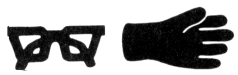
MATERIAL SAFETY DATA SHEET

OIL SPOT PRIMER

Offerte en français

HEALTH CANADA	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
Not regulated		**Not regulated**

SECTION I: IDENTIFICATION

Use: Asphalt repair and maintenance.

Manufacturer:
ExpertSeal
327 9th Avenue
Richmond (Quebec) J0B 2H0
CANADA
Tel.: 819 826-1000

Distributor:
Resisto Division, Soprema Canada
1675 Haggerty Street
Drummondville (Quebec) J2C 5P7
CANADA
Tel.: 819 478-8408 – 1 877 478-8408

In case of emergency:
SOPREMA (8:00am to 5:00pm): 1 800 567-1492 **CANUTEC (Canada) (24h.): 613 996-6666** **CHEMTREC (USA) (24h.): 1 800 424-9300**

SECTION II: HAZARD(S) IDENTIFICATION

DANGER

Causes eye irritation. May be harmful if swallowed. Likely to harm the fertility or the foetus. Presumed hazard of severe effects for the organs following repeated exposures or a prolonged exposure.

Make sure to get the special instructions before use. Do not handle before reading and understanding all the safety instructions. Do not eat, drink or smoke during handling this product. Do not breath vapours. Wear protection gloves and eye protection. Wash hands thoroughly after handling. Keep under key. Dispose of the container in a disposal site in accordance with the local, municipal and federal regulations.

SECTION III: COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Ethylene Glycol	107-21-1	1-5 %	100 mg/m³	Not available

Effects of Short-Term (Acute) Exposure

INHALATION

Ethylene Glycol: Ethylene glycol does not readily form a vapour at normal temperatures. Therefore, it must be heated or misted before inhalation exposure can occur. In studies with volunteers, continuous exposure to up to 63 mg/m³ had no noticeable effects, while brief exposure to 127 mg/m³ and higher caused throat and upper respiratory tract irritation. Exposure to 244 mg/m³ was not tolerable. (1)

SKIN CONTACT

Ethylene Glycol: Ethylene glycol is not irritating or a very mild irritant, based on animal and unconfirmed human information. In an unpublished sensitization study, application of ethylene glycol for 24 hours, with and without a covering, 9 times over 3 weeks, resulted in marginal redness in 9.3-12.2% of 401 volunteers and definite redness in a smaller group (percentage not reported), indicating cumulative irritation in some individuals. Ethylene glycol is absorbed through skin, but significant harmful effects are not expected by this route of exposure. (1)

EYE CONTACT

Ethylene Glycol: Ethylene glycol is not irritating or a very mild eye irritant, based on animal information. No conclusions can be drawn from a human case report where severe eye irritation occurred after exposure to a radiator fluid containing ethylene glycol. Concurrent exposure to other chemicals in the radiator fluid may have occurred. (1)

INGESTION

Ethylene Glycol: Ethylene glycol can cause significant harmful effects if ingested. There are numerous reports of kidney injury, nervous system injury and deaths in people who accidentally or intentionally ingested ethylene glycol. The commonly cited minimum lethal oral dose in humans is 1 110-1 665 mg/kg. However, it is very difficult to estimate a valid lethal or toxic dose for humans. Effects following ingestion of ethylene glycol involve 3 stages that develop with increasing time following exposure. The stages may overlap and the severity increases with the dose. Ingestion of lower doses may only result in stage 1 symptoms. Stage 1 begins 30 minutes – 12 hours after exposure and consists of symptoms of upset of the digestive tract and central nervous system toxicity including slurred speech, poor muscular coordination, drowsiness, seizures and convulsions. If the patient survives stage 1, stage 2 can occur 12-72 hours after ingestion and includes metabolic acidosis and symptoms of cardiopulmonary toxicity including rapid heartbeat, rapid breathing, bluish discolouration, pulmonary oedema and heart failure. Stage 3 occurs 24-72 hours after ingestion and is characterized by kidney toxicity including pain, excess urine production followed by diminished urine production, tissue death in the kidney and oxalate crystal deposition. A 4th stage, which is less common, can occur 6 days or more after ingestion. It consists of effects on cranial nerves resulting in symptoms such as facial paralysis, hearing loss, difficulty swallowing, blurred vision and poor muscular coordination. Ingestion is not a typical route of occupational exposure. (1)

