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MSDS

Dated: 1990



# ACME STEEL COMPANY

13500 SOUTH PERRY AVENUE, RIVERDALE, ILLINOIS 60627-1182 (708) 849-2500

MSDS Id #: AS002

## MATERIAL SAFETY DATA SHEET

Product Name: NAPHTHALENE

Part #: N/A

### SECTION I SUPPLIER INFORMATION

Common Name : NAPHTHALENE  
Chemical Name : NAPHTHALIN; TAR CAMPHOR; WHITE TAR; NAPHTHENE; ALBOCARBON  
Formula/CAS# : C10H8/91-20-3

Supplier : ACME STEEL COMPANY-COKE Supplier #: A602  
Address : 11236 SOUTH TORRENCE AVE.  
City, St, Zip: CHICAGO IL 606 Phone: 312-933-5000

EMERGENCY PHONE #: 312-933-5000

Date Issued: 03-19-90

Date Entered: 03-19-90

Date Revised: 01-01-91

### SECTION II INGREDIENT INFORMATION

NAPHTHALENE  
%: 100 CAS #: 91-20-3 PEL-OSHA: 10 PPM TLV-ACGIH: 10 PPM

#### INGREDIENT HAZARD STATEMENT

NAPHTHALENE IS CONDENSED FROM COKE OVEN GAS, SKIMMED OFF WATER TO BE SENT TO TAR DECANIER WHERE IT IS ABSORBED BY TAR.

NAPHTHALENE IS A SKIN SENSITIZER AND A HEMOLYTIC AGENT. THE SUBSTANCE MAY BE ABSORBED INTO THE BODY BY INHALATION AND INGESTION, AND MAY AFFECT THE BLOOD, LIVER, AND KIDNEYS.  
THE NAPHTHALENE STEEL IS 15 PPM.

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : 424F  
Specific Gravity (H2O = 1) : 1.1  
Melting Point: 176F  
Vapor Pressure (mm Hg): 0.05 @ 20C  
Vapor Density (Air=1): 4.4  
Evaporation Rate (Butyl Acetate=1): <1.0  
Solubility/Water: INSOLUBLE

#### APPEARANCE AND ODOR

WHITE CRYSTALLINE, VOLATILE FLAKES; ODOR OF MOTH BALLS.

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: 174F  
Auto-Ignition: N/A  
LEL: N/A  
UEL: 5.9%

Flammable: 2 NFPA HAZARD CLASSIFICATION Health: 2 Reactivity: 0 Special: N/A

#### EXTINGUISHING MEDIA

DRY CHEMICAL, SAND, WATER SPRAY OR FOAM. FOR LARGER FIRES, USE WATER SPRAY, FOG OR FOAM.

#### SPECIAL FIRE FIGHTING PROCEDURES

MOVE CONTAINER FROM FIRE AREA IF POSSIBLE. COOL CONTAINERS EXPOSED TO FLAME WITH WATER FROM SIDE UNTIL WELL AFTER FIRE IS OUT. USE WATER IN FLOODING QUANTITIES AS FOG. SOLID STREAMS MAY NOT BE EFFECTIVE. COOL CONTAINERS WITH FLOODING AMOUNTS OF WATER. APPLY FROM AS FAR A DISTANCE AS POSSIBLE. SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE.

#### UNUSUAL FIRE AND EXPLOSION HAZARDS

MODERATE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME, AND A MODERATE EXPLOSION HAZARD IN THE FORM OF DUST AT 176F. REACTIONS WITH INCOMPATIBLE SUBSTANCES MAY CAUSE FIRES AND EXPLOSIONS.

### SECTION V REACTIVITY DATA

Stability? GENERALLY NON-REACTIVE UNDER NORMAL CONDITIONS.  
Avoid: THE SUBSTANCE SUBLIMES BELOW THE MELTING POINT.

#### INCOMPATIBILITY (Materials to Avoid)

VIOLENT REACTIONS MAY OCCUR WITH CHROMIC ANHYDRIDE, ALUMINUM TRICHLORIDE/BENZOYL CHLORIDE MIXTURES, AND STRONG OXIDIZERS. EXPLOSIONS MAY OCCUR IN REACTIONS WITH DINITROGEN PENTAOXIDE AND STRONG OXIDIZERS.

#### HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

MELTED NAPHTHALENE WILL ATTACK SOME FORMS OF PLASTICS, RUBBER, AND COATINGS.

Polymerization? POLYMERIZATION WILL NOT OCCUR

Avoid: N/A

### SECTION VI HEALTH HAZARD DATA

#### ROUTES OF ENTRY

Inhalation? YES  
Skin? YES  
Ingestion? NO  
Eyes? YES

\*\*\*\*\* CARCINOGENICITY \*\*\*\*\*

NTP? N/A

IARC? N/A

OSHA? N/A

N/A

\*\*\*\*\* ACUTE AND CHRONIC HEALTH HAZARDS \*\*\*\*\*

ACUTE:

INHALATION - HEMOLYTIC AGENT. 500 PPM IMMEDIATELY DANGEROUSLY TO LIFE AND HEALTH. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION, WITH HEADACHE, CONFUSION, EXCITEMENT, NAUSEA, VOMITING, SWEATING, DYSURIA, HEMATURIA AND HEMOLYSIS. OPTIC NEURITIS IS RARE. PAROTID GLAND ENLARGEMENT IS POSSIBLE.

SKIN CONTACT - IRRITANT/ SENSITIZER. MAY CAUSE IRRITATION AND, IN SENSITIZED INDIVIDUALS, SEVERE DERMATITIS.

EYE CONTACT - IRRITANT. 15 PPM OF VAPOR IS IRRITATING. MAY CAUSE SUPERFICIAL INJURY, CONJUNCTIVITIS, AND VISUAL DISTURBANCES.

INGESTION - HEMOLYTIC AGENT. INGESTION MAY CAUSE INTRAVASCULAR HEMOLYSIS. INITIAL SYMPTOMS MAY INCLUDE HEADACHE, CONFUSION, EXCITEMENT, MALAISE, PROFUSE SWEATING, NAUSEA, VOMITING, ABDOMINAL PAIN, AND IRRITATION OF THE BLADDER. THERE MAY BE PROGRESSIVE JAUNDICE, HEMATURIA, HEMOGLOBINURIA, RENAL TUBULAR BLOCKAGE, AND ACUTE RENAL SHUTDOWN.

CHRONIC:

INHALATION - NO EFFECTS KNOWN IN HUMANS.

SKIN CONTACT - ITCHING, REDNESS, SCALING, WEEPING, AND CRUSTING OF THE SKIN. MAY PRODUCE SENSITIZATION DERMATITIS FOLLOWING REPEATED CONTACT.

EYE CONTACT - WORKERS EXPOSED TO HIGH CONCENTRATIONS HAVE DEVELOPED CATARACTS.

\*\*\*\*\* SIGNS AND SYMPTOMS OF EXPOSURE \*\*\*\*\*

SEE ABOVE.

\*\*\*\*\* MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE \*\*\*\*\*

INDIVIDUALS WITH A DEFICIENCY OF GLUCOSE-6-PHOSPHATE DEHYDROGENASE ARE MORE SUSCEPTIBLE TO THE HEMOLYTIC EFFECTS.

\*\*\*\*\* EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

INHALATION: REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. KEEP AFFECTED PERSON WARM AND AT REST. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT: REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH AFFECTED AREA WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION.

EYE CONTACT: WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER, OCCASIONALLY LIFTING THE UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 10-20 MINUTES). GET MEDICAL ATTENTION.

INGESTION: SEEK MEDICAL ATTENTION IMMEDIATELY.

