



## MATERIAL SAFETY DATA SHEET

DATE OF DATA SHEET: 11/01/2005

TRADE NAME: Waterproofing/ Dampproofing Asphalt

CHEMICAL FAMILY: ASPHALT

### **UNITED ASPHALTS**

Mailing Address:

P.O. Box 1034

Commerce City, CO 80022

Plant Address:

4306 E. 60<sup>th</sup> Avenue

Commerce City, CO 80022

Health & Technical Contact:

(800) 466-5431 / (303) 287-5431 Fax

PREPARED ACCORDING TO OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.100). FORMERLY CALLED MATERIAL INFORMATION BULLETIN.

CAUTION: HOT ASPHALT MAY EMIT TOXIC HYDROGEN SULFIDE GAS (H<sub>2</sub>S). PROLONGED OR REPEATED CONTACT WITH SKIN COULD BE HARMFUL. KEEP OUT OF REACH OF CHILDREN.

TYPICAL COMPOSITION: OXIDIZED ASPHALT (CAS 64/42-93-4)

EXPOSURE STANDARD: THE ACGIH (1985-86) TLV FOR PETROLEUM ASPHALT FUMES IS 5MG/M<sup>3</sup> FOR A DAILY 8-HOUR EXPOSURE. THIS IS NOT A FEDERAL OSHA EXPOSURE STANDARD FOR ASPHALT FUMES. THE FEDERAL OSHA EXPOSURE STANDARD FOR HYDROGEN SULFIDE (H<sub>2</sub>S) IS 20 PPM (A CEILING VALUE). IT MAY BE EXCEEDED (UP TO 50 PPM) FOR 10 MINUTES IN ANY 8-HOUR PERIOD IN, WHICH NO OTHER MEASURABLE EXPOSURE OCCURS. THE ACGIH (1985-86) TLV IS 10 PPM (8-HOUR TIME WEIGHTED AVERAGE).

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### SECTION 1: PHYSIOLOGICAL & HEALTH EFFECTS

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EYES: THE COOL SOLID MATERIAL IS NOT EXPECTED TO CAUSE EYE IRRITATION. THERMAL BURNS MAY RESULT FROM CONTACT WITH HOT MATERIAL. FUMES MAY CAUSE IRRITATION, REDNESS, OR BLURRED VISION.

SKIN: THE COOL SOLID MATERIAL IS NOT EXPECTED TO CAUSE SKIN IRRITATION. THERMAL BURNS MAY RESULT FROM CONTACT WITH HOT MATERIAL. LONG-TERM SKIN EXPOSURE TO ASPHALT CAN INCREASE SENSITIVITY TO THE SUN, AND MAY CAUSE DISCOLORATION.

INHALATION: FUMES FROM THE HOT MATERIAL CAN BE UNPLEASANT AND MAY PRODUCE NAUSEA AND IRRITATION OF THE UPPER RESPIRATORY TRACT. BREATHING (H<sub>2</sub>S) MAY BE HAZARDOUS: SEE ADDITIONAL DATA. BASED ON A 2000 REVIEW OF HEALTH



EFFECTS LITERATURE, NIOSH CONCLUDED THAT ROOFING ASPHALT FUMES ARE A POTENTIAL OCCUPATIONAL CARCINOGEN.

INGESTION: ASPHALT MAY BE HARMFUL OR CAUSE DEATH IF SWALLOWED, MAY CAUSE DIZZINES, INCOORDINATION, HEADACHE, NAUSEA, AND VOMITING.

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## SECTION 2: EMERGENCY & FIRST AID PROCEDURES

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EYES: IF THE HOT MATERIAL SHOULD SPLASH INTO THE EYES, FLUSH EYES IMMEDIATELY WITH FRESH WATER WHILE HOLDING EYELIDS OPEN. SEE A DOCTOR.

SKIN: IF THE HOT MATERIAL GETS ON SKIN, QUICKLY COOL IN WATER. SEE A DOCTOR FOR EXTENSIVE BURNS. DO NOT TRY TO PEEL THE SOLIDIFIED MATERIAL FROM THE SKIN OR USE SOLVENTS OR THINNERS TO DISSOLVE IT. THE USE OF VEGETABE OIL OR MINERAL OIL IS RECOMMENDED FOR REMOVAL OF THIS MATERIAL FROM THE SKIN.

INHALATION: IF THERE ARE SIGNS OR SYMPTOMS AS DESCRIBED IN THIS MSDS DUE TO BREATHING THIS MATERIAL, MOVE THE PERSON TO FRESH AIR. IF THE BREATHING HAS STOPPED, APPLY ARTIFICIAL RESPIRATION (CPR). CALL A DOCTOR.

INGESTION: DO NOT INDUCE VOMITING. PREVENT ASPIRATION OF ASPHALT INTO LUNGS. SEEK IMMEDIATE MEDICAL ATTENTION.

