ABC Coke

Crude Coal Tar

Safety Data Sheet (SDS)

Original Issue: 01/29/1999 **Revised:** 05/17/2019

Section 1 – Chemical Product and Company Identification

1(a) GHS Product Identifier: Crude Coal Tar

1(b) Other Means of Identification: Tar, Coal Tar, High Temperature Coal Tar

1(c) Recommended Use of the Chemical and Restrictions on Use: None

1(d) Name, Address, and Telephone Number:

ABC Coke
900 Huntsville Ave
Tarrant, Alabama 35217

Phone Number: (205) 849-1336
FAX (205) 849-1391

1(e) Off-Hour Emergency Phone Number: 1-800-262-8200 (CHEMTREC)

Section 2 - Hazards Identification

2(a) Classification of the Chemical: Crude Coal Tar is considered a hazardous material according to the criteria specified in REACH [REGULATION (EC) No 1907/2006), Swiss Chemical Ordinance and CLP [REGULATION (EC) No 1272/2008), OSHA Hazard Communication Standard. Categories of Health Hazards as defined in "GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Fifth revised edition ST/SG/AC.10/30/Rev. 5" United Nations, New York and Geneva, 2015 have been evaluated. Refer to Section 3, 8 and 11 for additional information. (This revised section of the SDS incorporates the WHMIS classifications per the HPR).

2(b) Label element(s):

Hazard Symbol	Hazard Classification	Signal Word	Hazard Statement(s)
	Acute Toxicity, Inhalation – 3 Acute Toxicity – Dermal -4	**Danger**	Toxic if inhaled. Toxic if absorbed through the skin. Causes severe skin burns and eye damage. May be fatal if swallowed and enters airways. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause central nervous system depression, respiratory irritation, drowsiness or dizziness and damage to lungs, liver, and blood cells. Causes damage to blood and blood forming system through prolonged and repeated exposure. Causes damage to olfactory system. Causes damage to lungs and central nervous system through prolonged and repeated inhalation exposure. Causes serious eye irritation.
	Skin Corrosion/Irritation - 2 Eye Irritation - 2A		
	Skin sensitization - 1		
	Aspiration Hazard - 1 Germ Cell Mutagenicity - 1B Carcinogenicity - 1A Reproductive Toxicity - 1B Single Target Organ Toxicity (STOT) Single Exposure - 2 STOT Repeated Exposure - 1		

Precautionary Statement (s):

Prevention	Response	Storage/Disposal
Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink, or smoke when using this product. Do not breathe gas/mist/vapor/spray. Wear protective gloves / protective clothing / eye protection / face protection. Use only outdoors or in well-ventilated areas.	If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If swallowed: Rinse mouth. Immediately call a poison center or doctor/physician. DO NOT induce vomiting. If exposed, concerned or feel unwell: Get medical advice/attention, call a poison center or doctor/physician.	Store locked up. Store in well ventilated place. Keep container tightly closed. Dispose of contents in accordance with federal, state, and local regulations.

Hazards Not Otherwise Classified: None Known

Unknown Acute Toxicity Statement (mixture): None Known

Section 3 – Composition/Information on Ingredients

3(a-c) Chemical Name, Common Name (synonyms), CAS Number and Other Identifiers, and Concentration: (Coal Tar, High Temperature CAS Number 65996-89-6, or Crude Coal Tar CAS Number 8007-45-2):

Ingredient Name	CAS Number	EC Number	% weight
Tar, Coal, high temp.	65996-89-6	266-024-0	100
This product is a complex mixture of organic hydrocarbons. Listed below is a partial listing of the components that comprise this product:			
Naphthalene	91 -20-3	202-049-5	3.0 - 12 .0
PNA (Polycyclic Aromatic Hydrocarbon , also known as Polynuclear Aromatics) Compounds	Various	Various	7 - 3 1
Benzene	71-43-2	200-753-7	<0.1 - 1.0
Phenol	108-95-2	203-95-7	<0.1 - 1.0
Toluene	108-88-3	203-625-9	<0.1 - 1.0

CAS - Chemical Abstract Service
EC - European Community

Section 4 - First Aid Measures

4(a) Description of Necessary Measures: If exposed, concerned or feel unwell: Get medical advice/attention, call a poison center or doctor/physician.

- **Inhalation:** If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician.
- **Eye Contact:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- **Skin Contact:** If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
- **Ingestion:** If swallowed: Rinse mouth. Immediately call a poison center or doctor/physician. Do NOT induce vomiting.

