

MODIFIED SHINGLE SATURANT MATERIAL SAFETY DATA SHEET



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| NFPA HAZARD IDENTIFICATION | DEGREE OF HAZARD | HAZARD RATINGS |
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| | HEALTH: 1 FIRE: 1 REACTIVITY: 0 PPE C | 0= LEAST 1= SLIGHT 2= MODERATE 3= HIGH 4= EXTREME |

| SECTION 1 - COMPONENT DATA | |
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| PRODUCT NAME | MODIFIED SHINGLE SEALANT |
| CHEMICAL NAME | HYDROTREATED HEAVY NAPHTHENIC DISTILLATE/ PETROLEUM ASPHALT |
| CHEMICAL FAMILY | PETROLEUM HYDROCARBON |

| SECTION 2 - PHYSICAL DATA | |
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| BOILING POINT, □F: | >850 |
| SPECIFIC GRAVITY: | 0.97-1.04 |
| VAPOR PRESSURE (MM HG): | *ND |
| MELTING POINT, □F: | 150-220 |
| SOLUBILITY IN WATER: | NEGLIGIBLE |
| VAPOR DENSITY (AIR=1): | *ND |
| EVAPORATION RATE (N-BUTYL ACETATE =1): | *ND |
| PH: | NEUTRAL |
| APPEARANCE AND ODOR: | BLACK VISCOUS SEMISOLID. ASPHALT ODOR. |

| HAZARDOUS INGREDIENTS | | |
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| COMPONENT | CAS NUMBER | PERCENT |
| ASPHALT | 8052-42-4 | 75-95 |
| PROCESS EXTENDER OIL | 64742-52-5 | 5-25 |

| SECTION 3 - FIRE AND EXPLOSION HAZARDS | |
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| FLASH POINT AND METHOD: | >550 °F (TCC) |
| FLAMMABLE LIMITS: % VOLUME IN AIR | LOWER: *ND UPPER: *ND |
| EXTINGUISHING MEDIA | DRY CHEMICAL OR FOAM PREFERRED. WATER FOG MAY BE USED ON FLAT SURFACES SUCH AS ROADS. |

*NA=NOT APPLICABLE **ND=NOT DETERMINED



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| SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS | DO NOT USE WATER ON ASPHALT FIRE IN TANK OR OTHER CONTAINERS SINCE IT MAY CAUSE VIOLENT ERUPTION AND SPREADING OF BURNING ASPHALT. MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER. |
| UNUSUAL FIRE AND EXPLOSION HAZARD | DO NOT HEAT ABOVE FLASH POINT. HOT ASPHALT MAY IGNITE FLAMMABLE MIXTURES ON CONTACT. SULFUR OXIDES AND HYDROGEN SULFIDE, BOTH OF WHICH ARE TOXIC, MAY BE RELEASED UPON COMBUSTION. H ₂ S VAPORS ARE HEAVIER THAN AIR, MAY ACCUMULATE IN LOW AREAS AND TRAVEL ALONG THE GROUND TO A REMOTE IGNITION SOURCE; IF IGNITED WILL FLASH BACK TO ORIGINAL CONTAINER. |

| SECTION 4 - REACTIVITY DATA | |
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| STABILITY: | STABLE |
| HAZARDOUS POLYMERIZATION: | WILL NOT OCCUR |
| CONDITIONS AND MATERIALS TO AVOID | DO NOT ALLOW MOLTEN PRODUCT TO CONTACT WATER OR LIQUIDS AS THIS CAN CAUSE VIOLENT ERUPTIONS, SPLATTER HOT MATERIAL OR IGNITE FLAMMABLE MATERIALS. |
| HAZARDOUS DECOMPOSITION PRODUCTS | THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE, AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION. |

