



## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION INFORMATION

**Product Name:** COAL TAR

ArcelorMittal USA Inc.  
1 South Dearborn Street  
Chicago, IL 60603-9888

**Synonym(s):** Crude Coal Tar  
High Temperature Coal Tar

Emergency Phone Number:  
CHEMTREC (Day or Night) 1-800-424-9300

Additional Information, Contact: 219-391-3900 or email at:  
msdssupport@arcelormittal.com

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS No.	Wt. %	OSHA PEL (mg/M3)	ACGIH TLV (mg/M3)	LD50 Species/Route	LC50 Species/Route
Coal Tar*	8007-45-2	100	0.2**	0.2**	Not Established	Not Established

\* This material represents a mixture of condensable volatile products formed during the destructive distillation of bituminous coal. Composition is variable, but generally consists of: 0 to 2 percent light oils (chiefly benzene, toluene, and xylene); 16 to 18 percent middle oils (chiefly phenols, cresols, and naphthalene); 8 to 10 percent heavy oils (naphthalene and derivatives); 16 to 20 percent anthracene oils; and about 50 percent pitch (see Attachment 1 for typical composition).

\*\* As coal tar pitch volatiles (benzene soluble fraction).

## 3. HAZARDS IDENTIFICATION

**Potential Health Effects:** Long-term excessive exposure to coal tar and its vapors has been associated with an increased risk of developing cancer at several sites including the lungs, kidneys, skin, and bladder.

Exposure to high vapor concentrations may produce headache, nausea, vomiting, and other symptoms. Prolonged or repeated exposure to the vapors has also been associated with an increased risk of bronchitis. Coal tar vapors can be irritating to the respiratory tract.

Direct contact can be irritating to the skin and produce skin itching, burning, swelling and redness. Repeated and prolonged contact without adequate hygiene can lead to skin disorders such as dermatitis. Coal tar can also act as a photosensitizer in that ultraviolet light can trigger an allergic reaction. Symptoms may be similar to an aggravated sunburn.

Direct contact or exposure to the vapors may be irritating to the eyes. Conjunctivitis may result from prolonged or repeated exposure. Coal tar is considered to be very toxic if ingested.

Long-term excessive exposure to benzene, a minor constituent, has been associated with the following health effects or symptoms: blood disorders (anemia, leukopenia, thrombocytopenia, and aplastic anemia); increased risk of developing leukemia; and central nervous system effects.

**Usual Route(s) of Entry:** Inhalation is usually the most important route, but skin absorption may also be significant.

**Medical Conditions Possibly Aggravated:** Exposure to coal tar may aggravate chronic diseases or disorders of the respiratory system or the skin.

	IARC	NTP	OSHA
Carcinogen References:	Yes	Yes	Yes

#### 4. FIRST AID MEASURES

**Eye:** Treat for foreign body in the eye. Flush eyes with large amounts of water for at least 15 minutes. Seek medical attention promptly.

**Skin:** Remove contaminated clothing immediately. Wash off affected area thoroughly with waterless skin cleaner or olive oil and soap and water. Remove residual material to avoid photosynthetic burns. If irritation or other symptoms develop, seek medical attention.

**Ingestion:** Call Poison Control Center immediately. If conscious, dilute by administering one glass of water. Seek medical attention promptly. Do not induce vomiting.

**Inhalation:** Remove from excessive exposure levels. Seek medical attention. Give artificial respiration if breathing has stopped.

#### 5. FIRE FIGHTING MEASURES

**Fire Hazard:** Combustible material. May be ignited by heat and sparks or flame. **Vapor may travel to source of ignition and flash back.**

**Extinguishing Media:** Small fires: Dry chemical, carbon dioxide, water spray or foam. Large fires: Water spray, fog or foam.

**Unusual Fire and Explosion Hazards:** **Vapor may travel to source of ignition and flash back.**

**Fire Fighting Instructions:** Wear self-contained breathing apparatus. Water may be used to keep fire-exposed containers cool. Isolate for 1/2 mile radius in all directions if tank car or truck is involved in fire.

#### 6. ACCIDENTAL RELEASE MEASURES

Shut off ignition sources; no flares, smoking or flames in hazard area.