4(b) Most Important Symptoms/Effects, Acute and Delayed (chronic):

Acute Effects:

- **Inhalation:** Acute respiratory effects caused by overexposure to coal tar may include coughing, sneezing, and swollen or irritated nasal mucosa and sinuses. Short-term exposures may also cause transient photosensitization.
- **Eye:** Vapors or mist may cause irritation to the eyes and mucous membranes.
- **Skin:** Exposure to Coal Tar can cause skin irritation characterized by skin itching, burning, swelling and redness.
- **Ingestion:** Ingestion of this product is unlikely, however, gastrointestinal disturbances (i.e., nausea and vomiting) and systemic toxicity may occur if absorbed. Ingestion of this material may cause irritation to the mouth, throat and gastrointestinal tract. May cause central nervous system effects, nausea, vomiting, and diarrhea. Pulmonary aspiration hazard if swallowed and/or vomiting occurs. Can enter lungs and cause damage. Ingestion of this material may damage liver.

Delayed (chronic) Effects:

May cause genetic defects and damage fertility or the unborn child. Harmful if inhaled or absorbed through the skin. May cause eye and skin irritation. Repeated excessive exposures may cause blood disorders such as anemia and leukemia. Repeated excessive exposures may cause liver and/or kidney effects or damage. Material has been related to cancer in humans.

4(c) Immediate Medical Attention and Special Treatment: If quantity ingested is LO ml/kg or greater, careful gastric lavage may be indicated, being careful to avoid aspiration.

Section 5 – Fire and Explosion Hazard Information

5(a) Suitable (and unsuitable) Extinguishing Media: Steam, water fog, CO2, foam, dry chemicals or sand. Small fires - Foam, CO2, Dry Chemical, Water Spray. Large Fires -Water Spray, fog or foam. Frothing may occur if material is molten.

5(b) Specific Hazards A rising From the Chemical: Incompatibility (material s to avoid): Oxidizers, heat, and flames. When burned, toxic smoke and vapor may be emitted including, oxides of carbon and sulfur, PNA's, aromatic hydrocarbons and other toxic vapors.

5(c) Special Protective Equipment and Precautions for Fire-fighters: Self-contained NIOSH approved respiratory protection and full protective clothing should be worn when fumes and/or smoke from fire are present. Heat and flames cause emittance of acrid smoke and fumes. Do not release runoff from fire control methods to sewers or waterways. Firefighters should wear full face-piece self-contained breathing apparatus and chemical protective clothing with thermal protection. Direct water stream will scatter and spread flames and, therefore, should not be used.

Section 6 - Accidental Release Measures

6(a) Personal Precautions, Protective Equipment and Emergency Procedures: For spills, clean-up personnel should be protected against contact with eyes and skin. If material is in a dry state, avoid inhalation of dust. Large spills should be diked and foam applied. Do not release into sewers or waterways. Use absorbent material such as vermiculite or sand to soak up spill. Contain material and follow normal clean-up procedures. Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations. Keep unnecessary people away. Isolate hazard area and deny entry. Stay upwind.

6(b) Methods and Materials for Containment and Clean Up: Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations. Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements. Contain spill within diked area, allow to cool and mix with solid absorbent (i.e., sand, crushed coal, dirt).

Section 7 - Handling and Storage

7(a) Precautions for Safe Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in well ventilated areas. Do not breathe gas / mist / vapor / spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid direct contact on skin, eyes or on clothing. Handle and use in accordance with OSHA29CFRl 910.106 or local codes. Observe proper industrial hygiene practices. Comply all applicable regulatory standards. Emergency safety showers and eye wash stations should be present.

7(b) Conditions for Safe Storage, Including any Incompatibilities: Store locked up. Use only outdoors or in a well ventilated area. Store in well ventilated place. Keep containers tightly closed. Store away from acids and incompatible materials. Avoid oxidizers, heat, and flames

Section 8 - Exposure Controls / Personal Protection

8(a) Occupational Exposure Limits (OELs): The following exposure limits are offered as reference, for an experienced industrial hygienist to review