| SECTION 5 - HEALTH HAZARD DATA | |
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| THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATIONS STANDARD (29 CFR 1910.1200) | |
| EYE CONTACT | LUBRICATING BASE OILS AND ASPHALT ARE GENERALLY CONSIDERED NO MORE THAN MINIMALLY IRRITATING TO THE EYES. |
| SKIN CONTACT | LUBRICATING BASE OILS AND ASPHALT ARE GENERALLY CONSIDERED NO MORE THAN MINIMALLY IRRITATING TO THE SKIN. PROLONGED AND REPEATED CONTACT MAY LEAD TO VARIOUS SKIN DISORDERS SUCH AS DERMATITIS, OIL ACNE OR FOLLICULITIS. CONTACT WITH HOT PRODUCT CAN RESULT IN THERMAL BURNS. |
| INHALATION | VAPORS (GENERATED AT HIGH TEMPERATURES ONLY) MAY CAUSE MINOR IRRITATION OF THE MUCOUS MEMBRANES OF THE UPPER RESPIRATORY TRACT. HIGH VAPOR CONCENTRATIONS MAY RESULT IN CNS DEPRESSION. |
| WARNING: HYDROGEN SULFIDE (H ₂ S) AND OTHER HAZARDOUS VAPORS MAY EVOLVE AND COLLECT IN THE HEADSPACE OF STORAGE TANKS OR OTHER ENCLOSED VESSELS. HYDROGEN SULFIDE IS AN EXTREMELY FLAMMABLE, TOXIC GAS. H ₂ S IS IRRITATING TO THE EYES AND RESPIRATORY TRACT AT LOW CONCENTRATIONS. 0.02 PPM- ODOR THRESHOLD. 10 PPM-EYE IRRITATION. 100 PPM-HEADACHE, DIZZINESS, VOMITING, COUGHING. 200-300 PPM-EYE INFLAMMATION, RESPIRATORY TRACT IRRITATION AFTER 1 HOUR EXPOSURE. 300-700 PPM LOSS OF CONSCIOUSNESS OR POSSIBLE DEATH IN 30 MIN. TO AN HOUR. 700-900 PPM- RAPID LOSS OF CONSCIOUSNESS; DEATH CAN RESULT.>1000 PPM-UNCONSCIOUSNESS IN SECONDS; DEATH IN MINUTES UNLESS VICTIM IS REMOVED FROM CONTAMINATED AREA AND BREATHING IS RESTORED. DO NOT DEPEND ON SENSE OF SMELL FORM WARNING. H ₂ S CAUSES RAPID OLFACTORY FATIGUE (DEADENS SENSE OF SMELL). THERE IS NO EVIDENCE THAT H ₂ S WILL ACCUMULATE IN THE BODY TISSUE AFTER REPEATED EXPOSURE. | |
| SIGNS AND SYMPTOMS OF OVEREXPOSURE | IRRITATION AS NOTED ABOVE. |

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| AGGRAVATED MEDICAL CONDITIONS | PREEXISTING SKIN, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. | | | | |
| HAZARDOUS INGREDIENT: ASPHALT | CARCINOGENICITY | | | | |
| NTP LISTED | NO | | | | |
| IARC LISTED | YES | | | | |
| OSHA REGULATED | NO | | | | |
| OCCUPATIONAL EXPOSURE LIMITS: | | | | | |
| | OSHA | | ACGIH | | |
| COMPONENT | PEL/TWA | PEL/CEILING | TLV/TWA | TLV/STEL | OTHER |
| PROCESS /EXTENDER OIL | 5 MG/M3 | NONE | 5 MG/M ³ * | 10 MG/M ³ * | NONE |
| ASPHALT | *OIL MIST, MINERAL | | 5 MG/M ³ | | |

SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES

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| EYE CONTACT | FLUSH EYES WITH PLENTY OF WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION. |
| SKIN CONTACT | IF HOT ASPHALT STRIKES THE SKIN, IMMERSIVE THE AREA IN WATER TO ASSIST COOLING. IF AVAILABLE, APPLY ICE WATER OR ICE PACKS EXCEPT, WHEN BURNED AREA COVERS MORE THAN 10% OF THE BODY. DO NOT REMOVE ASPHALT FROM A BURN AFTER IT HAS COOLED. REMOVE CONTAMINATED CLOTHING. WASH WITH SOAP AND WATER OR A WATERLESS HAND CLEANER FOLLOWED BY SOAP AND WATER. IF IRRITATION OCCURS GET MEDICAL ATTENTION. |
| INHALATION | REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. BEWARE THAT H ₂ S MAY BE PRESENT IF VICTIM IS UNCONSCIOUS. USE BREATHING PROTECTION BEFORE REMOVING VICTIM TO FRESH AIR. GET MEDICAL ATTENTION. |
| INGESTION | DO NOT INDUCE VOMITING. IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ADVICE. |