Evacuate all unnecessary personnel from the affected area and cordon off if necessary. Do not re-enter the affected area without the proper protective equipment (gloves, respirator, clothing, etc.). Ventilate the area of the spill. Stop leak if you can do it without risk. Use water spray to reduce vapors. Small spills: take up with sand or other noncombustible absorbent material and place into containers for later disposal. Large spills: dike area, collect material for reclamation or for disposal in sealed containers.

#### 7. HANDLING AND STORAGE

Should be handled in ways to minimize generation of airborne emissions and prevent spills. Maintain all surfaces as free as practical of accumulation of material. Do not smoke or consume food or beverage in the workplace. Wash hands before eating, drinking, or smoking and after handling. Change contaminated clothing before leaving work premises.

#### 8. EXPOSURE CONTROLS PERSONAL PROTECTION

**Engineering Controls (Ventilation, etc.):** Ventilation should be adequate to maintain vapor and/or particulate levels below the applicable exposure limit for coal tar pitch volatiles and the major constituents of coal tar. Eyewash stations, sinks, or showers should be readily available.

**Eye Protection:** Use safety glasses and/or other protective eyewear as specified by a safety professional where risk of eye injury is present. Contact lenses should not be worn when working with this material.

**Skin Protection:** Long-sleeved work clothing should be worn when working with this material. Employees who have the potential for prolonged or repeated exposures should wear gloves (i.e. Viton, polyvinyl alcohol) and/or protective clothing which is impervious to the main components of coal tar, as specified by an industrial hygienist or safety professional. Exposed skin area should be washed thoroughly. Shower and change into clean clothing at the end of the workshift.

**Respiratory Protection:** When engineering controls are not feasible or sufficient to lower exposure levels below the applicable exposure limit, use a NIOSH-approved respirator which protects against dust and organic vapors as specified by an industrial hygienist or qualified safety professional in accordance with manufacturer instructions and use limitations.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid

**Appearance and Odor:** Black viscous material

**Vapor Pressure:** 0.2 - 1.0 mm Hg @ 70 ° F

**Boiling Point:** 100 ° to 895 ° F (distillation range)

**Flashpoint:** 218 ° F – 260 ° F (Closed cup/Pensky-Martens)

**Solubility in Water:** Slight (less than 0.2%)

**pH:** Not Applicable

**Melting Point:** Not Applicable

**Vapor Density:** Not Established

**Specific Gravity:** 1.2 @ 60 ° F

**Evaporation Rate:** Not Applicable

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Conditions to Avoid:** Strong oxidizing materials

**Hazardous Decomposition Products:** Organic vapors and toxic gases such as carbon monoxide

## 11. TOXICOLOGICAL INFORMATION

See available LD50 and/or LC50 information in Section 2.

## 12. ECOLOGICAL INFORMATION

Components present an ecological impact to wildlife.

## 13. DISPOSAL CONSIDERATION

Recycle excess product when possible. Dispose as hazardous waste in accordance with local, state, and federal regulations.

## 14. TRANSPORT INFORMATION

Proper Shipping Name (PSN): Environmentally Hazardous Substances  
Liquid, N.O.S (Naphthalene)  
9,UN3082, PG111, RQ,  
Marine Pollutant

## 15. REGULATORY INFORMATION

The following list of regulatory requirements relating to an ArcelorMittal USA Inc. product may not be complete and should not be solely relied on for all regulatory compliance responsibilities.

**SARA Title III Hazard Categories:** This material is considered, under applicable definitions, to meet the following categories:

- |                                |              |
|--------------------------------|--------------|
| (X) Immediate (acute) Health   | ( ) Reactive |
| (X) Delayed (chronic) Health   | (X) Fire     |
| ( ) Sudden Release of Pressure |              |

**SARA 313 Information:** This product contains chemicals subject to the reporting requirements of Section 313 of TITLE III of the Superfund Amendments & Reauthorization Act (SARA) of 1986 and 40 CFR, Part 372 (see Section 2; the @ symbol denotes chemicals subject to these reporting requirements). Please also note that if you repackage or otherwise redistribute this product to industrial customers, SARA 313 requires that a notice be sent to those customers.

**Toxic Substances Control Act (TSCA):** This material is included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory as a part of the generic listing "Tar, coal, high temperature".

