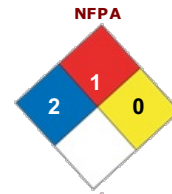




Personal Protective Equipment					WHMIS Pictograms
Chemical Splash Goggles	Safety Glasses	Protective Gloves	Face shield	Half Face Respirator	D2A Toxic

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: PermaMop® Low Fuming Asphalt
MSDS Manufacturer Number: 24889-NAM
Manufacturer Name: Owens Corning Roofing and Asphalt, LLC
Address: One Owens Corning Parkway
 Toledo, OH 43659
Customer Service Phone Number: 1-800-GET-PINK or 1-800-438-7465
Health Issues Information: 1-800-438-7465
Technical Product Information: 1-800-GET-PINK or 1-800-438-7465
Emergency Phone Number: 1-419-248-5330 (after 5pm ET and weekends)
CHEMTREC: 800-424-9300 (24 hours everyday)
Canotec: (613) 996-6666 (Canada 24 hours everyday)
Website: www.owenscorning.com
MSDS Creation Date: June 25, 2000
MSDS Revision Date: January 17, 2012



HMIS	
Health Hazard	3*
Fire Hazard	1
Reactivity	0
Personal Protection	X

* Chronic Health Effects

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Asphalt, oxidized	64742-93-4	90 - 99 by weight	265-196-4
N,N'-Ethylenebis (stearamide)	110-30-5	1 -10 by weight	203-755-6
Non-Hazardous Statement:	The remaining components of this product are non-hazardous or are in a small enough quantity as to not meet regulatory thresholds for disclosure. These components contain no substances or impurities which would influence the classification of this product.		

SECTION 3 - HAZARDS IDENTIFICATION

Applies to Product

Emergency Overview: Upon heating, hydrogen sulfide (H2S) gas may be released from this material. Vapor spaces in tanks and shipping containers containing hot asphalt or asphalt products may accumulate hydrogen sulfide vapors at harmful concentrations. At high concentrations, H2S can cause rapid unconsciousness and death.

Route of Exposure: Eye contact
 Skin contact
 Inhalation
 Ingestion

Potential Health Effects:

Eye:

Hot Material: Contact with hot material may result in pain, tears, swelling, redness blurred vision and thermal burns.

Cold Material: Cool material may cause eye irritation.

Skin:

Hot Material: Contact with hot product may cause thermal burns.

Cold Material: Cool material may cause minor skin irritation. Prolonged or repeated contact may cause dryness and skin irritation. Long term skin exposure to asphalt can increase sensitivity to the sun, and may cause discoloration.