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

DOT Classification: CAMPHOR TAR

\*\*\*\*\* STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED \*\*\*\*\*

SHUT OFF IGNITION SOURCES. DO NOT TOUCH SPILLED MATERIAL. FOR SMALL SPILLS, PLACE MATERIAL INTO CONTAINER AND COVER; MOVE CONTAINERS FROM SPILL AREA. FOR LARGER SPILLS, WET DOWN WITH WATER AND DIKE FOR LATER DISPOSAL. NO SMOKING, FLAMES OR FLARES IN HAZARD AREA! KEEP UNNECESSARY PEOPLE AWAY. ISOLATE HAZARD AREA AND DENY ENTRY. WHEN MATERIAL IS NOT INVOLVED IN FIRE, KEEP OPEN FLAMES, SPARKS AND OTHER IGNITION SOURCES AWAY. DO NOT ALLOW MATERIAL TO CONTAMINATE SEWERS AND WATER SOURCES. BUILD DIKES FOR CONTAINMENT OF SPILL FLOW.

\*\*\*\*\* WASTE DISPOSAL METHOD \*\*\*\*\*

RECYCLE IN PROCESS.

\*\*\*\*\* PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE \*\*\*\*\*

KEEP OPEN FLAMES, SPARKS AND OTHER IGNITION SOURCES AWAY. AVOID CONTACT.

\*\*\*\*\* OTHER PRECAUTIONS \*\*\*\*\*

N/A

SECTION VIII CONTROL MEASURES

\*\*\*\*\* RESPIRATORY PROTECTION \*\*\*\*\*

500 PPM - CHEMICAL CARTRIDGE RESPIRATOR WITH AN ORGANIC VAPOR CARTRIDGE AND A DUST FILTER. GAS MASK WITH A CHIN-STYLE, FRONT-, OR BACK-MOUNTED ORGANIC VAPOR CANISTER AND A DUST FILTER. SUPPLIED-AIR RESPIRATOR WITH A FULL FACEPIECE, HELMET, OR HOOD. SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE.

ESCAPE - GAS MASK WITH A CHIN-STYLE, FRONT-, OR BACK-MOUNTED ORGANIC VAPOR CANISTER AND A HIGH-EFFICIENCY PARTICULATE FILTER. ANY ESCAPE SELF-CONTAINED BREATHING APPARATUS.

\*\*\*\*\* VENTILATION \*\*\*\*\*

Local Exhaust: TO MEET PERMISSIBLE EXPOSURE LIMIT REQUIREMENTS.  
Special Exhaust: N/A  
Mechanical Exhaust: N/A

\*\*\*\*\* OTHER PROTECTION \*\*\*\*\*

Gloves: WEAR IMPERVIOUS GLOVES. CONSULT MANUFACTURER FOR SPECIFIC TYPE OF GLOVE FOR PROTECTION AGAINST THIS SUBSTANCE.  
Eye Protection: WEAR FACESHIELD, VENTED SAFETY GOGGLES, OR SAFETY GLASSES WITH SIDESHIELDS.

\*\*\*\*\* CLOTHING \*\*\*\*\*

AVOID REPEATED OR PROLONGED CONTACT WITH CHEMICAL.

\*\*\*\*\* WORK/HYGIENE PRACTICES \*\*\*\*\*

PRACTICE GOOD HOUSEKEEPING AND WASH THOROUGHLY AFTER HANDLING.



# ACME STEEL COMPANY

13500 SOUTH PERRY AVENUE, RIVERDALE, ILLINOIS 60627-1182 (708) 849-2500

MSDS Id #: AS0023

## MATERIAL SAFETY DATA SHEET

Product Name: TAR DECANTER SLUDGE

Part #: N/A

### SECTION I SUPPLIER INFORMATION

Common Name : TAR DECANTER SLUDGE  
Chemical Name : TAR DECANTER SLUDGE  
Formula/CAS : N/A

Supplier : ACME STEEL COMPANY-COKE Supplier #: A002  
Address : 11236 SOUTH TORRENCE AVE.  
City, St, Zip: CHICAGO IL 60617 Phone: 312-933-5000

EMERGENCY PHONE #: 312-933-5000

Date Issued: 04-28-89

Date Entered: 04-28-89

Date Revised: 02-01-90

01-01-91

### SECTION II INGREDIENT INFORMATION

IRON OXIDE	%: .5	CAS #: 1309-37-1	PEL-OSHA: 10 MG/M3	TLV-ACGIH: 5 MG/M3
CALCIUM OXIDE	%: 6	CAS #: 1305-76-8	PEL-OSHA: 5 MG/M3	TLV-ACGIH: 2 MG/M3
NAPHTHALENE	%: 5	CAS #: 91-20-3	PEL-OSHA: 10 PPM	TLV-ACGIH: 10 PPM
PHENOL (AS C6H5OH)	%: 6-11	CAS #: 108-95-2	PEL-OSHA: 19 MG/M3	TLV-ACGIH: 19 MG/M3
BENZENE	%: 0-1	CAS #: 000071-43-2	PEL-OSHA: 1.0 PPM	TLV-ACGIH: 10 PPM
CARBONACEOUS MATERIAL	%: 5-15	CAS #: N/A	PEL-OSHA: N/A	TLV-ACGIH: N/A
TOLUENE	%: 0-1	CAS #: 108-88-3	PEL-OSHA: 100 PPM	TLV-ACGIH: 100 PPM
XYLENE	%: 0-1	CAS #: 1330-20-7	PEL-OSHA: 100 PPM	TLV-ACGIH: 100 PPM
COAL TAR PITCH	%: 40-60	CAS #: 65996-93-2	PEL-OSHA: .2 MG/M3	TLV-ACGIH: .2 MG/M3

### INGREDIENT HAZARD STATEMENT

STANDARDS ARE EXPRESSED AS IRON FUME, PHENOL (SKIN), NAPHTHALENE STEL OF 15 PPM, TOLUENE STEL OF 150 PPM AND XYLENE STEL OF 150 PPM. THE OSHA COAL TAR PITCH VOLATILE STANDARD FOR COKE OVENS IS 0.15 MG/M3 AND THE STEL FOR BENZENE IS 5.0 PPM.

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : N/A  
Specific Gravity (H2O = 1) : N/A  
Melting Point: N/A  
Vapor Pressure (mm Hg): N/A  
Vapor Density (Air=1): N/A  
Evaporation Rate (Butyl Acetate=1): N/A  
Solubility/Water: N/A

### APPEARANCE AND ODOR

BLACK TAR, NAPHTHALENE ODOR.

DECANTER TANK TAR SLUDGE IS CLASSIFIED AS A HAZARDOUS WASTE (K087).

### ADDITIONAL INFORMATION

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: NO IGNITABILITY CHARACTERISTICS PRESENT.  
Auto-ignition: N/A  
LEL: N/A  
UEL: N/A

### NFPA HAZARD CLASSIFICATION

Flammable: 3 Health: 3 Reactivity: 0 Special: N/A

### EXTINGUISHING MEDIA

DRY CHEMICAL OR CARBON DIOXIDE.

### SPECIAL FIRE FIGHTING PROCEDURES

N/A

### UNUSUAL FIRE AND EXPLOSION HAZARDS

DENSE BLACK SMOKE IS GENERATED DURING DECOMPOSITION.

### SECTION V REACTIVITY DATA

Stability? PRODUCT IS STABLE UNDER NORMAL CONDITIONS OF USE, STORAGE AND TRANSPORT.

Avoid: N/A

### INCOMPATIBILITY (Materials to Avoid)

BENZENE CAN REACT VIGOROUSLY WITH OXIDIZING MATERIALS. NAPHTHALENE ALSO REACTS WITH OXIDIZING MATERIALS.

### HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

BENZENE AND HYDROGEN CYANIDE.

Polymerization? POLYMERIZATION WILL NOT OCCUR

Avoid: N/A

SECTION VI HEALTH HAZARD DATA

ROUTES OF ENTRY

Inhalation? YES  
 Skin? YES  
 Ingestion? NO  
 Eyes? NO

ADDITIONAL INFORMATION

HOT SLUDGE MAY CAUSE EYE DAMAGE AS WELL AS DERMAL BURNS.

CARCINOGENICITY

NTP? YES IARC? YES OSHA? YES

BENZENE AND COAL TAR PITCH ARE BOTH CARCINOGENS.

