

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER MODIFIED BITUMINOUS OPEN-TRUSS ROOF UNDERLAY		PRODUCT BRAND NAME TILEMATE	
PRODUCT USE AS AN UNDERLAYMENT BENEATH METAL, CONCRETE OR CLAY ROOFING TILE.			
MANUFACTURER'S NAME HAL INDUSTRIES INC.		SUPPLIER'S NAME HAL INDUSTRIES INC.	
STREET ADDRESS 9681 - 187TH STREET		STREET ADDRESS 9681 - 187TH STREET	
CITY SURREY	PROVINCE B.C	CITY SURREY	PROVINCE B.C
POSTAL CODE V4N - 3N3	EMERGENCY TELEPHONE NO. 604 - 888 - 0777 1- 800 663 - 0076	POSTAL CODE V4N - 3N3	EMERGENCY TELEPHONE NO. 604 - 888 - 0777 1- 800 663 - 0076

SECTION 2 - HAZARDOUS AND OTHER INGREDIENTS

INGREDIENTS	CAS NUMBER	LD50 OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFIC SPECIES)
ASPHALT 60 - 70 %	8052 - 42 -4	ORAL: LD50> 5000 MG/ KG (RAT) DERMAL: LD50> 2000 MG/KG (RABBIT)	N/A, ACGIH RECOMMENDS FOR ASPHALT FUMES: 5 MG/ M ³ HYDROGEN SULPHIDE, 10 PPM (14 MG/ M ³)
S-B -S BLOCK COPOLYMER (PROPRIETARY)	9003 - 55-8	This polymer does not present an intrinsic health hazard when processed according to correct working procedures. The limits on the residual monomers are:	RESIDUAL MONOMERS: STYRENE TWA : 50 ppm = 215 mg/ M ³ STEL : 100 ppm = 425 mg/ M ³ BUTADIENE NO LIMIT AVAILABLE
INERT FILLER (PROPRIETARY)	NOT REGULATED	N/A	N/A
FIBER GLASS MAT 9 %	65997-17-3 for continuous filament glass fibers	OSHA FIBER LIMITS TO 5 PPM	
UREA FORMALDEHYDE BINDER 0.05 -0.1 % (used in fiber glass mat, is modified & cured)	9011-05-6	10 PPM for formaldehyde monomer	
WOVEN POLY PROPYLENE 7 %	NOT REGULATED HOMOPOLYMER CAS# 9003-07-0	N/A	N/A

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE SOLID (ASPHALT COATED SURFACED SHEETS)	ODOUR AND APPEARANCE ODOUR: NO DISTINCT ODOUR APPEARANCE: SHEET FORM, COVERED WITH WOVEN POLYPROPYLENE FABRIC			ODOUR THRESHOLD (PPM) NOT AVAIL
VAPOUR PRESSURE: N/A FOR ASPHALT: <1 KPA AT 38 DEG C	VAPOUR DENSITY NOT APPLICABLE	EVAPORATION RATE: NOT AVAIL	SOFTENING PT. COATING 100 - 110 EC	FREEZING POINT (°C) <-15
PH N/A	SPECIFIC GRAVITY 1.03 - 1.08	COEFF. WATER/OIL DIST. INSOLUBLE IN WATER		NOT VOLATILE

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY? YES (X) NO ()	IF YES, UNDER WHICH CONDITION? COMBUSTIBLE IF EXPOSED TO HIGH HEAT AND OPEN FLAMES.	
MEANS OF EXTINCTION: WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE FOR SMALL FIRES. FIRE FIGHTING PROCEDURES - USE WATER SPRAY TO COOL FIRE EXPOSED PRODUCT AND AS A PROTECTIVE SCREEN. DO NOT POINT SOLID WATER DIRECTLY INTO BURNING ASPHALT TO AVOID SPREADING. SELF CONTAINED BREATHING APPARATUS IS ADVISED TO BE WORN TO PROTECT AGAINST POSSIBLE RELEASE OF HYDROGEN SULPHIDE AND SULPHUR DIOXIDE IF MATERIAL IS BURNING.		
FLASH POINT (° C) AND METHOD: Solid Flash point for asphalt: (ASTM D93), 255 – 265 ° C	UPPER FLAMMABLE LIMIT (% BY VOLUME) NOT AVAIL.	LOWER FLAMMABLE LIMIT (% BY VOLUME) NOT AVAIL.
ASPHALT'S BOILING POINT : 400 ° C	HAZARDOUS COMBUSTION PRODUCTS CARBON DIOXIDE, CARBON MONOXIDE, SO _x , H ₂ S AND OTHER ORGANIC VAPOURS	
EXPLOSION DATA	SENSITIVITY TO IMPACT NONE	SENSITIVITY TO STATIC DISCHARGE NONE

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY YES (X) NO ()	IF NO, UNDER WHICH CONDITION? STABLE AT AMBIENT CONDITIONS.
INCOMPATIBILITY WITH OTHER SUBSTANCES YES (X) NO ()	IF SO, WHICH ONES? STRONG OXIDIZING AGENTS
REACTIVITY, AND UNDER WHAT CONDITIONS	EXCESSIVE HEAT APPROACHING MELTING OF POLYPROPYLENE AND ASPHALT=S FLASH POINT
HAZARDOUS DECOMPOSITION PRODUCTS	STABLE UNDER NORMAL CONDITIONS. SEE HAZARDOUS COMBUSTION PRODUCTS FOR PRODUCTS OF THERMAL DECOMPOSITION.