Ingredients	OSHA PEL [1]	ACGIH TLV [2]	NIOSH REL [3]	IDLH [4]
Coal Tar	0.2 mg/m^3 (benzene soluble fraction)	0 2 mg/m (as benzene soluble aerosol for coal tar pitch volatiles)	0.1 mg/m^3 (cyclohexane-extractable fraction)	NE
Naphthalene	10 ppm (50 mg/m^3)	10 ppm (52 mg/m^3), skin "STEL" 15 ppm (79 mg/m^3)	10 ppm (50 mg/m^3) "STEL" 15 ppm (75 mg/m^3)	250 ppm
Benzene	1.0 ppm "STEL" 5.0 ppm	0.5 ppm (1 .6 mg/m\ skin "STEL" 2 5 ppm (188 mg/m 3)	0.1 ppm (0.32 mg/m^3) "STEL" 1.0 ppm (3.2 mg/m^3)	500 ppm
Phenol	5 ppm "skin"	5 ppm "skin"	5 ppm 15 ppm "C 15 min"	250 ppm
Toluene	200 ppm "C" 300 ppm	50 ppm "skin"	100 ppm (375 mg/m^3) "STEL" 150 ppm (560 mg/m^3)	500 ppm

NE - None Established

1. OSHA PEL (Permissible Exposure Limits) are 8-hour TWA (time-weighted average) concentrations unless otherwise noted. A ("C") designation denotes a ceiling limit, which should not be exceeded during any part of the working exposure unless otherwise noted. A Short Term Exposure Limit (STEL) is defined as a 15-minute exposure, which should not be exceeded at any time during a workday. An Action level (AL) is used by OSHA and NlOSH to express a health or physical hazard. They indicate the level of a harmful or toxic substance/activity, which requires medical surveillance, increased industrial hygiene monitoring, or biological monitoring. Action Levels are generally set at one half of the PEL but the actual level may vary from standard to standard , The intent is to identify a level at which the vast majority of randomly sampled exposures will be below the PEL
2. Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH) are 8-hour TWA concentrations unless otherwise noted. ACGIH TLVs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes. A Short Term Exposure Limit (STEL) is defined as the maximum concentration to which workers can be exposed for a short period of time (15 minutes) for only four times throughout the day with at least one hour between exposures.
3. The National Institute for Occupational Safety and Health Recommended Exposure Limits (NIOSH-REL) - Compendium of Policy and Statements. NIOSH, Cincinnati, OH (1992). NIOSH is the federal agency designated to conduct research relative to occupational safety and health. As is the case with ACGIH TLVs, NIOSH RELs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes.
4. The "immediately dangerous to life or health air concentration values (IDLHs)" are used by NIOSH as part of the respirator selection criteria and were first developed in the mid-1970's by NIOSH. The Documentation for Immediately Dangerous to Life or Health Concentrations (IDLHs) is a compilation of the rationale and sources of information used by NIOSH during the original determination of 387 IDLHs and their subsequent review and revision in 1994

8(b) Appropriate Engineering Controls: Use controls as appropriate to minimize fire risk and in halation of vapors or mists as well as any byproducts of combustion. Provide general or local exhaust ventilation systems to minimize airborne concentrations. Local exhaust is necessary for use in enclosed or confined spaces. Provide sufficient general/local exhaust ventilation in pattern/volume to control inhalation exposures below current exposure limits and areas below flammable vapor concentrations.

8(c) Individual Protection Measures:

- **Respiratory Protection:** Do not breathe dusts/fumes/vapor/spray. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, use only a NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. Concentration in air of the various contaminants determines the extent of respiratory protection needed. Half-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 10 times the exposure limit. Full-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 50 times the exposure limit. Protection by air-purifying negative-pressure and powered air respirators is limited. Use a positive-pressure-demand, full-face, supplied air respirator or self contained breathing apparatus (SCBA) for concentrations above 50 times the exposure limit. If exposure is above the IDLH (Immediately dangerous to life or health) for any of the constituents, or there is a possibility of an uncontrolled release or exposure levels are unknown, then use a positive-demand, full-face, supplied air respirator with escape bottle or SCBA.

  Warning! Air-purifying respirators both negative-pressure, and powered-air do not protect workers in oxygen-deficient atmospheres.

Section 8 - Exposure Controls / Personal Protection (continued)

8(c) Individual Protection Measure (continued):

- **Eyes**: Wear appropriate eye protection to prevent eye contact. Use safety glasses with side shields or chemical goggles.
- **Skin**: Persons handling this product should wear appropriate clothing to prevent skin contact. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Wear protective gloves. Chemical goggles, face shields or glasses should be worn to prevent eye contact. Contact lenses should not be worn where industrial exposure to this material is likely. Wash ski n that has been exposed with soap and water
- **Other protective equipment**: An eyewash fountain and deluge shower should be readily available in the work area.