ACUTE AND CHRONIC HEALTH HAZARDS

SYSTEMIC REACTIONS FOR NAPHTHALENE INCLUDE NAUSEA, HEADACHE, DIAPHORESIS (PERSPIRATION), HEMATURIA (BLOOD IN URINE), FEVER, ANEMIA, LIVER DAMAGE, CONVULSIONS, AND COMA.  
 BENZENE- POISONING OCCURS THROUGH THE INHALATION OF VAPOR, THOUGH BENZENE AND PHENOL CAN PENETRATE THROUGH THE SKIN.  
 LOCALLY BENZENE HAS A STRONG IRRITATING EFFECT WHICH CAN LEAD TO EDEMA AND BLISTERING IN SEVERE CASES.

SIGNS AND SYMPTOMS OF EXPOSURE

SEE ABOVE

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

N/A

EMERGENCY AND FIRST AID PROCEDURES

INHALATION - REMOVE TO FRESH AIR; SEEK MEDICAL ATTENTION IF NECESSARY.  
 EYES - RINSE WITH WATER; SEEK MEDICAL ATTENTION IF NECESSARY.  
 SKIN - WASH WITH SOAP AND WATER.  
 INGESTION - N/A

FOR EYE AND/OR SKIN BURNS FROM HOT SLUDGE, SEEK MEDICAL ATTENTION.

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

DOT Classification: HAZARDOUS MATERIAL

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

MATERIAL IS A HAZARDOUS WASTE AND SHOULD BE TREATED APPROPRIATELY.

WASTE DISPOSAL METHOD

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND/OR LOCAL LAWS AND REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

N/A

SECTION VIII CONTROL MEASURES

RESPIRATORY PROTECTION

NIOSH APPROVED RESPIRATOR WHEN LEVELS EXCEED APPLICABLE OSHA STANDARDS.

VENTILATION

Local Exhaust: YES WHEN PEL'S ARE EXCEEDED  
 Special Exhaust: N/A  
 Mechanical Exhaust: N/A

OTHER PROTECTION

Gloves: IMPERVIOUS GLOVES  
 Eye Protection: SAFETY GLASSES / GOGGLES

CLOTHING

SAFETY CLOTHING OR DISPOSABLE CLOTHING IS RECOMMENDED.

WORK/HYGIENE PRACTICES

N/A

\*\*\*\* SARA HAZARD CATEGORIES \*\*\*\*

FIRE HAZARD \_\_\_\_\_ SUDDEN RELEASE OF PRESSURE \_\_\_\_\_  
 IMMEDIATE (ACUTE) HEALTH HAZARD  X  DELAYED (CHRONIC) HEALTH HAZARD  X   
 REACTIVITY HAZARD \_\_\_\_\_

SARA TITLE III SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372)

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) SUBJECT TO THE SARA TITLE III SECTION 313 REPORTING REQUIREMENTS:

- . Benzene
- . Naphthalene
- . Toluene
- . Xylene

% COMPOSITION AND CAS NUMBERS ARE LISTED UNDER SECTION II "INGREDIENT INFORMATION".

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THIS IS THE END OF THE MSDS Id #AS0023



# ACME STEEL COMPANY

13500 SOUTH PERRY AVENUE, RIVERDALE, ILLINOIS 60627-1182 (708) 849-2500

MSDS Id #: A50022

## MATERIAL SAFETY DATA SHEET

Product Name: FLUSHING LIQUOR/WEAK AMMONIA LIQUOR

Part #: N/A

### SECTION I SUPPLIER INFORMATION

Common Name : FLUSHING LIQUOR/WEAK AMMONIA LIQUOR  
Chemical Name : FLUSHING LIQUOR/WEAK AMMONIA LIQUOR  
Formula/CAS : N/A

Supplier : ACME STEEL COMPANY-COKE Supplier #: A002  
Address : 11236 SOUTH TORRENCE AVE.  
City, St, Zip: CHICAGO IL 60617 Phone: 312-933-5000

EMERGENCY PHONE #: 312-933-5000

Date Issued: 04-28-89

Date Entered: 04-28-89

Date Revised: 02-01-90

01-01-91

### SECTION II INGREDIENT INFORMATION

FENOL			
%: 0-0.6 CAS #: 108-95-2	PEL-OSHA: 19 MG/M3	TLV-ACGIH: 19 MG/M3	
AMMONIA			
%: 0-3 CAS #: 7664-41-7	PEL-OSHA: 27 MG/M3	TLV-ACGIH: 18 MG/M3	
SULFIDES			
%: 0-0.5 CAS #: 7783-06-4	PEL-OSHA: 10 PPM	TLV-ACGIH: N/A	
THIOSULFATE			
%: 0-0.5 CAS #:	PEL-OSHA:	TLV-ACGIH:	
THIOCYANATE			
%: 0-0.5 CAS #:	PEL-OSHA:	TLV-ACGIH:	

### INGREDIENT HAZARD STATEMENT

FLUSHING LIQUOR IS THE CONDENSATE FROM VOLATILE PRODUCTS DRIVEN OFF BY THE COKING PROCESS. AMMONIA LIQUOR IS THE EXCESS FLUSHING LIQUOR WHICH HAS THE TAR DECANTED FROM IT. BOTH LIQUORS ARE PRIMARILY WATER. THE SULFIDE EXPOSURE LIMIT IS EXPRESSED AS HYDROGEN SULFIDE (STEL 15 PPM). AMMONIA STEL IS 27 MG/M3.

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : N/A  
Specific Gravity (H2O = 1) : N/A  
Melting Point: N/A  
Vapor Pressure (mm Hg): N/A  
Vapor Density (Air=1): N/A  
Evaporation Rate (Butyl Acetate=1): N/A  
Solubility/Water: N/A

### APPEARANCE AND ODOR

PALE GOLD WITH SLIGHT TAR AMMONIA ODOR.

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A  
Auto-Ignition: N/A  
LEL: 0  
UEL: 0

Flammable: N/A NFPA HAZARD CLASSIFICATION  
Health: N/A Reactivity: N/A Special: N/A

### EXTINGUISHING MEDIA

N/A

### SPECIAL FIRE FIGHTING PROCEDURES

N/A

### UNUSUAL FIRE AND EXPLOSION HAZARDS

MANY SULFIDES REACT VIOLENTLY AND EXPLOSIVELY ON CONTACT WITH POWERFUL OXIDIZERS. HYDROGEN SULFIDE EVOLVED CAN FORM EXPLOSIVE MIXTURES WITH AIR.

### SECTION V REACTIVITY DATA

Stability? PRODUCT IS STABLE UNDER NORMAL CONDITIONS OF USE AND STORAGE.  
Avoid: STRONG OXIDIZERS.

### INCOMPATIBILITY (Materials to Avoid)

STRONG OXIDIZERS, SUCH AS ACIDS.

### HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

THESE PRODUCTS MAY BECOME DANGEROUS WHEN HEATED TO DECOMPOSITION. THEY EMIT HIGHLY TOXIC FUMES OF SO<sub>2</sub>, WHICH CAN REACT WITH WATER, STEAM OR ACIDS TO PRODUCE TOXIC AND FLAMMABLE VAPORS OF HYDROGEN SULFIDE.

Polymerization? POLYMERIZATION WILL NOT OCCUR

Avoid: N/A

### SECTION VI HEALTH HAZARD DATA

### ROUTES OF ENTRY

Inhalation? YES  
Skin? YES  
Ingestion? NO  
Eyes? NO

### ADDITIONAL INFORMATION

PROLONGED EXPOSURE TO SKIN MAY CAUSE DERMATITIS. PRODUCT MAY BE CORROSIVE TO MUCOUS TISSUE.