Inhalation:	Hot Material: Fumes from hot material can be unpleasant and may produce nausea, headaches and irritation of the upper respiratory tract. Substance may give off hydrogen sulfide (H ₂ S) when heated which may collect in enclosed spaces. Exposure to H ₂ S may result in respiratory tract irritation, headache, dizziness, nausea, gastrointestinal disturbances, coughing, a sensation of dryness and pain in the nose, throat, and chest, confusion and unconsciousness. H ₂ S is a colorless gas with an odor similar to rotten eggs. Odor cannot be relied on as a means of detection because the olfactory nerves (sense of smell) rapidly become insensitive to it. In addition, the H ₂ S odor may be masked by the general odor of hot asphalt. At low concentrations, H ₂ S can irritate the eyes and respiratory tract, and may cause nervousness, cough, nausea, and headache. Prolonged exposure to concentrations between 250-600 ppm, may cause pulmonary edema (fluid in the lungs) and bronchial pneumonia. Brief exposure to concentrations above 500 ppm can cause unconsciousness and may be fatal. See Section 8 for exposure controls.
Ingestion:	May be harmful or fatal if ingested. If ingested, may cause mouth, throat and gastrointestinal tract irritation and upset with possible nausea, vomiting and diarrhea. Aspiration of petroleum distillates into the lungs can cause severe chemical pneumonitis that can be fatal.
Chronic Health Effects:	The International Agency for Research on Cancer (IARC) has concluded that, "Occupational exposures to oxidized bitumens and their emissions during roofing are probably carcinogenic to humans." IARC explained its finding stating that, "The body of available data from cancer studies in humans points to an association between exposures to oxidized bitumens (asphalt) during roofing and lung cancer and tumors in the upper aerodigestive tract (head, neck and upper respiratory system)." IARC Press Release, October 18, 2011. This petroleum based product contains a variable amount of polycyclic aromatic compounds (PACs) including polynuclear aromatic hydrocarbons (PAHs) which have been shown to cause cancer and respiratory damage in humans and laboratory animals. See Section 11 for additional toxicological data.
Carcinogenicity:	This product contains a component which is listed by IARC, OSHA or NTP.
Aggravation of Pre-Existing Conditions:	Chronic respiratory or skin conditions may temporarily worsen from exposure to this product.
OSHA Regulatory Status:	This product is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get medical attention, if irritation or symptoms of overexposure persists.
Skin Contact:	Hot Material: Immediately drench or immerse area in water to assist in cooling. Apply iced water or ice packs to burned area. DO NOT use iced water or ice packs if the burned area covers more than 10% of the body, as this may contribute to shock. DO NOT try to remove product from burned area after it has cooled. Seek immediate medical attention. Medical Personnel can soften and remove cooled product with petroleum jelly or mineral oil. If skin irritation persists, call a physician. Cold Material: Clean exposed skin with mild soap and water. Seek medical attention if irritation persists.
Inhalation:	If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, trained personnel should administer oxygen. If breathing has stopped, give artificial respiration and seek immediate medical attention.
Ingestion:	Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration. Seek immediate medical attention.
Note to Physicians:	Provide general supportive measures and treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties:	Not available.
Flash Point:	> 525 °F (274 °C)
Flash Point Method:	Cleveland Open Cup (C.O.C).
Auto Ignition Temperature:	> 650 °F (343 °C)
Lower Flammable/Explosive Limit:	Not available.
Upper Flammable/Explosive Limit:	Not available.
Extinguishing Media:	Dry chemical, foam, carbon dioxide. Use water to cool fire-exposed containers and to protect personnel. Treat as fuel oil or hydrocarbon fire.
Unsuitable Media:	Do not use water directly on asphalt fires as it may cause violent eruptions and spreading of hot asphalt.

Protective Equipment:	Wear self-contained breathing apparatus (SCBA) and full fire fighting protective gear.
Unusual Fire Hazards:	DO NOT direct water into a container or directly onto hot product, a vessel or storage tank containing hot product as it may cause violent eruptions and spreading of hot product. Hot product may ignite flammable materials on contact.
Hazardous Combustion Byproducts:	Primary combustion products are carbon monoxide, carbon dioxide and water. Combustion products may include sulfur oxides and hydrogen sulfide. Other undetermined compounds could be released in small quantities.

NFPA Ratings:

NFPA Health:	2
NFPA Flammability:	1
NFPA Reactivity:	0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Avoid contact with skin and eyes. Isolate area and keep unnecessary personnel away.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry. Prevent from spreading by covering, diking or other means.
Methods for cleanup:	Solidify with inert absorbent material such as sand or oil dry, pick up and put into suitable container for disposal. Pick up and transfer to properly labeled containers. Evaluate residue to determine if it is a hazardous waste by characteristic (D001). Dispose of in accordance with Local, State, Federal and Provincial regulations.

SECTION 7 - HANDLING and STORAGE

Handling:	Do not get this material in your eyes, on your skin, or on your clothing and avoid inhaling vapors, fumes or mist. Use this product with adequate ventilation.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep away from heat, sparks, or open flame. Assure proper ventilation of storage or shipping containers to prevent accumulation of hazardous concentrations of off-gassed hydrocarbon gas or H2S.
Work Practices:	Handle in accordance with good industrial hygiene and safety practices. These include avoiding any unnecessary exposure and removal of the material from the skin, eyes and clothing.
Special Handling Procedures:	Hydrogen sulfide, an extremely flammable, colorless, highly toxic gas, is emitted from heated asphalt and may accumulate in storage tanks and bulk transport containers.
Hygiene Practices:	Wash exposed areas thoroughly after handling this product. Wash hands and arms frequently. Shower after exposure. Wash work clothes when soiled. Avoid contact with skin, eyes and clothing.
Heating	Correct application temperature is Equiviscous Temperature (EVT) which is the temperature that the asphalt in the mop bucket or mechanical spreader must be at to achieve asphalt consistency or viscosity necessary to ensure that the correct amount of asphalt is applied to the roof. Minimize temperature to which product is heated in the kettle to obtain EVT during application in order to maintain quality of installed material and reduce hazard from fumes, hydrogen sulfide, kettle coking and kettle flashes. Maximum kettle temperature should be 50°F less than flash point to control generation of fumes and avoid possible explosion hazard but the product should never be heated over 550°F regardless of flashpoint.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Follow NIOSH guidelines for controlling exposure to fumes that are found in Asphalt Fume Exposures During the Application of Hot Asphalt to Roofs DHHS (NIOSH) Publication No. 2003-112 (June 2003). These include: 1. Use fume suppressing asphalt (TruLo Max) or kettles with afterburner or kettle loading systems when feasible, 2. Use kettles of appropriate size for the job, 3. Make sure lids fit tightly, close the lid when asphalt is not being added and minimize the number of times that the lid must be opened, 4. Chop the kegs into easy-to-handle pieces before opening lid to reduce time it is open, 5. Place the kettle downwind from workers, and with lid facing away from building, 6. Place the kettle away from air intake vents, doors and windows, 7. Restrict access to the area around kettle, 8. Calibrate kettle thermometers and thermostats at least monthly, and 9. Adhere to EVTs at point of application and use insulated kettles and piping to minimize the kettle temperature needed to achieve the application EVT
Eye/Face Protection:	Wear safety glasses with side-shields or goggles. If a splash hazard exists also wear a face shield.
Skin Protection Description:	Protective gloves (heat insulated, leather or lined neoprene coated gloves are recommended when working with hot product). Long sleeved