Section 9 - Physical and Chemical Properties

9(a) Appearance (physical state, color, etc.): Black viscous liquid

9(h) Odor: with aromatic odor

9(c) Odor Threshold: NA

9(d) pH: NA

9(e) Melting Point/Freezing Point: 95-l l 8°C (203-244°F)

9(f) Initial Boiling Point and Boiling Range: > I 50°C (>302°F)

9(g) Flash Point: ND

9(h) Evaporation Rate: ND

9(i) Flammability (solid, gas): Combustible Liquid

9(j) Upper/lower Flammability or Explosive Limits: ND

9(k) Vapor Pressure: <5 mm Hg

9(1) Vapor Density (Air = 1): >1

9(m) Relative Density: > 1.1 [Specific Gravity (H_20=1 at 20°C/60°F)]

9(n) Solubility(ies): Insoluble

9(o) Partition Coefficient n-octanol/water: ND

9(p) Auto-ignition Temperature: ND

9(q) Decomposition Temperature: ND

9(r) Viscosity: ND

NA - Not Applicable

ND - Not Determined for product as a whole

Section 10 - Stability and Reactivity

10(a) Reactivity: Not Determined (ND)

10(b) Chemical Stability: Crude Coal Ta r is stable under normal storage and handling conditions.

10(c) Possibility of Hazardous Reaction: None Known

10(d) Conditions to Avoid: Exposure to heat, sparks or flames.

10(e) Incompatible Materials: Will react with Acids and Oxidizers.

10(f) Hazardous Decomposition Products: Oxides of carbon and sulfur, PNA's, aromatic hydrocarbons, and other toxic vapors may be releases at high temperatures.

Section 11 - Toxicological Information

11(a-e) Information on Toxicological Effects: The following toxicity data have been determined for **Crude Coal Tar** by using the information available for its components applied to the guidance on the preparation of an SDS under the requirements of the GHS:

Hazard Classification	Hazard Category		Hazard Symbols	Signal Word	Hazard Statement
	EU	OSHA			
Acute Toxicity Hazard (covers Categories 1-4)	3	3[a]		Danger	Toxic if inhaled.
Skin Irritation (covers Categories 1A, 1B, and 2)	1B	1B [b]		Warning	Causes severe skin bums and eye damage.
Eye Damage/Irritation (covers Categories 1 , 2A and 2B)	2	2A[c]		Warning	Causes serious eye irritation.
Aspiration Hazard (Category 1)	1	1[c]		Danger	May be fatal if swallowed and enters airways.
Germ Cell Mutagenicity (covers Categories 1A, 1B and 2)	1B	1B[f]		Danger	May cause genetic defects.
Carcinogenicity (covers Categories 1A, 1B and 2)	1A	1A [g]		Danger	May cause cancer
Toxic Reproduction (covers Categories 1A, 1B and 2)	1B	1B[h]		Danger	May damage fertility or the unborn child.
Specific Target Organ Toxicity (STOT) Following Single Exposure (covers Categories 1-3)	2	2[i]		Warning	May cause central nervous system depression, respiratory irritation drowsiness or dizziness and damage to lungs, liver and blood cells.

Section 11 - Toxicological Information (continued)

11(a-e) Information on Toxicological Effects

Hazard Classification	Hazard Category		Hazard Symbols	Signal Word	Hazard Statement
	EU	OSHA			
Specific Target Organ Toxicity (STOT) Following Repeated Exposure (covers Categories 1&2)	1	1[j]		Danger	Causes damage to blood and blood forming system through prolonged or repeated exposure. Causes damage to olfactory system. Causes damage to lungs and central nervous system through prolonged or repeated inhalation exposure.

Toxicological data listed below are presented regardless to classification criteria. Individual hazard classification categories where the toxicological information has met or exceeded a classification criteria threshold are listed above.

a. The following LC50 or LD50 has been established for Crude Coal Tar and it's components:

- Coal Tar: LD50 (rat)> 2000 mg/kg (REACH)
  LD50 (mouse)> 1600 mg/kg (IUCLID)
- Benzene: LD50 (rat) 3.8 (2.9-4.8) and 5.6 (4.0-7.8) ml/kg young & old resp.
  LD50 (rabbits): > 9.4 ml/kg (abraded skin)
  LC50 (female rat) > 13700 ppm)
- Naphthalene: LD50 (mouse) = 397 - 827 mg/kg (REACH)
  LD50(rat) > 2500 mg/kg (REACH and IUCLID)
  LC50(rat) > 77.7 ppm (> 0.4 mg/L)(REACH and Toxnet)
- Toluene: LD50 (rat) > 5000 mg/kg (REACH)
  LD50 (rabbit) > 5000 mg/kg (REACH)

b. No Skin (Dermal) Irritation data available for **Crude Coal Tar** as a mixture. The following Skin Irritation information was found for the components:

- **Benzene**: Irritating to the skin.
- **Toluene**: Toluene is irritating to rabbit skin (REACH and IUCLID).

c. No Eye Irritation data available for **Crude Coal Tar** as a mixture. The following Eye Irritation information was found for the components:

- **Benzene**: Irritating to the eyes.
- **Toluene**: Slight irritation (REACH and IUCLID) Severe eye irritant in humans (NLM HSD).

d. No Skin (Dermal)/Respiratory Sensitization data available for **Crude Coal Tar** as a mixture or its components.

e. No Aspiration Hazard data available for **Crude Coal Tar** as a mixture. The following Aspiration Hazard information was found for the components:

- **Benzene**: Respiratory aspiration hazard.
- **Toluene**: May be fatal if enters respiratory tract.

f. The following Germ Cell Mutagenicity data was available for **Crude Coal Tar** as a mixture and its components:

- **Coal Tar** - Positive Ames test, bacterial mutation.
- **Benzene**: Positive In vitro and In vivo clastogenicity results.

g. Carcinogenicity: IARC, NTP, and OSHA list **Crude Coal Tar** as a carcinogen. The following Carcinogenicity information was found :

- **Coal Tar** - NTP has concluded that there is sufficient evidence that Coal Tars are carcinogenic in humans and experimental animals. Exposure to Coal Tars causes skin, l ung, bladder and gastrointestinal cancers. This effect may be due to the presence of polycyclic aromatic hydrocarbons. OSHA (29 CFR 1910.1002) regulates coal tar pitch volatiles and ACGIH (2009 TLV Booklet) classifies coal tar as confirmed human carcinogens. IARC lists coal tar as a Group 1 carcinogen.
- **Naphthalene**: Rat 105 week inhalation - Clear evidence of carcinogenicity - increases in respiratory epithelia adenoma and olfactory epithelial neuroblastoma. NTP and IARC list as category 2B.
- **Benzene** -ACGIH, OSHA, IARC, and NTP consider the Benzene to be a known carcinogen. Case reports and cohort studies have suggested a relationship between overexposures to Benzene and the occurrence of various types of leukemia.

h. . The following Toxic Reproduction data was available for **Crude Coal Tar** as a mixture and its components:

- **Coal Tar**: Reproductive toxin based on REACH classification.
- **Benzene**: Both reproductive and teratogenicity positive results found.
- **Toluene**: DEVELOPMENTAL HAZARD. May harm the unborn child based on animal information. Has been associated with:low birth weight or size, learning disabilities, hearing loss.

No Specific Target Organ Toxicity (STOT) following a Single Exposure data available for **Crude Coal Tar** as a mixture. The following STOT following a Single Exposure data was found for the components:

- **Naphthalene**: Eye and skin irritation (OSHA).
- **Benzene**: Central and peripheral nervous system depression, lung liver (vacuoled hepatocytes) and red blood cells. Mild to moderate respiratory tract irritation expected with breathing vapors.
- **Toluene**: Headache, dizziness and impaired performance.

j. No Specific Target Organ Toxicity (STOT) following Repeated Exposure data was available for **Crude Coal Tar** as a whole. The following STOT following Repeated Exposure data was found for the components:

- **Naphthalene**: Olfactory lesions and effects on nasal turbinates, cataracts, jaundice, kidney and liver damage (OSHA).
- **Benzene**: Hematopoietic system, spleen, and liver damage. Induced blood dyscrasias in humans were characterized by erythrocytic anisocytosis and poikilocytosis, anemia, decreased hemoglobin, and reduced hematocrit. In addition, benzene is a human carcinogen.
- **Toluene**: Ataxia, hypothermia, leucocyte decrease in female rats and increase liver and kidney weights.

Section 11 - Toxicological Information (continued)

11(a-e) Information on Toxicological Effects (continued):

The above toxicity information was determined from available scientific sources to illustrate the prevailing posture of the scientific community. The scientific resources includes: The American Conference of Governmental Industrial Hygienist (ACGIH) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure indices (BEIs) with Other Worldwide Occupational Exposure Values 2009, The International Agency for Research on Cancer (IARC), The National Toxicology Program (NTP) updated documentation, the World Health Organization (WHO) and other available resources, the International Uniform Chemical Information Database (IUCLID), European Union Risk Assessment Report (EU-RAR), Concise International Chemical Assessment Documents (CICAD), European Union Scientific Committee for Occupational Exposure Limits (EU-SCOEL), Agency for Toxic Substances and Disease Registry (ATSDR), Hazardous Substance Data Bank (HSDB), and International Programme on Chemical Safety (IPCS).