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## SECTION 3: SPECIAL PROTECTIVE INFORMATION

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EYE PROTECTION: DO NOT GET HOT MATERIAL IN EYES. EYE CONTACT CAN BE AVOIDED BY WEARING CHEMICAL SAFETY GOGGLES OR A FACE SHIELD.

SKIN PROTECTION: AVOID SKIN CONTACT WITH HOT MATERIAL BY WEARING PROTECTIVE CLOTHING INCLUDING GLOVES, LOOSE-FITTING LONG-SLEEVED SHIRT AND LONG PANTS.

RESPIRATORY PROTECTION: NO SPECIAL RESPIRATORY PROTECTION IS NORMALLY REQUIRED. HOWEVER, IF OPERATING CONDITIONS CREATE AIRBORNE CONCENTRATIONS, WHICH EXCEED THE EXPOSURE STANDARD, THE USE OF AN APPROVED RESPIRATOR IS RECOMMENDED. NOTE: IF ANY OF THE APPLICABLE (H2S) STANDARDS ARE LIKELY TO BE EXCEEDED, POSITIVE SUPPLIED –AIR RESPIRATORY PROTECTION MUST BE USED.

VENTILATION: USE THIS MATERIAL ONLY IN WELL-VENTILATED AREAS.



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#### SECTION 4: FIRE PROTECTION

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FLASH POINT: (COC) 450 F (MIN)

AUTO-IGNITION TEMP: 700 F (APPROXIMATELY)

FLAMMABILITY LIMITS: N/A

EXTINGUISHING MEDIA: CO<sub>2</sub>, DRY CHEMICAL, FOAM, WATER FOG, HALON.

SPECIAL FIRE FIGHTING PROCEDURES: FOR FIRES INVOLVING THIS MATERIAL, DO NOT ENTER ANY ENCLOSED OR CONFINED FIRE SPACE WITHOUT PROPER PROTECTIVE EQUIPMENT, INCLUDING SELF-CONTAINED BREATHING APPARATUS. SEE HAZARDOUS DECOMPOSITION PRODUCTS.

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#### SECTION 5: ENVIRONMENTAL PROTECTION

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ENVIRONMENTAL IMPACT: THIS MATERIAL IS NOT EXPECTED TO PRESENT ANY ENVIRONMENTAL PROBLEMS.

PRECAUTIONS IF MATERIAL IS RELEASED OR SPILLED: IF LIQUID MATERIAL IS SPILLED, ALLOW IT TO COOL AND SOLIDIFY BEFORE PROCEEDING WITH DISPOSAL METHODS. CLEAN UP SPILLS IMMEDIATELY, OBSERVING PRECAUTIONS IN SPECIAL PROTECTIVE INFORMATION AND ON PRODUCT LABEL.

WASTE DISPOSAL METHODS: PLACE CONTAMINATED MATERIALS IN DISPOSABLE CONTAINERS AND DISPOSE OF IN A MANNER CONSISTENT WITH APPLICABLE REGULATIONS. CONTACT LOCAL ENVIRONMENTAL OR HEALTH AUTHORITIES FOR APPROVED DISPOSAL OF THIS MATERIAL.

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#### SECTION 6: SPECIAL PRECAUTIONS

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DO NOT USE OR STORE NEAR FLAMES, SPARKS OR HOT SURFACES. USE ONLY IN WELL VENTILATED AREA. KEEP CONTAINER CLOSED.

TOXIC QUANTITIES OF HYDROGEN SULFIDE (H<sub>2</sub>S) MAY BE PRESENT IN STORAGE TANKS AND BULK TRANSPORT VESSELS WHICH CONTAIN OR HAVE CONTAINED HOT ASPHALT. PERSONS OPENING OR ENTERING THESE COMPARTMENTS SHOULD FIRST DETERMINE IF



(H<sub>2</sub>S) IS PRESENT. SEE SPECIAL PROTECTIVE INFORMATION. DO NOT ATTEMPT TO RESCUE WITHOUT WEARING SUPPLIED-AIR OR SELF-CONTAINED BREATHING EQUIPMENT.

DO NOT ADD OR ALLOW WATER TO MIX WITH HOT ASPHALT. STEAM GENERATED ERUPTIONS MAY OCCUR. YOU SHOULD STORE AND TRANSPORT ASPHALT ONLY IN PROPERLY VENTED CONTAINERS. COMBUSTION OF ASPHALT AND ASPHALT VAPORS MAY OCCUR. DO NOT MISHANDLE ASPHALT EQUIPMENT. OBSERVE MANUFACTURER'S GUIDELINES ON PROPER EQUIPMENT USE.