shirt and long pants (cotton or other thermal protective material are recommended).

Respiratory Protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators in accordance with their company's respiratory protection program, local regulations or 29 CFR 1910.134. If irritation occurs, wear an air purifying respirator with particulate and organic vapor cartridges. Supplied air respirators or self-contained breathing apparatus should be used when concentrations of hydrogen sulfide exceeds the occupational exposure limit.

EXPOSURE GUIDELINES

Ingredient	Guideline OSHA	Guideline NIOSH	Guideline ACGIH	Ontario Canada	Alberta Canada
Hydrogen Sulfide	PEL-Ceiling: 20 ppm PEL-Peak: 50 ppm Peak	Ceiling Limit: 10 ppm	TLV-STEL: 15 ppm TLV-STEL: 5 ppm	8 Hour TWA: 10 ppm STEL: 15 ppm	8 Hour TWA: 10 ppm Ceiling Limit: 15 ppm
Asphalt, oxidized	PEL-TWA: 5 mg/m3 (Oil mist)	REL-TWA: 5 mg/m3 (Oil mist)	TLV-TWA: 0.5 mg/m3 (Fume)	8-hour TWA: 0.5 mg/m3 as benzene-soluble aerosol (inhalable fraction)	8-hour TWA: 5 mg/m3
Ingredient	Mexico				
Hydrogen Sulfide	8 hour TWA: 10 ppm Ceiling Limit: 15 ppm				
Asphalt, oxidized	8-hour TWA: 5 mg/m3 STEL: 10 mg/m3				

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Color:	Brown to black
Odor:	Petroleum odor.
Boiling Point:	> 1000 °F (> 538 °C)
Melting Point:	No Data
Specific Gravity:	No Data
Solubility:	Insoluble in water.
Vapor Density:	No Data
Vapor Pressure:	3 mm Hg @ 20 °C
Percent Volatile:	No Data
pH:	No Data
Viscosity:	Not applicable.
Flash Point:	> 525 °F (274 °C)
Flash Point Method:	Cleveland Open Cup (C.O.C).
Auto Ignition Temperature:	> 650 °F (343 °C)

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under normal conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.
Conditions to Avoid:	Keep away from heat, sparks, or open flame. Do not allow hot, molten asphalt to contact water as this may cause violent eruptions and spreading of hot asphalt.
Incompatible Materials:	This product may react with strong oxidizing agents and water.
Special Decomposition Products:	Carbon dioxide. Carbon monoxide. Combustion products may include sulfur oxides and hydrogen sulfide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Carcinogens:							
	ACGIH	NIOSH	OSHA	IARC	NTP	Canada	MEXICO
Asphalt, oxidized	A4 Not Classifiable as a Human Carcinogen	NIOSH potential carcinogen	No Data	Group 2A Probably Carcinogenic to Humans (1)	No Data	No Data	A4 Not Classifiable as a Human Carcinogen
N,N'-Ethylenebis (stearamide)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Applies to Product :

Acute Effects: Inhalation of vapors, fumes and/or mists may cause nose, throat, and mucous membrane irritation, and nausea, headaches or dizziness, and central nervous system depression, including drowsiness, loss of coordination, and unconsciousness. Eye contact may cause severe irritation, redness, tearing, and blurred vision. If ingested, may cause mouth, throat and gastrointestinal tract irritation and upset with possible nausea, vomiting and diarrhea. Aspiration of petroleum distillates into the lungs can cause severe chemical pneumonitis that can be fatal. See Section 8 for exposure controls.