SECTION 7 - PERSONAL HEALTH PROTECTION INFORMATION

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| PROTECTIVE CLOTHING | WEAR CHEMICAL RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE SKIN CONTACT. WEAR SAFETY GLASSES OR GOGGLES TO AVOID EYE CONTACT. |
| RESPIRATORY PROTECTION | IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE A NIOSH/MSHA APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS. |
| ADDITIONAL PROTECTIVE MEASURES | USE IN A WELL VENTILATED AREA TO CONTROL VAPOR CONCENTRATION. AIR-DRY CONTAMINATED CLOTHING IN A WELL VENTILATED AREA, THEN LAUNDRER BEFORE REUSING. |

SECTION 8 - SPILL, LEAK & DISPOSAL PROCEDURES

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| STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED | CONSULT HEALTH HAZARD DATA IN SECTION 5, PERSONAL HEALTH PROTECTION INFORMATION IN SECTION 7, FIRE & EXPLOSION DATA IN SECTION 3, AND REACTIVITY DATA IN SECTION 4. NOTIFY APPROPRIATE AUTHORITIES OF SPILL. CONTAIN SPILL IMMEDIATELY. DO NOT ALLOW SPILL TO ENTER SEWERS OR WATERCOURSES. REMOVE ALL SOURCES OF IGNITION. ABSORB WITH APPROPRIATE INERT MATERIAL SUCH AS SAND, CLAY, ETC. LARGE SPILLS MAY BE PICKED UP USING VACUUM PUMPS, SHOVELS, BUCKETS OR OTHER MEANS AND PLACED IN DRUMS OR OTHER SUITABLE CONTAINERS. |
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| WASTE DISPOSAL METHOD | ALL DISPOSALS MUST COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS. THE MATERIAL, IF SPILLED OR DISCARDED, MAY BE A REGULATED WASTE. REFER TO STATE AND LOCAL REGULATIONS. CAUTION! IF REGULATED SOLVENTS ARE USED TO CLEAN UP SPILLED MATERIAL, THE RESULTING WASTE MIXTURE MAY BE REGULATED. DEPARTMENT OF TRANSPORTATION (DOT) REGULATIONS MAY APPLY FOR TRANSPORTING THIS MATERIAL WHEN SPILLED. WASTE MATERIAL MAY BE LANDFILLED OR INCINERATED AT AN APPROVED FACILITY. MATERIALS SHOULD BE RECYCLED IF POSSIBLE. |
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| SECTION 9 - SPECIAL PRECAUTIONS/ADDITIONAL INFORMATION | |
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| WHEN ASPHALTIC PRODUCTS ARE HEATED, THEY OFTEN GIVE OFF SMALL AMOUNTS OF HYDROGEN SULFIDE. HYDROGEN SULFIDE IS AN EXTREMELY FLAMMABLE, HIGHLY TOXIC GAS. BREATHING HYDROGEN SULFIDE MUST BE AVOIDED. MINIMIZE BREATHING OF VAPORS, FUMES, OR MIST; WHEN POSSIBLE, USE VENTILATION OR WORK UPWIND OF SOURCE OF VAPORS, FUMES AND MIST. LAUNDRY CONTAMINATED CLOTHING BEFORE USING. DISCARD LEATHER GOODS WHEN THEY CANNOT BE DECONTAMINATED. OBSERVE GOOD PERSONAL HYGIENE. WASH THOROUGHLY AFTER WORKING WITH ASPHALT AND BEFORE EATING OR SMOKING. | |
| D.O.T. CLASSIFICATION: | CLASS 9 (MISCELLANEOUS HAZARDOUS MATERIAL), PG III |
| D.O.T. PROPER SHIPPING NAME: | ELEVATED TEMPERATURE MATERIAL, LIQUID, N.O.S. (PETROLEUM ASPHALT) |
| OTHER REQUIREMENTS: | NA 9259. NOT REGULATED BY D.O.T. IF IN A CONTAINER OF 119 GALLON CAPACITY OR LESS. |
| THE COMPONENTS OF THE PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES. PROTECTION OF STRATOSPHERIC (PURSUANT TO SECTION 6110 F THE CLEAN AIR ACT AMENDMENTS OF 1990) PER 40 CFR PART 82, THIS PRODUCT DOES NOT CONTAIN NOR WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR II OZONE DEPLETING SUBSTANCES. | |

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, MARTIN ASPHALT COMPANY MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. THIS INFORMATION AND PRODUCT IS FURNISHED ON THE CONDITION THAT THE PERSON RECEIVING THEM SHALL MAKE THEIR OWN DETERMINATION AS TO THE SUITABILITY OF THE PRODUCT FOR THEIR PARTICULAR PURPOSE AND ON THE CONDITION THAT THEY ASSUME THE RISK OF USE THEREOF.

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