Effects of Long-Term (Chronic) Exposure

NERVOUS SYTEM

Ethylene Glycol: No conclusions can be drawn based on a historical study, because ethylene glycol exposure levels are unknown, there was a mixed exposure and the exposure scenario is unusual (the mixture was heated to 105°C). Thirty-eight female workers were exposed to ethylene glycol vapour from a mixture (40% ethylene glycol, 55% boric acid and 5% ammonia) heated to 105°C for 1-5 years. Nine workers had regular loss of consciousness for 5-10 minutes (2-5 times/week), and episodes of involuntary rapid eye movement (nystagmus). (1)

SKIN

Ethylene Glycol: No conclusions about ethylene glycol can be drawn from the only study located, as there were mixed exposures. Six construction workers developed chronic skin diseases after working with vibrating tools using mineral oil in summer and ethylene glycol in winter, for up to 20 years. Four workers had a persistent fungal disease and two had irritant contact dermatitis. (1)

SKIN SENSITIZATION
Ethylene Glycol: Ethylene glycol is not considered an occupational skin sensitizer, because of the small number of cases located. (1)

KIDNEYS / URINARY SYSTEM
Ethylene Glycol: No conclusions about kidney effects can be drawn from studies in humans with long-term exposure to ethylene glycol. Short- and long-term ingestion exposure in animals to doses of about 1 000 mg/kg/day and higher has resulted in degenerative changes in the kidneys including tubule dilation, inflammation and deposition of oxalate crystals and stones. (1)

BLOOD
Ethylene Glycol: Twenty male volunteers who were exposed to an average of 17-49 mg/m³ ethylene glycol aerosol (purity not reported) for 30 days (20-22 hours/day) had no significant effects on blood composition. Male volunteers (number not reported) exposed continuously to 63 mg/m³ ethylene glycol aerosol (purity not reported; cited as 25 ppm) for up to 28 days had no effects on blood chemistry. (1)

CARCINOGENICITY
Ethylene Glycol: The available evidence does not indicate that ethylene glycol is a carcinogen. There is little human information available. In two animal studies, oral exposure to ethylene glycol for two years did not cause an increase in tumours. The International Agency for Research on Cancer (IARC) has not evaluated the carcinogenicity of this chemical. The American Conference of Governmental Industrial Hygienists (ACGIH) has designated this chemical as not classifiable as a human carcinogen (A4). The US National Toxicology Program (NTP) has not listed this chemical in its report on carcinogens. (1)

MUTAGENICITY
Ethylene Glycol: The available information does not indicate that ethylene glycol is mutagenic. No human information was located. Negative results were obtained in a study using live rats. (1)

TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY
Ethylene Glycol: Ethylene glycol is considered a developmental hazard based on animal evidence. In rats and mice, embryotoxic (late resorptions), fetotoxic (reduced foetal body weight) and teratogenic (external, soft tissue and skeletal defects) effects were observed at relatively high oral doses that caused no or minimal maternal toxicity. However, the US National Toxicology Program-Center for the Evaluation of Risks to Human Reproduction (NTP-CERHR) has concluded that the likelihood of developmental toxicity occurring in humans with occupational or consumer exposures is considered negligible, primarily because of the high doses needed to produce effects. (1)

POTENTIAL FOR ACCUMULATION
Ethylene Glycol: Does not accumulate. Ethylene glycol is readily absorbed from the digestive tract and through the lungs and is rapidly distributed throughout the body. Reported half-lives in animals range from 1-4 hours following oral exposure and 34-39 hours following inhalation exposure. In humans, half-lives following ingestion have ranged from 2.5-10 hours. (1)

SECTION IV: FIRST AID MEASURES

EYE CONTACT
Rinse with precaution with water for several minutes. Remove any contact lenses if they can be easily removed. Continue to rinse. Get medical attention if eye irritation persists.

SKIN CONTACT
Wash with soap and water. Get medical attention in case of irritation.

INHALATION
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

INGESTION
Call a Poisons Information Centre. Rinse one's mouth.

SECTION V: FIRE FIGHTING MEASURES

FLASH POINT: 111.1°C (232°F) (Closed cup) (Ethylene glycol)
AUTO-IGNITION TEMPERATURE: 398°C (748°F) (Ethylene glycol)
FLAMMABILITY LIMITS IN AIR: (% en volume) Not available.