AN IGNITION SOURCE SHOULD BE CONSIDERED PRESENT IN LARGE TANK WHERE ASPHALT IS STORED AT TEMPERATURES ABOVE 350 F. DEPOSITS CAN FORM IN THE VAPOR SPACE OF LARGE ASPHALT TANKS WHICH MAY IGNITE AS LOW AS 350 F. PYROPHORIC IRON SULFIDE MAY CAUSE IGNITION BELOW 350 F.

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#### SECTION 7: REACTIVITY DATA

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STABILITY: (THERMAL, LIGHT, ETC.) STABLE

INCOMPATIBILITY: (MATERIALS TO AVOID) MAY REACT WITH STRONG OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS: NORMAL COMBUSTION FORMS CARBON DIOXIDE AND WATER, AND MAY PRODUCE OXIDES OF SULFUR AND NITROGEN. INCOMPLETE COMBUSTION CAN PRODUCE CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

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#### SECTION 8: PHYSICAL & CHEMICAL PROPERTIES

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SOLUBILITY: SOLUBLE IN HALOGENATED HYDROCARBONS AND BENZENE; INSOLUBLE IN WATER AND ALCOHOLS.

APPEARANCE: (COLOR, ODOR, ETC.) BROWN/BLACK, SEMI-SOLID WITH LOW ODOR.

BOILING POINT: 650 – 1000+ F (MIN) (IBP)

MELTING POINT: N/A

SPECIFIC GRAVITY: 1.00 – 1.05 @ 15.6/15.6 C



VAPOR PRESSURE: N/A

VAPOR DENSITY: N/A

EVAPORATION: N/A

VISCOSITY: 500 – 1000+ CSI @ 350 F. SOLID AT AMBIENT TEMPERATURE.

SOFTENING POINT: 210 – 225 F TYPES 4  
185 – 205 F TYPES 3  
158 – 176 F TYPES 2  
135 – 151 F TYPES 1

PHYSICAL STATE: SOLID

#### **ADDITIONAL HEALTH DATA**

NO ASSOCIATION HAS BEEN ESTABLISHED BETWEEN INDUSTRIAL EXPOSURE TO PETROLEUM ASPHALT AND CANCER IN HUMANS. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), HAS RECENTLY REVIEWED CARCINOGENIC POTENTIAL OF ASPHALT. THEY CONCLUDED THAT THERE WAS INSUFFICIENT EVIDENCE THAT UNDILUTED, AIR REFINED ASPHALTS WERE CARCINOGENIC TO ANIMALS, WHILE THERE WAS ONLY LIMITED EVIDENCE THAT STEAM-REFINED ASPHALTS WERE CARCINOGENIC TO ANIMALS. ADDITIONALLY, THERE WAS INSUFFICIENT EVIDENCE TO CONCLUDE THAT ASPHALTS WERE CARCINOGENIC TO HUMAN BEINGS. STUDIES IN WHICH MICE WERE EXPOSED TO A VARIETY OF WHOLE ASPHALTS DID NOT RESULT IN ANY INCREASED CANCER RATE; MICE EXPOSED TO ASPHALTS DILUTED WITH HYDROCARBON SOLVENTS HAD INCREASED INCIDENCE OF CERTAIN TYPES OF CANCER. BRIEF OR INTERMITTENT SKIN CONTACT WITH THIS ASPHALT PRODUCT IS NOT LIKELY TO CAUSE CANCER IN HUMANS. SKIN CONTACT AND BREATHING OF MIST, FUMES OR VAPORS SHOULD BE REDUCED TO A MINIMUM. WE STRONGLY RECOMMEND THAT THE PRECAUTIONS OUTLINED IN THIS MSDS BE FOLLOWED WHEN HANDLING THIS MATERIAL.

SOME ASPHALT CONTAINS SULFUR COMPOUNDS, WHICH MAY FORM (H<sub>2</sub>S) WHEN HEATED. THE ROTTEN EGGS ODOR OF (H<sub>2</sub>S) IS UNRELIABLE AS AN INDICATOR OF CONCENTRATION BECAUSE IT MAY BE ENTIRELY MASKED BY THE ODOR OF THE ASPHALT. SIGNS AND SYMPTOMS OF OVEREXPOSURE TO (H<sub>2</sub>S) INCLUDE: RESPIRATORY TRACT IRRITATIONS, HEADACHES, DIZZINESS, NAUSEA, GASTROINTESTINAL DISTURBANCES, COUGHING, A SENSATION OF DRYNESS AND PAIN OF THE NOSE, THROAT AND CHEST, CONFUSION AND UNCONSCIOUSNESS. (H<sub>2</sub>S) CONCENTRATIONS OF 1000-2000 PPM CAN BE EXTREMELY HAZARDOUS. DEATH HAS OCCURRED FOLLOWING EXPOSURE TO 600 PPM.