## 16. OTHER INFORMATION

The following label hazard ratings are recommended:

NFPA		HMIS	
Fire	2	Flammability	2
Health	2	Health	2
Reactivity	1	Reactivity	1
Specific Hazard	None		

**DISCLAIMER:** Our objective in sending this information is to help you protect the health and safety of your personnel and to comply with the OSHA Hazard Communication Standard and Title III of the Superfund Amendment and Reauthorization Act of 1986. This information is taken from sources or is based upon data believed to be reliable. ArcelorMittal USA Inc. makes no warranty as to the absolute correctness, completeness, or sufficiency of any of the foregoing, or that any additional or other measures may not be required under particular conditions. ARCELORMITTAL USA INC. MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTIES OTHERWISE ARISING FROM COURSE OF DEALING OR TRADE.

Attachment 1: Typical Coal Tar Analysis

Compound	CAS No.	UN No.	Wt %	OSHA-PEL (ppm)	ACGIH-TLV (ppm)	LD50 Species-Route (mg/kg)	LC50 Species-Route (mg/kg)
Acenaphthene	83-32-9		0.05 -1.05	NE	NE	NE	NE
Acenaphthyen	208-96-8		1.8 - 2.0	NE	NE	NE	NE
Ammonia	7664-41-7	1005	0.38	50	25 STEL - 35	350 (rat/oral)	4230 ppm (mouse/inh)
@ Anthracene	120-12-7		0.75 -1.9	0.2*	NE	430 (mouse/I.P.)	NE
@ Benzene	71-43-2	1114	0.06 - 0.29	1 STEL - 5	0.5 STEL - 2.5	4700 (mouse/oral)	9980 ppm (mouse/Inh.)
@ Benzo(a)Anthracene	56-55-3		0.52 - 1.2	NE	NE	NE	NE
@ Benzo (a)Pyrene	50-32-8		0.48 - 1.9	0.2*	NE	50 (rat/S.C)	NE
@ Benzo(b)Fluoranthene	205-99-2		0.4 - 2.6	NE	NE	NE	NE
Benzo(ghi)perylene	191-24-2		0.39	NE	NE	NE	NE
@ Benzo (k)fluoranthene	207-08-9		0.76	NE	NE	NE	NE
Carbazole	86-74-8		0.4 - 0.6	NE	NE	200 (mouse/I.P.)	NE
Chrysene	218-01-9		0.5 - 1.3	0.2*	NE	NE	NE
o-Cresol	95-48-7	2076	0.16 - 0.25	5	5	168 (mouse/I.P.)	NE
m-Cresol	108-39-4	2076	0.45	5	5	344 (mouse/oral)	179 (mouse/Inh)
p-Cresol	106-44-5	2076	0.27 - 0.50	5	5	25 (mouse/I.P.)	NE
@ Dibenz (a,h) Anthracene	53-70-3		0.14	NE	NE	NE	NE
@ Dibenzofuran	132-64-9		1.1	NE	NE	NE	NE
Ethylbenzene	100-41-4		0.0017 - 0.02	100	100 STEL -125	3500 (rat/oral)	NE
Fluoranthene	206-44-0		1.4 - 3.5	NE	NE	100 (mouse/I.V.)	NE
Fluorene	86-73-7		0.64 - 1.7	NE	NE	2000 (mouse/I.P.)	NE
High Boiling Tar Acids			0.83	NE	NE	NE	NE
Indene	95-13-6		0.35 - 0.90	NE	10	NE	NE
@ Indeno (1,2,3-cd)pyrene	193-39-5		0.43	NE	NE	NE	NE
Medium-Soft Pitch	65996-93-2		63.5	0.2*	0.2*	NE	NE
a-Methylnaphthalene	90-12-0		0.31 - 0.65	NE	NE	1840 (rat/oral)	NE
B-Methylnaphthalene	91-57-6		0.61 - 1.5	NE	NE	1630 (rat/oral)	NE
Naphtha	8030-30-6	2553	0.97	100	NE	NE	NE
@ Naphthalene	91-20-3	1334	3.0 - 11	10	10 STEL -15	150 (mouse/I.P.)	NE
@ Phenanthrene	85-01-8		2.6 - 5.1	0.2*	NE	700 (mouse/I.P.)	NE
Phenol	108-95-2	1671	0.45 - 0.76	5	5	180 (mouse/I.P.)	177 (mouse/Inh)
Pyrene	129-00-0		1.3 - 2.5	0.2*	NE	514 (mouse/I.P.)	170 (mouse/Inh)
Styrene	100-42-5		0.02 - 0.04	100 Ceiling - 200 Peak - 600	20 STEL - 40	316 (mouse/oral)	24 gm/m3 (rat/Inh)
Tar Bases			2.08	NE	NE	NE	NE
Toluene	108-88-3	1294	0.04 - 0.25	200 Ceiling - 300 Peak - 500	50	1126 (mouse/I.P.)	5320 (mouse/Inh)
2,4,-Xylenol	105-67-9		0.14	NE	NE	183 (mouse/I.P.)	NE
Xylenols	1300-71-67	2261	0.04 - 0.36	100	100 STEL - 150	NE	NE