The following health hazard information is provided regardless to classification criteria and is based on the individual component(s):

Acute Effects by Component:

- **Coal Tar** - Acute respiratory effects may include coughing, sneezing, and swollen or irritated nasal mucosa and sinuses. Vapors or mist may cause irritation to the eyes and mucous membranes. Can cause skin irritation characterized by skin itching, burning, swelling and redness. Gastrointestinal disturbances (i.e., nausea and vomiting) and systemic toxicity may occur if absorbed. Ingestion of this material may cause irritation to the mouth, throat and gastrointestinal tract.
- **Naphthalene** - Excessive exposures may cause irritation to eyes, nose, throat and lungs, and respiratory tract. Central nervous system effects may occur. Excessive exposures may also result in dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure and death.
- **Benzene** - Excessive exposures may cause irritation to eyes, skin, nose, throat, lungs, and respiratory tract. Central nervous system effects may occur due to excessive exposures. Excessive exposures may result in headaches, nausea, sleep disturbances, excitability, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.
- **Toluene** - Excessive exposures may cause irritation to eyes, nose, throat, lungs, and respiratory tract. Central nervous system effects may occur. Excessive exposures may result in headaches, nausea dizziness, loss of balance and coordination, unconsciousness, and coma as well as respiratory failure and/or death.

Delayed (chronic) Effects by component:

- **Coal Tar**: May cause genetic defects and damage fertility or the unborn child. Harmful if inhaled or absorbed through the skin. May cause eye and skin irritation. Repeated excessive exposures may cause blood disorders such as anemia and leukemia. Repeated excessive exposures may cause liver and/or kidney effects or damage. Material has been related to cancer in humans.
- **Naphthalene**: Chronic exposure of workers to naphthalene has been reported to cause cataracts and retinal hemorrhage. Exposure may also result in headache, loss of appetite, and nausea. Kidney damage has also been reported in connection with chronic naphthalene exposure.
- **Benzene** - IARC Group I- Human Cancer Hazard. Early signs and symptoms of chronic overexposure include effects on CNS and the GI tract (headache, loss of appetite, drowsiness, nervousness, and pallor) but the major manifestation of toxicity is aplastic anemia. Bone marrow depression may occur resulting in leucopoenia, anemia, or thrombocytopenia (leukemogenic action). With continued overexposure the disease states may progress to pancytopenia resulting from bone marrow aplasia. Evidence has I inked benzene in the etiology of leukemia.
- **Toluene** - Chronic overexposure has been associated with headache, lassitude, and nausea, loss of coordination, memory loss, and loss of appetite along with enlargement of the liver, a moderate decrease in red blood cells, and reduction in white blood cells, as well as palpitations, weakness, and impaired reaction time may occur. The neurological effects of chronic overexposure to high levels of toluene gradually progress to an irreversible state. Besides effects on behavior and intelligence, degeneration of the optic nerve and nerve deafness have also been reported. Dermatitis from repeated contact with the skin may also occur. Overexposure to toluene may cause risk of harm to the unborn child.

Section 12 - Ecological Information

12(a) Ecotoxicity (aquatic & terrestrial): No Data Available for **Crude Coal Tar** as sold/shipped. However, individual components of the product when processed have been found to be toxic to the environment.

•**Benzene**: LC50 *Lepomis macrochirus* (bluegill sunfish) 20 mg/l/24 to 48 hr /Conditions of bioassay not specified/; LC50 *Salmo trutta* (brown trout yearlings) 12 mg/L/1 hr (static bioassay).

•**Toluene**: LC50 *Pimephales promelas* (fathead minnow) 34.27 mg/l 96 hr (95% Confidence Limits= 22.83-45.86 mg/l) /Conditions of bioassay not specified/ LC50 *Daphnia magna*, (water flea) 313 mg/l 48 hr /Conditions of bioassay not specified.

•**Naphthalene**: LC50 *Pimephales promelas* (fathead minnow) 6.08 (5.74-6.44) mg/I 72 & 96 hr, /flow-through bioassay ; LC50 *Oncorhynchus gorbuscha* (pink salmon) 1.4 mg/l/96 hr Conditions of bioassay not specified.

12(b) Persistence & Degradability: Vapor-phase benzene and toluene are degraded in the atmosphere by reaction with photochemically- produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 13 days and 3 days for benzene and toluene, respectively.