SECTION 6 - TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY () SKIN CONTACT	() SKIN ABSORPTION	() EYE CONTACT	() INHALATION	() INGESTION
EFFECT OF ACUTE EXPOSURE TO PRODUCT: SKIN / EYE CONTACT : INHALATION: FUMES FROM HOT ASPHALT AND DECOMPOSED POLYPROPYLENE IN CASE OF FIRE MAY CAUSE NAUSEA, HEADACHE AND DIZZINESS.				
EFFECT OF CHRONIC EXPOSURE TO PRODUCT THE MANUFACTURED PRODUCT AS PRODUCED AND WHEN USED UNDER AMBIENT CONDITIONS POSES NO HEALTH HAZARD.				
EXPOSURE LIMITS NOT LISTED BY NIOSH	IRRITANCY OF PRODUCT NOT AVAIL.	SENSITIZATION TO PRODUCT NOT AVAIL.	CARCINOGENICITY NOT LISTED AS CARCINOGENS (IARC)	

TERATOGENICITY NOT AVAIL.	REPRODUCTIVE TOXICITY NOT AVAIL.	MUTAGENICITY NOT AVAIL.	SYNERGISTIC PRODUCTS NOT AVAIL.
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SECTION 7 - PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES (SPECIFY) :
NOT NORMALLY PRACTICAL
WASH HANDS AFTER CONTACT.

RESPIRATOR (SPECIFY) :
NOT NEEDED UNDER AMBIENT CONDITIONS
ORGANIC CANISTER IF HEATING PRODUCT.

EYE (SPECIFY):
AVOID EYE CONTACT WITH
PRODUCT OR WITH HANDS
DURING PRODUCT APPLICATION.

FOOTWEAR (SPECIFY) :
PROTECTIVE FOOTWEAR

CLOTHING (SPECIFY) :
NORMAL WORK CLOTHING

OTHER (SPECIFY) :

ENGINEERING CONTROLS (SPECIFY, E.G VENTILATION, ENCLOSED PROCESS) :
IF PRODUCT IS BEING HEATED OR BURNING PROVIDE SUFFICIENT VENTILATION. (SEE SECTION 4)

LEAK AND SPILL PROCEDURE: NOT NORMALLY IN LIQUID STATE. N / A

WASTE DISPOSAL: SEND TO RECYCLER OR INCINERATOR ACCORDING TO FEDERAL, PROVINCIAL AND LOCAL REGULATIONS.

HANDLING PROCEDURES AND EQUIPMENT:
EXERCISE THE USUAL SAFETY PRECAUTIONS WHEN HANDLING PRODUCTS WITH PETROLEUM DISTILLATE . KEEP AWAY FROM IGNITION SOURCES.
WASH HANDS THOROUGHLY AFTER SKIN CONTACT.

STORAGE REQUIREMENTS:
STORE IN WELL VENTILATED AREAS AWAY FROM IGNITION SOURCES AND STRONG OXIDIZING MATERIALS.
SPECIAL SHIPPING INFORMATION:

SECTION 8 - FIRST AID MEASURES IN CASE OF FIRE CREATED FUMES

SPECIFIC MEASURES: SOLID UNDER AMBIENT CONDITIONS; IN CASE OF FIRE AND CONTACT WITH MOLTEN AND BURNING PRODUCT:

EYE CONTACT: FLUSH WITH LARGE AMOUNTS OF WATER WHILE HOLDING EYE LIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT: COOL THE AFFECTED AREA. WASH WITH SOAP AND WATER, OR USE BABY OIL OR WATERLESS HAND CLEANER. DO NOT USE SOLVENTS OR THINNERS TO CLEAN THE SKIN, GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

INGESTION: NOT EXPECTED TO BE A ROUTE OF ENTRY. IF INGESTED GIVE LIQUIDS. DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.

INHALATION: REMOVE VICTIM TO FRESH AIR. IF BREATHING IS DIFFICULT APPLY CARDIOPULMONARY RESUSCITATION AND GET IMMEDIATE MEDICAL ATTENTION.

SECTION 9 - PREPARATION DATE OF MSDS

PREPARED BY : " TECHNICAL GROUP"
HAL INDUSTRIES INC.

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DATE Aug, 2017

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