\*\*\*\*\* CARCINOGENICITY \*\*\*\*\*

NTP? NO IARC? NO OSHA? NO

\*\*\*\*\* ACUTE AND CHRONIC HEALTH HAZARDS \*\*\*\*\*

THE ALKALINE SULFIDES (POTASSIUM, CALCIUM, AMMONIUM, AND SODIUM) ARE SIMILAR IN ACTION TO ALKALIES. THEY CAUSE SOFTENING AND IRRITATION OF THE SKIN. IF TAKEN ORALLY THEY ARE CORROSIVE AND IRRITANT THROUGH THE LIBERATION OF HYDROGEN SULFIDE AND FREE ALKALI. SULFIDES OF THE HEAVY METALS ARE GENERALLY INSOLUBLE AND THEREFORE HAVE LITTLE TOXIC ACTION EXCEPT FOR THE LIBERATION OF HYDROGEN SULFIDE. DERMATITIS RESULTING FROM PHENOL OR PHENOL CONTAINING PRODUCTS IS COMMON.

\*\*\*\*\* SIGNS AND SYMPTOMS OF EXPOSURE \*\*\*\*\*

SEE ABOVE

\*\*\*\*\* MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE \*\*\*\*\*

N/A

\*\*\*\*\* EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

INHALATION - REMOVE TO FRESH AIR.  
EYES - FLUSH WITH WATER; SEEK MEDICAL ATTENTION IF NECESSARY.  
SKIN - WASH WITH SOAP AND WATER; SEEK MEDICAL ATTENTION IF NECESSARY.  
INGESTION N/A

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SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE  
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DOT Classification:

\*\*\*\*\* STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED \*\*\*\*\*

DIKE PRODUCT WITH PULVERIZED COAL AND DISPOSE.

\*\*\*\*\* WASTE DISPOSAL METHOD \*\*\*\*\*

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND/OR LOCAL LAWS AND REGULATIONS.

\*\*\*\*\* PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE \*\*\*\*\*

N/A

\*\*\*\*\* OTHER PRECAUTIONS \*\*\*\*\*

N/A

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SECTION VIII CONTROL MEASURES  
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\*\*\*\*\* RESPIRATORY PROTECTION \*\*\*\*\*

NIOSH APPROVED RESPIRATOR WHEN AIRBORNE LEVELS EXCEED APPLICABLE OSHA STANDARDS.

\*\*\*\*\* VENTILATION \*\*\*\*\*

Local Exhaust: YES - WHEN PEL'S ARE EXCEEDED  
Special Exhaust: N/A  
Mechanical Exhaust: N/A

\*\*\*\*\* OTHER PROTECTION \*\*\*\*\*

Gloves: IMPERVIOUS GLOVES  
Eye Protection: SAFETY GLASSES/ GOGGLES

\*\*\*\*\* CLOTHING \*\*\*\*\*

N/A

\*\*\*\*\* WORK/HYGIENE PRACTICES \*\*\*\*\*

N/A

\*\*\*\* SARA HAZARD CATEGORIES \*\*\*\*

FIRE HAZARD \_\_\_\_\_ SUDDEN RELEASE OF PRESSURE \_\_\_\_\_  
IMMEDIATE (ACUTE) HEALTH HAZARD  X  DELAYED (CHRONIC) HEALTH HAZARD  X   
REACTIVITY HAZARD \_\_\_\_\_

SARA TITLE III SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372)

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) SUBJECT TO THE SARA TITLE III SECTION 313 REPORTING REQUIREMENTS:

. Ammonia

% COMPOSITION AND CAS NUMBERS ARE LISTED UNDER SECTION II "INGREDIENT INFORMATION".

Information contained herein is believed to be accurate and is provided without charge for use by technically qualified personnel as part of Acme's safety program. It is not intended to be all inclusive or constitute performance information concerning the product. No warranty of any kind is made with respect to products or information contained herein. Acme assumes no liability for loss or damage incurred from the use of this information. It is not intended as a license to operate under or a recommendation to practice or infringe any patent.

THIS IS THE END OF THE MSDS Id #AS0022



# ACME STEEL COMPANY

12500 SOUTH PERRY AVENUE, EVERDALE, ILLINOIS 60627-1182 (708) 849-2500

MSDS Id #: AS0009

## MATERIAL SAFETY DATA SHEET

Product Name: COKE, PRODUCTION

Part #: N/A

### SECTION I SUPPLIER INFORMATION

Common Name : COKE, PRODUCTION  
Chemical Name : COKE  
Formula/CAS : MIXTURE

Supplier : ACME STEEL COMPANY - COKE Supplier #: A010  
Address : 10730 BURLEY AVENUE  
City, St, Zip: CHICAGO IL 60617 Phone: 312-933-5000

EMERGENCY PHONE #: 312-933-5000

Date Issued: 02-21-86

Date Entered: 11-11-88

Date Revised: 02-01-90

01-01-91

### SECTION II INGREDIENT INFORMATION

CARBONACEOUS MATERIAL  
%: 95 CAS #: N/A PEL-OSHA: N/A TLV-ACGIH: N/A  
SILICON DIOXIDE (SILICA)  
%: 3-5 CAS #: 7631-86-9 PEL-OSHA: 0.1 MG/M3 TLV-ACGIH: 0.1 MG/M3  
ALUMINUM OXIDE  
%: 1-2 CAS #: 1344-28-1 PEL-OSHA: 5 MG/M3 TLV-ACGIH: 10 MG/M3  
COAL TAR PITCH VOLATILES  
%: <0.1 CAS #: 65996-93-2 PEL-OSHA: 0.2 MG/M3 TLV-ACGIH: 0.2 MG/M3

#### INGREDIENT HAZARD STATEMENT

STANDARDS ARE EXPRESSED FOR CRYSTALLINE QUARTZ AND COAL TAR PITCH VOLATILES.  
THE OSHA PEL'S ARE EXPRESSED AS RESPIRABLE ALUMINUM METAL.  
COAL TAR PITCH VOLATILES FOR COKE OVEN EXPOSURE IS 0.15 MG/M3.  
THE ACGIH TLV IS EXPRESSED AS ALUMINUM METAL.

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : N/A  
Specific Gravity (H2O = 1) : .97 - 1.01  
Melting Point: N/A  
Vapor Pressure (mm Hg): N/A  
Vapor Density (Air=1): N/A  
Evaporation Rate (Butyl Acetate=1): N/A  
Solubility: SLIGHTLY

#### APPEARANCE AND ODOR

POROUS SOLID WITH COAL-LIKE APPEARANCE; VERY SLIGHT CHARCOAL-LIKE ODOR.

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A  
Auto-Ignition: N/A  
LEL: N/A  
UEL: N/A

#### NFPA HAZARD CLASSIFICATION

Flammable: 0 Health: 1 Reactivity: 1 Special: N/A

#### EXTINGUISHING MEDIA

WATER.

#### SPECIAL FIRE FIGHTING PROCEDURES

N/A

#### UNUSUAL FIRE AND EXPLOSION HAZARDS

N/A

### SECTION V REACTIVITY DATA

Stability? PRODUCT IS STABLE UNDER NORMAL CONDITIONS OF USE, STORAGE AND TRANSPORT.

Avoid: N/A

#### INCOMPATIBILITY (Materials to Avoid)

N/A

#### HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

N/A

Polymerization? POLYMERIZATION WILL NOT OCCUR

Avoid: N/A

### SECTION VI HEALTH HAZARD DATA

#### ROUTES OF ENTRY

Inhalation? YES  
Skin? NO  
Ingestion? NO  
Eyes? NO

#### ADDITIONAL INFORMATION

WHEN HOT, THIS MATERIAL SHOULD BE CONSIDERED AN IMMEDIATE (BURN) HAZARD.

#### CARCINOGENICITY

NTP? NO

IARC? NO

OSHA? NO



\*\*\*\*\* ACUTE AND CHRONIC HEALTH HAZARDS \*\*\*\*\*

CHRONIC OVEREXPOSURE - MAY LEAD TO A PNEUMOCONIOSIS-LIKE DISORDER.

\*\*\*\*\* SIGNS AND SYMPTOMS OF EXPOSURE \*\*\*\*\*

SEE ABOVE.

\*\*\*\*\* MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE \*\*\*\*\*

PREVIOUSLY EXISTING RESPIRATORY DISORDERS.