12(c) Bioaccumulative Potential: No Data Available for **Crude Coal Tar** or individual components.

12(d) Mobility (in soil): No Data Available for **Crude Coal Ta r** as a whole. However, benzene and toluene are have been estimated to be moderately to highly mobile in soil. Evaporation is expected to be the primary loss mechanism from water. Benzene and toluene are not expected to adsorb to sediment and suspended solids in water. Volatilization half-lives for a model river and model lake have been estimated to be 1 hr and 3.5 days, respectively for benzene and 1 hour and 4 days, respectively for toluene.

12(e) Other Adverse Effects: None Known

Additional Information:

Hazard Category: Acute 2, Chronic 2 **Signal Word:** No Signal Word **Hazard Symbol:**

Hazard Statement: Toxic to aquatic life with long lasting effects.

Section 13 - Disposal Considerations

Disposal: This material is considered a hazardous waste. Dispose in approved landfill or incinerate. Follow applicable federal, state and local regulations for disposal of hazardous waste accumulated during handling operations of the product.

Container Cleaning and Disposal: Follow applicable federal, state and local regulations. Observe safe handling precautions. European Waste Catalogue 05-06-01 (acid tars), or 05-06-03 (other tars).

Please note this information is for Crude Coal Tar in its original form. Any alterations can void this information.

Section 14 - Transport Information

14 (a-g) Transportation Information: US Department of Transportation (DOT) under 49 CFR 172.101 regulates Crude Coal Tar as a (as Environmentally Hazardous Substance, liquid, n.o.s.). All federal, state, and local laws and regulations that apply to the transport of this type of material must be adhered to.

Shipping Name: Environmentally Hazardous Substance, liquid, n.o.s. (contains benzo(a)pyrene and anthracene) **Shipping Symbols**: G **Hazard Class**: 9 **UN No** UN3082 **Packing Group**: PG Ill **DOT/ IMO Label:** 9 **Special Provisions** (172.102): 8, 146 183, T4, TP1, TP29	**Packaging Authorizations**: **a) Exceptions**: 1 55 **b) Non-bulk:** 203 **c) Bulk**: 241	**Quantity Limitations**: **a) Passenger, Aircraft, or Railcar**: No Limit **b) Cargo Aircraft Only**: No Limit **Vessel Stowage Requirements:** **a) Vessel Stowage:** A **b) Other:** Not Applicable **DOT Reportable Quantities:** Not Applicable

The International Maritime Dangerous Goods (IMDG) and the Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID) classification, packaging and shipping requirements follow the US DOT Hazardous Materials Regulation.

Regulations Concerning the International Carriage of Dangerous Goods by Road (ADR) regulates **Crude Coal Tar as a (Environmentally Hazardous Substance liquid n.o.s.) hazardous material.**

Shipping Name: Environmentally Hazardous Substance, liquid, n.o.s. (contains benzo(a)pyrene, anthracene) **Classification Code:** 9 **UN No.**: UN3082 **Packing Group:** PGIII **ADR Label**:9 **Special Provisions:** 274, 335, 909 **Limited Quantities:** 5L	**Packaging**: **a) Packing Instructions:** P001, LP01 **b) Special Packing Provisions:** PP1 **c) Mixed Packing Provisions** : Not Applicable	**Portable Tanks & Bulk Containers:** **a) Instructions:** T4 **b) Special Provisions:** TP2, TP29

IATA – International Air Transport Association (IATA) regulates Crude Coal Tar as a (Environmentally Hazardous Substance liquid n.o.s.) hazardous material.

Shipping Name: Environmentally Hazardous Substance, liquid, n.o.s. (contains benzo(a)pyrene, anthracene) **Class/Division:** 9 **Hazard Label (s):** Miscellaneous **UN No.:** UN3082 **Packing Group:** PGIII **Excepted Quantities (EQ):** EI	**Passenger & Cargo Aircraft Limited Quantity (EQ)** **Pkg Inst:** Y914 **Max Net Qty/Pkg:** 30kg G	**Pkg Inst:** 914 **Max Net Qty/Pkg:** 450L	**Cargo Aircraft Only** **Pkg Inst:** 914 **Max Net Qty/Pkg:** 450L	**Special Provisions:** A97 A158 **ERG Code:** NA

Pkg Inst – Packing Instructions Max Net Qty/Pkg – Maximum Net Quantity per Package ERG – Emergency Response Drill Code

Transport Dangerous Goods (TDG) Classification: Crude Coal Tar.