Trace Elements and Compounds: Trace elements and compounds include o-xylene, m-xylene, and p-xylene in varying concentrations less than 0.1 percent by weight, and arsenic, cadmium, chromium, copper, cyanide, lead, nickel, and zinc in varying concentrations typically less than 0.01 percent by weight.

\* As Coal Tar Pitch Volatiles (benzene soluble fraction) – expressed as milligrams per cubic meter.

# COAL TAR

Contains: Coal Tar (8007-45-2)



Proper Shipping Name (PSN): Environmentally Hazardous Substances  
Liquid, N.O.S (Naphthalene)  
9,UN3082, PG111, RQ,  
Marine Pollutant

## CAUTION

### **Hazards:**

- Combustible material and may be ignited by sparks or flame. Vapors may travel to source of ignition and flashback. Containers may explode in heat of fire. Vapor explosion hazard in containers and confined areas.
- Excessive exposure to vapors may produce headache and nausea.
- Excessive long-term exposure to some components of coal tar and its vapors have been associated with an increased risk of developing cancer of the lungs, kidneys and bladder, blood disorders, increased risk of leukemia and damage to the central nervous system.
- Liquid or vapors may cause irritation of the skin, eyes, and respiratory tract.
- May produce an allergic skin reaction in the presence of ultraviolet light.

### **Recommended Handling Procedures:**

- Keep away all sources of ignition.
- Avoid inhalation of vapor. Mechanical ventilation and/or personal protective equipment (i.e. eye protection, protective clothing, gloves, and NIOSH-approved respiratory protection) may be necessary during handling.
- Avoid repeated or prolonged skin contact.
- Do not smoke or consume food or beverages in the workplace.
- Protective impervious gloves and /or clothing recommended when prolonged skin contact is unavoidable.
- Handle material to prevent spills.
- Wash hands and exposed areas of the skin before eating, drinking, or smoking and after handling.
- Follow established safe job procedures (i.e., isolating, purging, ventilating, atmosphere testing, etc.) prior to entry or before welding or burning on or near tanks, storage vessels, piping, transport containers, etc.

### **Emergency Action:**

- Stop leak if you can without risk of injury.
- Use water spray to reduce vapors.
- Isolate area and deny any unnecessary entry.
- Isolate for ½ mile if tank car or truck is involved in fire.
- Wear self-contained breathing apparatus and protective clothing to fight fires and clean up large spills.
- Cool containers that are exposed to flames with water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.
- Small spills – Take up with sand or other noncombustible absorbent material and place in sealed containers.
- Large spills – Dike far ahead of spill for later reclaim or disposal.
- Follow all recommended handling procedures.

## FIRST AID AND MEDICAL EMERGENCY PROCEDURES

**Eye Contact:** Wash thoroughly with large amounts of water for at least 15 minutes. Seek medical attention.

**Skin Contact:** Remove contaminated clothing immediately. Wash affected area thoroughly with waterless skin cleaner or olive oil, then soap or mild detergent and large amounts of water. If irritation develops or persists, seek medical attention.

**Inhalation:** Remove from excessive exposure levels. Seek medical attention. Give artificial respiration if breathing has stopped.

**Ingestion:** Call Poison Control Center immediately. If conscious, dilute by administering one glass of water. Seek medical attention promptly. Do not induce vomiting.

*November 03, 2007*

*For more detailed health and safety information, read the Material Safety Data Sheet (MSDS) for this product.*

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