\*\*\*\*\* EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

INHALATION - REMOVE TO FRESH AIR; SEEK MEDICAL ATTENTION IF NECESSARY.  
EYES - FLUSH WITH WATER; SEEK MEDICAL ATTENTION IF NECESSARY.  
SKIN - WASH WITH SOAP AND WATER.

-----  
SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

DOT Classification: N/A

\*\*\*\*\* STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED \*\*\*\*\*

NORMAL CLEAN-UP METHODS MAY BE USED.

\*\*\*\*\* WASTE DISPOSAL METHOD \*\*\*\*\*

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND/OR LOCAL LAWS AND REGULATIONS.

\*\*\*\*\* PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE \*\*\*\*\*

N/A

\*\*\*\*\* OTHER PRECAUTIONS \*\*\*\*\*

N/A

-----  
SECTION VIII CONTROL MEASURES

\*\*\*\*\* RESPIRATORY PROTECTION \*\*\*\*\*

NIOSH APPROVED DUST-MIST RESPIRATOR WHEN AIRBORNE DUST LEVELS EXCEED APPLICABLE OSHA STANDARDS.

\*\*\*\*\* VENTILATION \*\*\*\*\*

Local Exhaust: YES, TO PREVENT EXCESSIVE DUST EXPOSURE.  
Special Exhaust: N/A  
Mechanical Exhaust: N/A

\*\*\*\*\* OTHER PROTECTION \*\*\*\*\*

Gloves: N/A

Eye Protection: PROTECTIVE SAFETY GLASSES OR GOGGLES/SIDE SHIELDS.

\*\*\*\*\* CLOTHING \*\*\*\*\*

APPROPRIATE RESISTANT CLOTHING WHEN HANDLING HOT COKE.

\*\*\*\*\* WORK/HYGIENE PRACTICES \*\*\*\*\*

N/A

\*\*\*\* SARA HAZARD CATEGORIES \*\*\*\*

FIRE HAZARD \_\_\_\_\_  
IMMEDIATE (ACUTE) HEALTH HAZARD  X   
REACTIVITY HAZARD \_\_\_\_\_  
SUDDEN RELEASE OF PRESSURE \_\_\_\_\_  
DELAYED (CHRONIC) HEALTH HAZARD  X

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# ACME STEEL COMPANY

13500 SOUTH PERRY AVENUE, RIVERDALE, ILLINOIS 60627-1182 (708) 849-2500

MSDS Id #: AS0006

## MATERIAL SAFETY DATA SHEET

Product Name: AMMONIUM SULFATE SLURRY

Part #: N/A

### SECTION I SUPPLIER INFORMATION

Common Name : AMMONIUM SULFATE SLURRY  
Chemical Name : AQUEOUS AMMONIUM SULFATE  
Formula/CAS : (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> . H<sub>2</sub>O/7783-20-2

Supplier : ACME STEEL COMPANY - COKE Supplier #: A010  
Address : 10730 BURLEY AVENUE  
City, St, Zip: CHICAGO IL 60617 Phone: 312-933-5000

EMERGENCY PHONE #: 312-933-5000

Date Issued: 08-21-86 Date Entered: 11-11-88  
Date Revised: 02-01-90 01-01-91

### SECTION II INGREDIENT INFORMATION

AQUEOUS AMMONIUM SULFATE  
%: 100 CAS #: 7783-20-2 PEL-OSHA: N/A TLV-ACGIH: N/A

#### INGREDIENT HAZARD STATEMENT

THE CHEMICAL IS AN AQUEOUS SOLUTION OF AMMONIA AND SULFATE. THE SOLUTION ITSELF IS PH NEUTRAL AND IS ONLY A VERY SLIGHT HEALTH HAZARD, BUT SHOULD BE CONSIDERED A MILD IRRITANT.

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : 280 C  
Specific Gravity (H<sub>2</sub>O = 1) : <1.3  
Melting Point: N/A  
Vapor Pressure (mm Hg): N/A  
Vapor Density (Air=1): N/A  
Evaporation Rate (Butyl Acetate=1): N/A  
Solubility/Water: APPRECIABLE

#### APPEARANCE AND ODOR

BROWNISH-GRAY TO GOLD IN COLOR, SLURRY FORM.  
AERATION IN CONFINED SPACE MAY RELEASE LOW LEVELS OF AMMONIA, HYDROGEN CYANIDE AND HYDROGEN SULFIDE.

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A  
Auto-Ignition: N/A  
LEL: N/A  
UEL: N/A

NFPA HAZARD CLASSIFICATION  
Flammable: 0 Health: 0 Reactivity: 0 Special: N/A

#### EXTINGUISHING MEDIA

N/A

#### SPECIAL FIRE FIGHTING PROCEDURES

N/A

#### UNUSUAL FIRE AND EXPLOSION HAZARDS

N/A

### SECTION V REACTIVITY DATA

Stability? PRODUCT IS STABLE UNDER NORMAL CONDITIONS OF USE, STORAGE AND TRANSPORT.

Avoid: N/A

INCOMPATIBILITY (Materials to Avoid)  
OXIDIZERS, HIGH HEAT, AND PEROXIDES.

#### HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

AMMONIA AND OXIDES OF SULFUR.  
Polymerization? POLYMERIZATION WILL NOT OCCUR  
Avoid: N/A

### SECTION VI HEALTH HAZARD DATA

#### ROUTES OF ENTRY

Inhalation? NO  
Skin? NO  
Ingestion? NO  
Eyes? YES

#### ADDITIONAL INFORMATION

#### CARCINOGENICITY

NTP? NO IARC? NO OSHA? NO

\*\*\*\*\* ACUTE AND CHRONIC HEALTH HAZARDS \*\*\*\*\*

ACUTE OVEREXPOSURE - SLIGHT SKIN IRRITATION ON CONTACT.

\*\*\*\*\* SIGNS AND SYMPTOMS OF EXPOSURE \*\*\*\*\*

SEE ABOVE.

\*\*\*\*\* MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE \*\*\*\*\*

N/A

\*\*\*\*\* EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

INHALATION - REMOVE TO FRESH AIR; SEEK MEDICAL ATTENTION IF NECESSARY.  
EYES - FLUSH WITH WATER; SEEK MEDICAL ATTENTION IF NECESSARY.  
SKIN - RINSE OFF WITH SOAP AND WATER.  
INGESTION - SEEK MEDICAL ATTENTION.

-----  
SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

DOT Classification: N/A

\*\*\*\*\* STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED \*\*\*\*\*

DIKE OR CONTAIN SPILL.

\*\*\*\*\* WASTE DISPOSAL METHOD \*\*\*\*\*

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND/OR LOCAL LAWS AND REGULATIONS.

\*\*\*\*\* PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE \*\*\*\*\*

N/A

\*\*\*\*\* OTHER PRECAUTIONS \*\*\*\*\*

N/A

-----  
SECTION VIII CONTROL MEASURES

\*\*\*\*\* RESPIRATORY PROTECTION \*\*\*\*\*

N/A

\*\*\*\*\* VENTILATION \*\*\*\*\*

Local Exhaust: N/A  
Special Exhaust: N/A  
Mechanical Exhaust: N/A

\*\*\*\*\* OTHER PROTECTION \*\*\*\*\*

USE VENTILATION WHEN AIRBORNE LEVELS ARE IRRITATING.

Gloves: PROTECTIVE GLOVES  
Eye Protection: SPLASH GOGGLES OR FACE SHIELD

\*\*\*\*\* CLOTHING \*\*\*\*\*

IMPERVIOUS

\*\*\*\*\* WORK/HYGIENE PRACTICES \*\*\*\*\*

N/A

\*\*\*\* SARA HAZARD CATEGORIES \*\*\*\*

FIRE HAZARD \_\_\_\_\_ SUDDEN RELEASE OF PRESSURE \_\_\_\_\_  
IMMEDIATE (ACUTE) HEALTH HAZARD X DELAYED (CHRONIC) HEALTH HAZARD \_\_\_\_\_  
REACTIVITY HAZARD \_\_\_\_\_

SARA TITLE III SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372)

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) SUBJECT TO THE  
SARA TITLE III SECTION 313 REPORTING REQUIREMENTS:

\* Ammonium Sulfate

% COMPOSITION AND CAS NUMBERS ARE LISTED UNDER SECTION II "IN-  
GREDIENT INFORMATION".