Shipping Name: Environmentally Hazardous Substance, liquid, n.o.s. (contains benzo(a)pyrene, anthracene) **Shipping Symbols**: G **Hazard Class**: 9	**UN No.:** UN3082 **Packing Group:** PGIII **Label**: 9

Section 15 - Regulatory Information

Regulatory Information: *The following listing of regulations relating to an ABC Coke product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.*

SARA Potential Hazard Categories: Immediate Acute Health Hazard; Delayed Chronic Health Hazard

SARA 313 Supplier Notification: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372

CAS #	Chemical Name	Percent (%) by Weight
71-43-2	Benzene	<0.1 - 1.0
193-39-5	Indeno(1,2,3-cd)pyrene	<0.1 - 1.0
108-95-2	Phenol	<0.1 - 1.0
108-88-3	Toluene	<0.1 - 1.0
21 8-01-9	Chrysene (alternate name Benzo(a)phenanthrene)	<0.1 - 1.5
207-08-9	Benzo(k)fluoranthene	0.1 - 1.5
56-55-3	1.2-Benzanthracene	0.5 - 1.6
50-32-8	Benzo(a)pyrene	<0.1 - 2.0
205-99-2	Benzo(b)fluoranthene	0.4 - 2.5
132-64-9	Dibenzofuran	1.0 - 2.5
82-32-9	Acenaphthene	0.1 - 3.0
120-12-7	Anthracene	0.7 - 4.0
206-44-0	Fluoranthene	1.5 - 5.0
85-01-8	Phenanthrene	2.5 - 7.5
91-20-3	Napht halene	3.0 - 12.0

State Regulations: The product, **Crude Coal Tar,** as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations:

California Prop. 65: Crude Coal Tar as a whole is not listed. However, individual components of the product are listed

Other regulations: .

WHMIS Classification (Canadian): Crude Coal Tar (listed as Tar Decanter Sludge) is listed as a stated in Section 2.
SEE SECTION 2 OF THIS SDS FOR THE ACCURATE CLASSIFICATIONS FOR CURRENT WHMIS REQUIREMENTS, THE HAZARDS HAVE BEEN UPDATED TO THE MOST STRICT REQUIREMENTS AND COMPLY WITH US AND CANADA
GHS REQUIREMENTS.

Section 16 - Other Information

Prepared By: ABC Coke Division, Drummond Company, Inc.

Revision History:

Hazardous Material Identification System (HMIS) Classification

Health Hazard	2
Fire Hazard	1
Physical hazards	1

HEALTH= 2, * Denotes temporary or minor injury may occur
FIRE= 1, Materials that must be preheated before ignition will occur; includes liquids, solids and semi-solids having a flash point above 200F (Class IIIB)
PHYSICAL HAZARDS = 1, Materials that are normally stable, but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitor.

National Fire Protection Association (NFPA)

HEALTH = 2, Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
FIRE = 1**,** Must be preheated before ignition can occur.
INSTABILITY = 1, Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

Section 16 - Other Information (continued)

ABBREVIATIONS/ACRONYMS

ACGIH	American Conference of Governmental Industrial	NIOSH	National Institute for Occupational Safety and Heal th
BEIs	Biological Exposure Indices	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	ORC	Organization Resources Counselors
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	OSHA	Occupational Safety and Health Administration
CFR	Code of Federal Regulations	PEL	Permissible Exposure Limit
CNS	Central Nervous System	PNOR	Particulate Not Otherwise Regulated
GI, GIT	Gastro-Intestinal, Gastro-Intestinal Tract	PNOC	Particulate Not Otherwise Classified
HMIS	Hazardous Materials Identification System	PPE	Personal Protective Equipment
IARC	International Agency for Research on Cancer	ppm	parts per million
LC50	Median Lethal Concentration	RCRA	Resource Conservation and Recovery Act
LD50	Median Lethal Dose	RTECS	Registry of Toxic Effects of Chemical Substances
LDu.	Lowest Dose to have killed animals or humans	SARA	Superfund Amendment and Reauthorization Act
LEL	Lower Explosive Limit	SCBA	Self-contained Breathing Apparatus
$\mu g/m^3$	microgram per cubic meter of air	SDS	Safety Data Sheet
mg/m^3	milligram per cubic meter of air	STEL	Short-term Exposure Limit
mppcf	million particles per cubic foot	TLV	Threshold Limit Value
NFPA	National Fire Protection Association	TWA	Time-weighted Average
NIF	No Information Found	UEL	Upper Explosive Limit

Disclaimer: This information is taken from sources or based upon data believed to be reliable. However, ABC Coke makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.