

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT IDENTIFICATION AND USE

<b>PRODUCT IDENTIFIER</b> <b>MODIFIED BITUMINOUS OPEN-TRUSS ROOF UNDERLAY</b>		<b>PRODUCT BRAND NAME</b> <b>TILEMATE</b>	
<b>PRODUCT USE</b> AS AN UNDERLAYMENT BENEATH METAL, CONCRETE OR CLAY ROOFING TILE.			
<b>MANUFACTURER'S NAME</b> HAL INDUSTRIES INC.		<b>SUPPLIER'S NAME</b> HAL INDUSTRIES INC.	
<b>STREET ADDRESS</b> 9681 - 187TH STREET		<b>STREET ADDRESS</b> 9681 - 187TH STREET	
<b>CITY</b> SURREY	<b>PROVINCE</b> B.C	<b>CITY</b> SURREY	<b>PROVINCE</b> B.C
<b>POSTAL CODE</b> V4N - 3N3	<b>EMERGENCY TELEPHONE NO.</b> 604 - 888 - 0777 1- 800 663 - 0076	<b>POSTAL CODE</b> V4N - 3N3	<b>EMERGENCY TELEPHONE NO.</b> 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 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 <sup>3</sup> HYDROGEN SULPHIDE, 10 PPM (14 MG/ M <sup>3</sup> )
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 <sup>3</sup> STEL : 100 ppm = 425 mg/ M <sup>3</sup>  BUTADIENE NO LIMIT AVAILABLE
INERT FILLER (PROPRIETARY)	NOT REGULATED	N/A	N/A
FIBER GLASS MAT 9 %		OSHA FIBER LIMITS TO 5 PPM	
UREA FORMALDEHYDE 0.05 -0.1 % ( used in fiber glass mat )		10 PPM	
WOVEN POLY PROPYLENE 7 %	NOT REGULATED HOMOPOLYMER CAS# 9003-07-0	N/A	N/A

## SECTION 3 - PHYSICAL DATA

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

### SECTION 4 - FIRE AND EXPLOSION DATA

<b>FLAMMABILITY?</b> YES ( X ) NO ( )	<b>IF YES, UNDER WHICH CONDITION?</b> COMBUSTIBLE IF EXPOSED TO HIGH HEAT AND OPEN FLAMES.	
<b>MEANS OF EXTINCTION:</b> WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE FOR SMALL FIRES. <b>FIRE FIGHTING PROCEDURES -</b> 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.		
<b>FLASH POINT (°C) AND METHOD (ASTM D93)</b> ASPHALT 255 - 265	<b>UPPER FLAMMABLE LIMIT (% BY VOLUME)</b> NOT AVAIL.	<b>LOWER FLAMMABLE LIMIT (% BY VOLUME)</b> NOT AVAIL.
<b>ASPHALT'S BOILING POINT :</b> 400 E C	<b>HAZARDOUS COMBUSTION PRODUCTS</b> CARBON DIOXIDE, CARBON MONOXIDE, SO <sub>x</sub> , H <sub>2</sub> S AND OTHER ORGANIC VAPOURS	
<b>EXPLOSION DATA</b>	<b>SENSITIVITY TO IMPACT</b> NONE	<b>SENSITIVITY TO STATIC DISCHARGE</b> NONE

### SECTION 5 - REACTIVITY DATA

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

### SECTION 6 - TOXICOLOGICAL PROPERTIES

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

## 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.

**PHONE NUMBER**

604 - 888 - 0777  
1- 800- 663 - 0076

**DATE**

Jan. 3, 2008

**IMPORTANT:**

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