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# ACME STEEL COMPANY

13500 SOUTH PERRY AVENUE, RIVERDALE, ILLINOIS 60627-1182 (708) 849-2500

MSDS Id #: AS0010

## MATERIAL SAFETY DATA SHEET

Product Name: LIGHT OIL - CRUDE

Part #: N/A

### SECTION I SUPPLIER INFORMATION

Common Name : LIGHT OIL - CRUDE  
Chemical Name : LIGHT OIL  
Formula/CAS : MIXTURE

Supplier : ACME STEEL COMPANY - COKE Supplier #: A010  
Address : 10730 BURLEY AVENUE  
City, St, Zip: CHICAGO IL 60617 Phone: 312-933-5000

EMERGENCY PHONE #: 312-933-5000

Date Issued: 02-21-88

Date Entered: 11-11-88

Date Revised: 02-01-90

01-01-91

### SECTION II INGREDIENT INFORMATION

BENZENE  
%: 50-85 CAS #: 000071-43-2 PEL-OSHA: 1.0 PPM TLV-ACGIH: 10 PPM  
TOLUENE  
%: 15-21 CAS #: 108-88-3 PEL-OSHA: 100 PPM TLV-ACGIH: 100 PPM  
XYLENE  
%: 4-9 CAS #: 1330-20-7 PEL-OSHA: 100 PPM TLV-ACGIH: 100 PPM  
COAL TAR NAFHTHA  
%: 4-5 CAS #: 8030-30-6 PEL-OSHA: 100 PPM TLV-ACGIH: N/A

#### INGREDIENT HAZARD STATEMENT

STEL'S ARE EXPRESSED FOR TOLUENE (150 PPM) AND XYLENE (150 PPM).  
BENZENE IS LISTED AS A CARCINOGEN.  
THE OSHA STANDARD EXPRESSED AS BENZENE STEL OF 5.0 PPM.

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : 80 C  
Specific Gravity (H2O = 1) : 0.888  
Melting Point: 5.51C  
Vapor Pressure (mm Hg): 100 @ 26.1C  
Vapor Density (Air=1): 2.77  
Evaporation Rate (Butyl Acetate=1): N/A  
Solubility/Water: SLIGHT

#### APPEARANCE AND ODOR

YELLOWISH COLOR/AROMATIC ODOR.

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: 12F/CC (BENZENE)  
Auto-Ignition: 867F  
LEL: 1.3%  
UEL: 7.1%

\*\*\*\*\* NFPA HAZARD CLASSIFICATION \*\*\*\*\*  
Flammable: 2 Health: 3 Reactivity: 0 Special: N/A

#### EXTINGUISHING MEDIA

FOAM OR DRY CHEMICAL.

#### SPECIAL FIRE FIGHTING PROCEDURES

N/A

#### UNUSUAL FIRE AND EXPLOSION HAZARDS

FLAMMABLE MATERIAL: MAY BE IGNITED BY HEAT, SPARKS OR FLAMES. VAPORS MAY TRAVEL TO A SOURCE OF IGNITION AND FLASH BACK. VAPOR EXPLOSION HAZARD IN SEWERS.

### SECTION V REACTIVITY DATA

Stability? PRODUCT IS STABLE UNDER NORMAL CONDITIONS OF USE, STORAGE AND TRANSPORT.

Avoid: N/A

#### INCOMPATIBILITY (Materials to Avoid)

STRONG OXIDIZERS, OPEN FLAMES, AND OTHER IGNITION SOURCES.

#### HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

N/A

Polymerization? POLYMERIZATION WILL NOT OCCUR

Avoid: N/A

### SECTION VI HEALTH HAZARD DATA

#### ROUTES OF ENTRY

Inhalation? YES  
Skin? YES  
Ingestion? NO  
Eyes? YES

#### ADDITIONAL INFORMATION

#### CARCINOGENICITY

NTP? YES

IARC? YES

OSHA? YES

BENZENE IS LISTED AS A CARCINOGEN WITH THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

\*\*\*\*\* ACUTE AND CHRONIC HEALTH HAZARDS \*\*\*\*\*

ACUTE OVEREXPOSURE - MAY CAUSE DIZZINESS, HEADACHE, NAUSEA AND SENSITIZATION TO FUTURE EXPOSURE.

CHRONIC OVEREXPOSURE - MAY LEAD TO RESPIRATORY, NERVOUS AND HEMATOPOIETIC SYSTEM DISORDERS.

\*\*\*\*\* SIGNS AND SYMPTOMS OF EXPOSURE \*\*\*\*\*

SEE ABOVE.

\*\*\*\*\* MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE \*\*\*\*\*

PRE-EXISTING RESPIRATORY AND HEMATOPOIETIC SYSTEM DISORDERS.

\*\*\*\*\* EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

INHALATION - REMOVE TO FRESH AIR.  
EYES - FLUSH WITH WATER.  
SKIN - WASH WITH MILD SOAP AND WATER.  
INGESTION - SEEK MEDICAL ATTENTION.

-----  
SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

DOT Classification: FLAMMABLE LIQUID

\*\*\*\*\* STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED \*\*\*\*\*

SHUT OFF IGNITION SOURCES; NO FLARES, SMOKING OR FLAMES IN HAZARD AREA. DIKE OR CONTAIN SPILLS; TAKE UP WITH SAND OR OTHER NONCOMBUSTIBLE ABSORBENT MATERIAL.

\*\*\*\*\* WASTE DISPOSAL METHOD \*\*\*\*\*

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND/OR LOCAL LAWS AND REGULATIONS. SHOULD BE CONSIDERED A HAZARDOUS MATERIAL.

\*\*\*\*\* PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE \*\*\*\*\*

SEE "UNUSUAL FIRE AND EXPLOSION HAZARDS".

\*\*\*\*\* OTHER PRECAUTIONS \*\*\*\*\*

N/A

-----  
SECTION VIII CONTROL MEASURES

\*\*\*\*\* RESPIRATORY PROTECTION \*\*\*\*\*

NIOSH APPROVED ORGANIC VAPOR RESPIRATOR WHEN AIRBORNE LEVELS EXCEED APPLICABLE OSHA STANDARDS. APPROPRIATE RESPIRATOR SELECTION DEPENDS ON THE MAGNITUDE OF THE EXPOSURE.

\*\*\*\*\* VENTILATION \*\*\*\*\*

Local Exhaust: YES - WHEN LEVELS EXCEED OSHA PEL'S  
Special Exhaust: N/A  
Mechanical Exhaust: N/A

\*\*\*\*\* OTHER PROTECTION \*\*\*\*\*

Gloves: IMPERVIOUS GLOVES  
Eye Protection: SAFETY GLASSES/GOGGLES OR SPLASH SHIELD

\*\*\*\*\* CLOTHING \*\*\*\*\*

SPLASH SUIT OR IMPERVIOUS CLOTHING

\*\*\*\*\* WORK/HYGIENE PRACTICES \*\*\*\*\*

AVOID BREATHING VAPORS.  
REMOVE AND ISOLATE CONTAMINATED CLOTHING AND SHOES AT THE SITE.

\*\*\*\* SARA HAZARD CATEGORIES \*\*\*\*

FIRE HAZARD X SUDDEN RELEASE OF PRESSURE \_\_\_\_\_  
IMMEDIATE (ACUTE) HEALTH HAZARD X DELAYED (CHRONIC) HEALTH HAZARD X  
REACTIVITY HAZARD \_\_\_\_\_

SARA TITLE III SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372)

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) SUBJECT TO THE SARA TITLE III SECTION 313 REPORTING REQUIREMENTS:

- Benzene
- Toluene
- Xylene

% COMPOSITION AND CAS NUMBERS ARE LISTED UNDER SECTION II "INGREDIENT INFORMATION".