Chronic Effects: Prolonged or repeated skin contact may result in dryness and irritation of the skin. Prolonged contact with clothing saturated in petroleum distillates can cause second degree burns. Long term skin exposure to asphalt can increase sensitivity to the sun, and may cause discoloration.

Asphalt, oxidized :

Carcinogenicity: In October 2011, the International Agency for Research on Cancer (IARC) classified occupational exposures to oxidized bitumen (asphalt) and their emissions during roofing as being probably carcinogenic to humans (Group 2 A). 'The Working Group concluded that there was 'limited evidence' in humans for the carcinogenicity of occupational exposures to bitumens and bitumen emissions during roofing. In experimental animals there was 'limited evidence' of carcinogenicity for oxidized bitumens (Class 2), which are mainly used in roofing, and 'sufficient evidence' of carcinogenicity for fume condensates of these oxidized bitumens.' Lancet Oncology, Vol 12, December 2011. Based on a 2000 review of health effects literature, NIOSH concluded that roofing asphalt fumes are a potential occupational carcinogen.

Footnote: (1) IARC classified occupational exposure to oxidized bitumen (asphalt) and their emissions during roofing.

SECTION 12 - ECOLOGICAL INFORMATION

Applies to Product :

Ecotoxicity: No data available for this material.

SECTION 13 - DISPOSAL CONSIDERATIONS

Applies to Product :

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

Contaminated Packaging: Empty containers should be taken for local recycling, recovery or waste disposal.

RCRA Number: No EPA Waste Numbers are applicable for this product's components.

RCRA Characteristics: This material is not expected to be a characteristic hazardous waste under RCRA.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Not regulated as hazardous material for transportation.

Canadian Shipping Name: Not regulated as hazardous material for transportation.

SECTION 15 - REGULATORY INFORMATION

Inventory Status

	Japan ENCS	EINECS Number	Philippines PICCS	South Korea KECL	Australia AICS
Asphalt, oxidized	Not listed	265-196-4	Listed	KE-01957	Listed
N,N'-Ethylenebis (stearamide)	(2)-831	203-755-6	Listed	KE-13662	Listed

	Canada DSL	TSCA Inventory Status			
Asphalt, oxidized	Listed	Listed			
N,N'-Ethylenebis (stearamide)	Listed	Listed			

Applies to Product :

Canada Reg. Status: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

Canada WHMIS: Controlled - Class: D2A Very Toxic Material - based on IARC classification of Oxidized Bitumen as a Group 2A Probable Carcinogen.

CA PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This product contains chemicals known to the state of California to cause cancer.

SARA: This material contains Polycyclic Aromatic Compounds (PACs) listed under SARA 313. For SARA 313 reporting information, see the following website: <http://www.trumbullasphalt.com>.

Section 311/312 Hazard Categories:

Acute Health Hazard:	Yes
Chronic Health Hazard:	Yes
Risk of ignition:	No
Sudden Release of Pressure Hazard:	No
Reactive Hazard:	No

Clean Air Act: This product does not contain any Hazardous Air Pollutants (HAPs).

Asphalt, oxidized :

EC Number: 265-196-4

N,N'-Ethylenebis (stearamide) :

EC Number: 203-755-6

State Right To Know

	RI	MN	IL	PA	MA
Asphalt, oxidized	No Data	No Data	No Data	No Data	No Data
N,N'-Ethylenebis (stearamide)	No Data	No Data	No Data	No Data	No Data

	NJ				
Asphalt, oxidized	No Data				
N,N'-Ethylenebis (stearamide)	No Data				

SECTION 16 - ADDITIONAL INFORMATION

HMIS Health Hazard: 3*

HMIS Fire Hazard: 1

HMIS Reactivity: 0

HMIS Personal Protection: X

MSDS Creation Date: June 25, 2000

MSDS Revision Date: January 17, 2012

MSDS Revision Notes: Revised to reflect IARC classification of oxidized bitumen (asphalt)

Disclaimer: Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, express or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

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