

MATERIAL SAFETY DATA SHEET

MSDS # 1209 - FLUX

IMPORTANT: Read this Material Safety Data Sheet before handling or disposing of this product. This product safety information is provided to help our customers with health, safety and/or environmental matters. We have taken reasonable effort to ensure that the test methods and sources for this data are correct and reliable, however, we give no warranty, expressed or implied, regarding its correctness. Since conditions or methods of handling and using this product are beyond our control, we do not assume responsibility and expressly disclaim liability for damages resulting from or connected with the handling, storage, use or disposal of the product.

SECTION 1 PRODUCT AND MANUFACTURER'S INFORMATION

Manufacturer/Supplier's Name: IKO Industries Ltd.
Address: 71 Orenda Road
Brampton, Ontario
L6W 1V8
Emergency Phone: (905) 457-2880 - EXT. 3354
Product Name: Flux, 85/100, PG 58-22, PG 58-28, 150/200, PC 1200, PG 64-28
Chemical Name: Asphalt
Trade Name: Asphalt
Chemical Family: Petroleum Hydrocarbon

SECTION 2 PREPARATION INFORMATION

Prepared/Reviewed By: HSE Department
Phone Number: (905) 457-2880 - EXT. 3354
Date: August 20, 2015

SECTION 3 HAZARDOUS INGREDIENTS

<u>Component</u>	<u>TLV-TWA (8H)</u>	<u>%(vol)</u>	<u>CAS #</u>
Bitumens	0.5 mg/m ³ (benzene soluble fraction of the inhalable particulate)*	≥ 97	8052-42-4
Sulphur	14 mg/m ³	≤ 3	7704-34-9

Note: During storage or transit of hot asphalt, small amounts of toxic hydrogen sulphide (CAS #7783-06-4) may be generated.

* ACGIH has recommended that the TLV-TWA for asphalt fumes be reduced to 0.5 mg/m³ from 5.0 mg/m³. There is no documentation that supports this reduction as the method of measuring has changed as well as the value. The NIOSH REL remains at 5.0 mg/m³. There is no PEL for asphalt fumes listed by OSHA.

SECTION 4 PHYSICAL DATA

Boiling Point: >470C (>878F) @ 1 atm
Specific Gravity: 1.0 to 1.1 kg/L (approx. @ at 15C)
Vapor Pressure: Approximately 20 mm Hg at 38C
Evaporation Rate: N/A
Solubility In Water: Insoluble
Appearance: Black plastic semi-solid when cold; viscous fluid when hot.
Odor: Characteristic petroleum odor.
Vapor Density: N/A

SECTION 5 FIRE AND EXPLOSION DATA

Auto-Ignition Temperature: 370 - 480C (698 - 867F) (approx.)
Flash Point: 270C (518F) minimum by C.O.C.
Flammable Limits: Not known
Extinguishing Media: Dry chemical, carbon dioxide; water may be used to cool fire but can cause frothing.
Special Procedures: Respirators required for firefighting. Cool tanks that have been exposed to fire with water. Excessive use of water may spread the fire. When heated above its flashpoint or if held in storage at high temperatures, this material can release vapors, which can burn in the open or be explosive in confined spaces if exposed to ignition.

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SECTION 6 TOXICOLOGICAL PROPERTIES

Toxicity Date: IARC states that there is inadequate evidence that bitumens alone are carcinogenic to humans. Two studies sponsored by the National Institute for Occupational Safety and Health (NIOSH) in the 1980s using a laboratory fume generation protocol found an increase in skin tumor formation in test mice. There were chemical and toxicological differences between the laboratory fume used by NIOSH and fumes encountered in the field. A 2009 study sponsored by the Asphalt Roofing Environmental Council (AREC) using a fume condensate validated to be representative of fumes encountered in the field found a weak tumor response late in the study after observance of significant skin irritation. A follow-up initiation-promotion study came to the same conclusion. AREC is currently evaluating a number of response actions. A study published in 2002 of asphalt production and asphalt roofing manufacturing workers found no increase in lung cancer risk associated with asphalt fume exposure.

WARNING: This product may contain oxidized bitumens. The International Agency for Research on Cancer (the "IARC") published a monograph in 2013 which concluded that "occupational exposure to oxidized bitumens and their emissions during roofing operations are probably carcinogenic to humans." The IARC found that there is "limited evidence" in humans for the carcinogenicity of occupational exposures to bitumens and bitumen emissions during roofing and mastic-asphalt work. The IARC also found that there is "sufficient evidence" in experimental animals for carcinogenicity of fume condensates generated from oxidized bitumen. All other evidence of cancer in humans and experimental animals was judged "inadequate" or "limited." The physical nature of this product may help limit any inhalation hazard from oxidized asphalt during application in its hardened state. However, physical forces such as grinding, drilling and other demolition work on this product may liberate dust containing oxidized asphalt. Burning or heating of the product may cause fumes, vapors or mists.

Effects of Overexposure:

Inhalation: Fumes from hot asphalt may cause nausea, headache or dizziness

Skin and Eyes: Hot asphalt burns skin and eyes. Prolonged or repeated skin contact. may cause dermatitis.

Ingestion: Ingestion is unlikely.

SECTION 7 REACTIVITY DATA

Stability: Stable

Polymerization: Will not occur

Materials to Avoid: Strong oxidizers, alkalis, strong acids, and fluorine

Hazardous

Decomposition Products: CO_x, SO_x, NO_x, smoke on combustion, hydrogen sulphide (storage of hot product).

SECTION 8 PREVENTIVE MEASURES

Spill Procedure: In case of spill or leakage, allow to harden and shovel into containers.

Disposal Procedure: Follow federal, state/provincial, and municipal regulations.

Ventilation: Ventilate as needed in confined areas so as to comply with exposure limits (asphalt = 0.5 mg/m³, Hydrogen Sulphide = 10 ppm).

Respiratory: Not necessary unless exposure limits exceeded for asphalt fumes or hydrogen sulphide.

Gloves: Minimize skin contact; use protective gloves when handling material.

Eye Protection: Use splash-proof chemical goggles.

Other: If contact is unavoidable, use face shield, long-sleeved shirt, cuffless pants, and loose clothing.

SECTION 9 FIRST AID PROCEDURES

Skin: For hot asphalt contact, cool body part by water immersion or shower. DO NOT attempt removal of asphalt, but split longitudinally if splash is circumferential to avoid tourniquet effect. For skin soiling without underlying burn, cleanse with mineral oil followed by soap and water. Use olive oil in vicinity of the eyes.

Eyes: Copious warm water flush (minimum 15 min.). Get a physician's assessment if eyes are inflamed. Cleanse soiling with a vegetable oil (such as olive oil).

Inhalation: Evacuate to fresh air. Apply Cardio Pulmonary Resuscitation if required. Physician assessment mandatory.

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Ingestion: N/A

Notes to Physician: No attempt should be made to remove firmly adhering bitumen from the skin. Once bitumen is cool, it does no further harm and provides a sterile covering over burnt area. Bitumen plaque will detach itself as healing progresses. If solvent treatment is used, it should be followed by washing with soap and water, then application of refatting agent or skin cleansing cream. Only medically approved solvents may be used to remove bitumen from burns, as other solvents may cause further skin damage.

SECTION 10 OTHER

For outdoor use, remain upwind of hot asphalt when possible. Avoid skin and eye contact. During storage or transit of hot asphalt, hydrogen sulphide may accumulate in enclosed spaces. Open tank car hatches with caution. Avoid inhalation. Maintain same precautions when gauging and sampling.