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# ACME STEEL COMPANY

13500 SOUTH PERRY AVENUE, RIVERDALE, ILLINOIS 60627-1182 (708) 849-2500

MSDS Id #: AS0011

## MATERIAL SAFETY DATA SHEET

Product Name: COAL TAR

Part #: N/A

### SECTION I SUPPLIER INFORMATION

Common Name : COAL TAR  
Chemical Name : COAL TAR  
Formula/CAS : 8007-45-2

Supplier : ACME STEEL COMPANY - COKE Supplier #: A010  
Address : 10730 BURLEY AVENUE  
City, St, Zip: CHICAGO IL 60617 Phone: 312-933-5000

EMERGENCY PHONE #: 312-933-5000

Date Issued: 02-21-86

Date Entered: 11-14-88

Date Revised: 02-01-90

01-01-91

### SECTION II INGREDIENT INFORMATION

BENZENE	%: 0-0.3	CAS #: 000071-43-2	PEL-OSHA: 1.0 PPM	TLV-ACGIH: 10 PPM
XYLENE	%: 0-1.1	CAS #: 1330-20-7	PEL-OSHA: 100 PPM	TLV-ACGIH: 100 PPM
NAPHTHALENE	%: 5-11	CAS #: 91-20-3	PEL-OSHA: 10 PPM	TLV-ACGIH: 10 PPM
COAL TAR PITCH	%: 45	CAS #: 65996-93-2	PEL-OSHA: 0.2 MG/M3	TLV-ACGIH: 0.2 MG/M3
CRESOLS	%: .7-2	CAS #: 1319-77-3	PEL-OSHA: 5 PPM	TLV-ACGIH: 5 PPM
COAL TAR NAPHTHA	%: .7-2	CAS #: 8030-30-6	PEL-OSHA: 100 PPM	TLV-ACGIH: N/A

### INGREDIENT HAZARD STATEMENT

BENZENE IS LISTED AS A CARCINOGEN. THE STEL'S ARE EXPRESSED AS TOLUENE (150 PPM), XYLENE (150 PPM) AND NAPHTHALENE (15 PPM). STANDARDS EXPRESSED FOR CRESOL REFER TO SKIN EXPOSURE. THE OSHA STEL FOR BENZENE IS 5 PPM. THE OSHA COKE OVEN PEL FOR COAL TAR PITCH VOLATILES IS 0.15 MG/M3.

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : 80 C  
Specific Gravity (H2O = 1) : <1.2  
Melting Point: N/A  
Vapor Pressure (mm Hg): N/A  
Vapor Density (Air=1): N/A  
Evaporation Rate (Butyl Acetate=1): N/A  
Solubility/Water: SLIGHT

### APPEARANCE AND ODOR

BLACK VISCOUS MATERIAL WITH AN AROMATIC ODOR.

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: 164F/PMCC  
Auto-Ignition: N/A  
LEL: N/A  
UEL: N/A

NFPA HAZARD CLASSIFICATION  
Flammable: 3 Health: 3 Reactivity: 0 Special: N/A

### EXTINGUISHING MEDIA

FOAM, DRY CHEMICAL OR WATER MIST.

### SPECIAL FIRE FIGHTING PROCEDURES

N/A

### UNUSUAL FIRE AND EXPLOSION HAZARDS

N/A

### SECTION V REACTIVITY DATA

Stability? PRODUCT IS STABLE UNDER NORMAL CONDITIONS OF USE, STORAGE AND TRANSPORT.

### INCOMPATIBILITY (Materials to Avoid)

STRONG OXIDIZERS.

### HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

N/A

Polymerization? POLYMERIZATION WILL NOT OCCUR

Avoid: N/A

### SECTION VI HEALTH HAZARD DATA

### ROUTES OF ENTRY

Inhalation? YES  
Skin? YES  
Ingestion? NO  
Eyes? NO

### ADDITIONAL INFORMATION

WHEN HOT, THIS MATERIAL SHOULD BE CONSIDERED AN IMMEDIATE (BURN) HAZARD.

### CARCINOGENICITY

NTP? YES IARC? YES OSHA? YES

BENZENE IS LISTED AS A CARCINOGEN WITH THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

\*\*\*\*\* ACUTE AND CHRONIC HEALTH HAZARDS \*\*\*\*\*

ACUTE OVEREXPOSURE - MAY CAUSE DIZZINESS, HEADACHE, NAUSEA AND SENSITIZATION TO FURTHER EXPOSURE.

CHRONIC OVEREXPOSURE - MAY CAUSE HEMATOPOIETIC SYSTEM DISORDERS.

\*\*\*\*\* SIGNS AND SYMPTOMS OF EXPOSURE \*\*\*\*\*

SEE ABOVE.

\*\*\*\*\* MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE \*\*\*\*\*

PRE-EXISTING RESPIRATORY AND HEMATOPOIETIC SYSTEM DISORDERS.

\*\*\*\*\* EMERGENCY AND FIRST AID PROCEDURES \*\*\*\*\*

INHALATION - REMOVE TO FRESH AIR; SEEK MEDICAL ATTENTION IF NECESSARY.

EYES - FLUSH WITH WATER; SEEK MEDICAL ATTENTION IF NECESSARY.

SKIN - WASH WITH SOAP AND WATER.

INGESTION - SEEK MEDICAL ATTENTION.

SEEK MEDICAL ATTENTION FOR EYE AND/OR SKIN BURNS FROM HOT MATERIAL.

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

DOT Classification: N/A

\*\*\*\*\* STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED \*\*\*\*\*

DIKE AND CONTAIN SPILL. SHOULD BE CONSIDERED A HAZARDOUS MATERIAL FOR DISPOSAL PURPOSES.

\*\*\*\*\* WASTE DISPOSAL METHOD \*\*\*\*\*

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND/OR LOCAL LAWS AND REGULATIONS. SHOULD BE CONSIDERED A HAZARDOUS MATERIAL.

\*\*\*\*\* PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE \*\*\*\*\*

N/A

\*\*\*\*\* OTHER PRECAUTIONS \*\*\*\*\*

N/A

SECTION VIII CONTROL MEASURES

\*\*\*\*\* RESPIRATORY PROTECTION \*\*\*\*\*

NIOSH APPROVED ORGANIC VAPOR RESPIRATOR WHEN AIRBORNE LEVELS EXCEED APPLICABLE OSHA STANDARDS. APPROPRIATE RESPIRATOR SELECTION DEPENDS ON THE MAGNITUDE OF THE EXPOSURE.

\*\*\*\*\* VENTILATION \*\*\*\*\*

Local Exhaust: YES - IN CONFINED OR ENCLOSED AREAS.

Special Exhaust: N/A

Mechanical Exhaust: N/A

\*\*\*\*\* OTHER PROTECTION \*\*\*\*\*

Gloves: USE IMPERVIOUS GLOVES WHEN HANDLING THIS MATERIAL.  
Eye Protection: SAFETY GLASSES/GOGGLES OR SPLASH SHIELD.

\*\*\*\*\* CLOTHING \*\*\*\*\*

IMPERVIOUS CLOTHING.

\*\*\*\*\* WORK/HYGIENE PRACTICES \*\*\*\*\*

AVOID BREATHING FUMES AND/OR VAPORS.

\*\*\*\* SARA HAZARD CATEGORIES \*\*\*\*

FIRE HAZARD \_\_\_\_\_ SUDDEN RELEASE OF PRESSURE \_\_\_\_\_  
IMMEDIATE (ACUTE) HEALTH HAZARD X DELAYED (CHRONIC) HEALTH HAZARD X  
REACTIVITY HAZARD \_\_\_\_\_

SARA TITLE III SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372)

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) SUBJECT TO THE SARA TITLE III SECTION 313 REPORTING REQUIREMENTS:

- Benzene
- Naphthalene
- Xylene

% COMPOSITION AND CAS NUMBERS ARE LISTED UNDER SECTION II "INGREDIENT INFORMATION".

