

P261: Avoid breathing dust/mist/spray.

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

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

P302+352: IF ON SKIN: Wash with plenty of water.

P308+313: If exposed or concerned: Get medical advice/attention.

P333+313: If skin irritation or a rash occurs: Get medical attention.

P501: Dispose of contents/container in accordance with local, state, and
federal regulations.

POTENTIAL HEALTH EFFECTS:

Target Organs: Liver, kidneys, bladder (ingestion)

Eye: Causes eye irritation.

Skin: Causes skin irritation. Skin sensitization has been reported.

Ingestion: Causes nausea, vomiting and diarrhea.

Inhalation: Causes respiratory tract irritation.

Chronic: Liver, kidney, bladder effects may occur with chronic ingestion
of high doses.

Carcinogenicity: Anthraquinone is not a mutagen.

NTP....: Not listed as a known or reasonably anticipated carcinogen
in NTP's 14th report on carcinogens.

IARC...: Listed in IARC Monograph 101 as Group 2B - possibly
carcinogenic to humans, referencing a U.S. NTP animal study which
does not meet current scientific standards (see Section 11).

ACGIH: Not listed as A1 (Carcinogen) or A2 (Suspected Human Carcinogen)

NIOSH: Not listed as a potential occupational carcinogen.

European ECHA classification: Category 1B - May cause cancer.

Medical Conditions Aggravated by Exposure: None are known.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>COMPONENT</u>	<u>CAS #</u>	<u>EXPOSURE LIMITS</u>	<u>% BY WT</u>
Anthraquinone EINECS Number: 201-549-0	84-65-1	OSHA PEL: Not Listed ACGIH TLV-TWA: Not Listed	ca 60
Water	7732-18-5	N/A	ca 40

Appearance: tan-colored opaque liquid.

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.

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Ingestion: Wash out mouth with water if victim is conscious and alert, give between one pint and one quart 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-60 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.

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: Will release water vapor with popping when heated rapidly.

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.

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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 / mist is present.

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

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Viscous Liquid - aqueous suspension of Anthraquinone particles

Vapor Pressure: same as water.

Specific Gravity: about 1.22

Solubility in Water: N/A

pH: 8-9.

Boiling Point: 100°C to dryness, then 377°C for dry Anthraquinone

Freezing/Melting Point: about 0°C for this aqueous suspension; about 286°C for the dry Anthraquinone after all water has evaporated.

Vapor Density: water vapor

Evaporation Rate: N/A - water evaporates from this aqueous suspension to dryness.

Odor: None or slight surfactant odor..

Appearance: Light tan-colored viscous liquid.

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.

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11. TOXICOLOGICAL INFORMATION

RTECS NUMBER: CB4725000

Inhalation, rat: LC50 = >1300 mg anthraquinone/m³/4 hours.Oral, rat - female: LD50 = >2 gm anthraquinone/kg.
(OECD Test Guideline 423)

Skin, rat: LD50 = >1 gm anthraquinone/kg.

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).**Prenatal Developmental Toxicity:** No Observed Adverse Effect Level <160 mg/kg/day for rat pregnant females and rat prenatal development (OECD 414, Prenatal Developmental Toxicity Study).**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:** Anthraquinone is not mutagenic, but the material tested by the National Toxicology Program (NTP) which caused cancers in rats and mice was contaminated with a strong mutagen. An earlier National Cancer Institute study in mice did not find any evidence that anthraquinone caused cancer.

NTP tested an anthraquinone sample produced by nitric acid oxidation of anthracene, an obsolete process no longer practiced anywhere in the world. The presence of a strong mutagen, 9-nitroanthracene, in NTP's test article was not recognized until years after animal testing had been completed. Contamination by 9-nitroanthracene has been acknowledged by NTP. Interpretation of NTP's test results is, thus, questionable.

The critical effect of 9-nitroanthracene contamination of its test material was obscured by NTP's presentation of a negative mutagenicity assay for a sample claimed to be a retained sample of the anthraquinone test material; in fact, this sample was not related to the test material. 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.

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12. ECOLOGICAL INFORMATION

TOXICITY: > 45 µg/L, LC50 / 96 h Coho Salmon
> 48 µg/L, EC50 / 48 h Daphnia magna

DISTRIBUTION: Substituted Anthraquinones are produced by many plant species. Anthraquinone, itself, is produced by some fungi.

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 comply with local, state, and federal laws and regulations.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Hazard Class: None.

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

Product Label.....: **CPT AQ-60**

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.

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.

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Clean Air Act:

This product does not contain any hazardous air pollutants.

This product does not contain any Class 1 Ozone depleters.

This product does not contain any Class 2 Ozone depleters.

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**NFPA Rating (National Fire Protection Association):**

Health - 2 (Materials which on intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.)

Fire - 0 (Materials that are nonflammable).

Reactivity - 0 (Materials which in themselves are normally stable even under fire exposure conditions, and which are not reactive with water).

Special - NA

Reason for Issue.....: Additional toxicology study results.

Prepared by..... : Jerry A. Cook

Title..... : Technical Director.

Approval Date..... : February 1, 2023

Supersedes Date.....: July 27, 2021

MSDS Number.....: 83.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of CPT Pulp and Paper, LLC. The data on this sheet relates only to the specific material designated herein. CPT Pulp and Paper, LLC assumes no legal responsibility for use or reliance upon these data.