

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

NAME: **CPT AQ 515**
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

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. 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 50
Water	7732-18-5	N/A	ca 50

Appearance: tan-colored opaque liquid.

3. HAZARDS IDENTIFICATION



WARNING! Irritating to eyes, respiratory system and skin [R 36/37/38].
May cause allergic skin reaction. Causes digestive and respiratory tract irritation.

When using do not eat or drink. [S 20].

Wash thoroughly after handling.

Wash hands before eating.

Remove contaminated clothing and wash before reuse.

Avoid breathing mist or dust. Use only with adequate ventilation.

Routes of Entry: Ingestion, possibly inhalation of mist.

POTENTIAL HEALTH EFFECTS:

Target Organs: Liver, kidneys, bladder.

Eye: Causes eye irritation.

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

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation: Causes respiratory tract irritation.

Chronic: Liver, kidney, bladder effects likely at relatively high dose rates.

Chronic toxicity of anthraquinone is not fully known.

Carcinogenicity: NTP.....: Not listed.
IARC.....: Not listed.
ACGIH.....: Not listed.
OSHA.....: Not regulated as a carcinogen.

Medical Conditions Aggravated by Exposure: None are known.

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.

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. Wash away any of this product which may contact the body, clothing, or equipment.

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 of this material in an approved landfill.

7. HANDLING AND STORAGE

Storage Temperature: Ambient. Store in a cool, dry place.

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.

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: Liquid - aqueous suspension of Anthraquinone particles

Vapor Pressure: same as water.

Specific Gravity: about 1.18

Solubility in Water: N/A

pH: approximately 8.

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 Anthraquinone

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 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.

11. TOXICOLOGICAL INFORMATION

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).

LDLo = 15 gm/kg (rat)

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 (S9). The National Toxicology Program (NTP) conducted anthraquinone studies with a material contaminated with a potent mutagen as a result of the material's obsolete manufacturing process - nitric acid oxidation of anthracene (NTP Technical Report 494).

NOTE: There is no credible scientific evidence that Anthraquinone is a carcinogen. Professor Alan R. Boobis, a Fellow of the British Toxicology Society, is the first-named author of a 2009 paper which states, regarding the NTP studies, *"The data for anthraquinone are considered suspect because other carcinogenicity studies were negative, and the NTP carcinogenicity study used a batch of anthraquinone contaminated with the potent mutagen 9-nitroanthracene..."* ("A Data-Based Assessment of Alternative Strategies for Identification of Potential Human Cancer Hazards"; Alan R. Boobis et al.; *Toxicol Pathol*; 37; 714-732; 2009).

CPT AQ 515 does not contain 9-nitroanthracene contamination.

12. ECOLOGICAL INFORMATION

TOXICITY: No information found.

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; any disposal practice must be in compliance 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 515

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

European Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)

(ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road)

(RID: Regulations Concerning the International Transport of Dangerous Goods by Rail)

ADR/RID-GGVS/E Class: None

15. REGULATORY INFORMATION

U.S. regulations

TSCA: CAS# 84-65-1 is listed on the TSCA inventory.

Anthraquinone, CAS# 84-65-1 is subject to a test rule under TSCA section 4(a)(1)(B)

TSCA Significant New Use Rule

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

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Code for anthraquinone, CAS # 84-65-1: immediate.

Section 302: None of the chemicals in this product have a TPQ.

Section 313: No chemicals in this product are reportable under Section 313.

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 under the CWA.

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

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

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

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing this product or derived from this product should be classified as a hazardous waste under 40 CFR 261.20-24.

Canada - DSL/NDSL CAS# 84-65-1 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2A, D2B.

European Labeling in Accordance with EC Directives:

Hazard Designation: Xi Irritant

Risk Phrases: 36/37/38 Irritating to eyes, respiratory system and skin.
68 Possible risk of irreversible effects.

Safety phrases: 9 Keep container in a well-ventilated place.
36/37 Wear suitable protective clothing and gloves.

Information about limitation of use: For use only by technically qualified individuals.

German Water Hazard Classification System (WGK)

CAS# 84-65-1: WGK1

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 nor reactive with water).

Special - NA

Reason for Issue.....: Expanded toxicological information and modified format for hazard identification.

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

Title.....: Technical Director.

Approval Date.....: November, 2009.

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