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# ACME STEEL COMPANY

13500 SOUTH PERRY AVENUE, RIVERDALE, ILLINOIS 60627-1182 (708) 849-2500

MSDS Id #: AS0023

## MATERIAL SAFETY DATA SHEET

Product Name: TAR DECANTER SLUDGE

Part #: N/A

### SECTION I SUPPLIER INFORMATION

Common Name : TAR DECANTER SLUDGE  
Chemical Name : TAR DECANTER SLUDGE  
Formula/CAS : N/A

Supplier : ACME STEEL COMPANY-COKE Supplier #: A002  
Address : 11236 SOUTH TORRENCE AVE.  
City, St, Zip: CHICAGO IL 60617 Phone: 312-933-5000

EMERGENCY PHONE #: 312-933-5000

Date Issued: 04-28-89

Date Entered: 04-28-89

Date Revised: 02-01-90

01-01-91

### SECTION II INGREDIENT INFORMATION

IRON OXIDE	%: .5	CAS #: 1309-37-1	PEL-OSHA: 10 MG/M3	TLV-ACGIH: 5 MG/M3
CALCIUM OXIDE	%: 6	CAS #: 1305-78-8	PEL-OSHA: 5 MG/M3	TLV-ACGIH: 2 MG/M3
NAPHTHALENE	%: 5	CAS #: 91-20-3	PEL-OSHA: 10 PPM	TLV-ACGIH: 10 PPM
PHENOL (AS C6H5OH)	%: 6-11	CAS #: 108-95-2	PEL-OSHA: 19 MG/M3	TLV-ACGIH: 19 MG/M3
BENZENE	%: 0-1	CAS #: 000071-43-2	PEL-OSHA: 1.0 PPM	TLV-ACGIH: 10 PPM
CARBONACEOUS MATERIAL	%: 5-15	CAS #: N/A	PEL-OSHA: N/A	TLV-ACGIH: N/A
TOLUENE	%: 0-1	CAS #: 108-88-3	PEL-OSHA: 100 PPM	TLV-ACGIH: 100 PPM
XYLENE	%: 0-1	CAS #: 1330-20-7	PEL-OSHA: 100 PPM	TLV-ACGIH: 100 PPM
COAL TAR PITCH	%: 40-60	CAS #: 65996-93-2	PEL-OSHA: .2 MG/M3	TLV-ACGIH: .2 MG/M3

### INGREDIENT HAZARD STATEMENT

STANDARDS ARE EXPRESSED AS IRON FUME, PHENOL (SKIN), NAPHTHALENE STEL OF 15 PPM, TOLUENE STEL OF 150 PPM AND XYLENE STEL OF 150 PPM. THE OSHA COAL TAR PITCH VOLATILE STANDARD FOR COKE OVENS IS 0.15 MG/M3 AND THE STEL FOR BENZENE IS 5.0 PPM.

### SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : N/A  
Specific Gravity (H2O = 1) : N/A  
Melting Point: N/A  
Vapor Pressure (mm Hg): N/A  
Vapor Density (Air=1): N/A  
Evaporation Rate (Butyl Acetate=1): N/A  
Solubility/Water: N/A

### APPEARANCE AND ODOR

BLACK TAR, NAPHTHALENE ODOR.

DECANTER TANK TAR SLUDGE IS CLASSIFIED AS A HAZARDOUS WASTE (K087).

### ADDITIONAL INFORMATION

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: NO IGNITABILITY CHARACTERISTICS PRESENT.  
Auto-Ignition: N/A  
LEL: N/A  
UEL: N/A

### NFPA HAZARD CLASSIFICATION

Flammable: 3 Health: 3 Reactivity: 0 Special: N/A

### EXTINGUISHING MEDIA

DRY CHEMICAL OR CARBON DIOXIDE.

### SPECIAL FIRE FIGHTING PROCEDURES

N/A

### UNUSUAL FIRE AND EXPLOSION HAZARDS

DENSE BLACK SMOKE IS GENERATED DURING DECOMPOSITION.

### SECTION V REACTIVITY DATA

Stability? PRODUCT IS-STABLE UNDER NORMAL CONDITIONS OF USE, STORAGE AND TRANSPORT.

Avoid: N/A

### INCOMPATIBILITY (Materials to Avoid)

BENZENE CAN REACT VIGOROUSLY WITH OXIDIZING MATERIALS. NAPHTHALENE ALSO REACTS WITH OXIDIZING MATERIALS.

### HAZARDOUS DECOMPOSITION OR BY-PRODUCTS

BENZENE AND HYDROGEN CYANIDE.

Polymerization? POLYMERIZATION WILL NOT OCCUR

Avoid: N/A



SECTION VI HEALTH HAZARD DATA

ROUTES OF ENTRY

Inhalation? YES  
 Skin? YES  
 Ingestion? NO  
 Eyes? NO

ADDITIONAL INFORMATION

HOT SLUDGE MAY CAUSE EYE DAMAGE AS WELL AS DERMAL BURNS.

CARCINOGENICITY

NTP? YES IARC? YES OSHA? YES

BENZENE AND COAL TAR PITCH ARE BOTH CARCINOGENS.

ACUTE AND CHRONIC HEALTH HAZARDS

SYSTEMIC REACTIONS FOR NAPHTHALENE INCLUDE NAUSEA, HEADACHE, DIAPHORESIS (PERSPIRATION), HEMATURIA (BLOOD IN URINE), FEVER, ANEMIA, LIVER DAMAGE, CONVULSIONS, AND COMA. BENZENE- POISONING OCCURS THROUGH THE INHALATION OF VAPOR, THOUGH BENZENE AND PHENOL CAN PENETRATE THROUGH THE SKIN. LOCALLY BENZENE HAS A STRONG IRRITATING EFFECT WHICH CAN LEAD TO EDEMA AND BLISTERING IN SEVERE CASES.

SIGNS AND SYMPTOMS OF EXPOSURE

SEE ABOVE

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

N/A

EMERGENCY AND FIRST AID PROCEDURES

INHALATION - REMOVE TO FRESH AIR; SEEK MEDICAL ATTENTION IF NECESSARY.  
 EYES - RINSE WITH WATER; SEEK MEDICAL ATTENTION IF NECESSARY.  
 SKIN - WASH WITH SOAP AND WATER.  
 INGESTION - N/A

FOR EYE AND/OR SKIN BURNS FROM HOT SLUDGE, SEEK MEDICAL ATTENTION.

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

DOT Classification: HAZARDOUS MATERIAL

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

MATERIAL IS A HAZARDOUS WASTE AND SHOULD BE TREATED APPROPRIATELY.

WASTE DISPOSAL METHOD

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE AND/OR LOCAL LAWS AND REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

N/A

SECTION VIII CONTROL MEASURES

RESPIRATORY PROTECTION

NIOSH APPROVED RESPIRATOR WHEN LEVELS EXCEED APPLICABLE OSHA STANDARDS.

VENTILATION

Local Exhaust: YES WHEN PEL'S ARE EXCEEDED  
 Special Exhaust: N/A  
 Mechanical Exhaust: N/A

OTHER PROTECTION

Gloves: IMPERVIOUS GLOVES  
 Eye Protection: SAFETY GLASSES / GOGGLES

CLOTHING

SAFETY CLOTHING OR DISPOSABLE CLOTHING IS RECOMMENDED.

WORK/HYGIENE PRACTICES

N/A

SARA HAZARD CATEGORIES

FIRE HAZARD \_\_\_\_\_ SUDDEN RELEASE OF PRESSURE \_\_\_\_\_  
 IMMEDIATE (ACUTE) HEALTH HAZARD  X  DELAYED (CHRONIC) HEALTH HAZARD  X   
 REACTIVITY HAZARD \_\_\_\_\_

SARA TITLE III SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372)

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) SUBJECT TO THE SARA TITLE III SECTION 313 REPORTING REQUIREMENTS:

- . Benzene
- . Naphthalene
- . Toluene
- . Xylene

% COMPOSITION AND CAS NUMBERS ARE LISTED UNDER SECTION II "INGREDIENT INFORMATION".

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THIS IS THE END OF THE MSDS Id #AS0023