FIRE HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES
Not available.

EXPLOSION HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

COMBUSTION PRODUCTS
CO, CO_2, formaldehyde and other toxic and irritating gases or fumes.

FIRE FIGHTING INSTRUCTIONS
Evacuate area. Wear self-contained breathing apparatus and appropriate protective clothing in accordance with standards. Stop the leak before attempting to stop the fire. If the leak cannot be stopped and if there is no risk to the surrounding area, let the fire burn itself out. Approach fire from upwind and fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move combustible surrounding material out from the fire area if this can be done without risk. Cool this material with flooding quantities of water until well after fire is out.

FIRE FIGHTING MEDIA
Use anti-alcohol or universal foam, dry chemical powder, CO_2 or sand.

SECTION VI: ACCIDENTAL RELEASE MEASURES

RELEASE OR SPILL
Stop or reduce the leak if safe to do so. Absorb with an inert dry material (earth, sand or absorbent material) and place in an appropriate waste disposal container. If necessary: **Neutralize the residue with a dilute solution of acetic acid.** Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. Do not wash this product down the sewage and drainage systems or into bodies of water.

SECTION VII: HANDLING AND STORAGE

HANDLING
This product is non-flammable. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing vapours and dusts. Wash thoroughly after handling. Tightly reseal all partially used containers. Use under appropriate conditions of ventilation. Keep away from heat. Do not cut, puncture or weld empty containers.

STORAGE
Store in a cool well-ventilated area out of direct sunlight and away from heat and ignition sources. Do not store at temperatures lower than 5°C or over than 90°C. Keep away from children.

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

EYES: Safety glasses. Splash goggles.
BODY: No special protective clothing is required.
RESPIRATORY: A respirator is not needed under normal and intended conditions of product use.
HANDS: Impervious gloves.
ENGINEERING CONTROLS: Keep in a cool, well-ventilated place.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
ODOUR AND APPEARANCE: Black liquid with slight acrylic odour
ODOUR THRESHOLD: Not available
pH (1% Soln/Water): 9.0-9.5
VAPOUR DENSITY (air = 1): Not available
VAPOUR PRESSURE: Not available
EVAPORATION RATE (Butyl acetate = 1): 0.36 (Water)
BOILING/CONDENSATION POINT: 100°C (212°F)
MELTING/FREEZING POINT:
May start to solidify at 0°C (32°F) based on data for: Water
SPECIFIC GRAVITY (H_2O = 1):
1.02 ± 0.01The only known value is 1 (Water)
SOLUBILITY: Miscible in water
VOLATILE ORGANIC COMPOUND CONTENT (V.O.C.): 0 g/L
VOLATILITY: 84-86 % (v/v). (Ammonia [Household] Solution)
VISCOSITY: Non-viscous substance
LogK_{ow}: Not available

SECTION X: STABILITY AND REACTIVITY

STABILITY AND REACTIVITY: This product is stable.
CONDITIONS OF INSTABILITY: None known.
INCOMPATIBILITY WITH VARIOUS SUBSTANCES: Reactive with oxidizing agents, strong acids and strong bases.
HAZARDOUS DECOMPOSITION PRODUCTS: Not available.
HAZARDOUS POLYMERISATION: Will not occur.

SECTION XI: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA
Ethylene Glycol: (1)
LC_{50} (rat): 2 725 mg/m³ (4-hour exposure)
LD_{50} (oral, rat): 4 000 mg/kg
LD_{50} (dermal, rabbit): 9 530 mg/kg

Effects of Short-Term (Acute) Exposure

INHALATION
Ethylene Glycol: Rats, rabbits, mice, dogs and monkeys exposed continuously to air saturated with ethylene glycol (66 ppm, 167 mg/m³, purity not reported) for 3 weeks had no toxic or behavioural effects. (1)

SKIN CONTACT
Ethylene Glycol: Application of 11-2 784 mg/kg/day ethylene glycol (purity not reported) for 30 days (1 hour/day) caused non-dose-related mortality and degeneration of renal tubules in rabbits (3-6/group) at almost all doses. This study is limited by low numbers of animals/group (usually 3) and poor reporting. (1)

INGESTION
Ethylene Glycol: In LD50 studies, the toxic effects from ethylene glycol included weakness, muscular incoordination, coma and death. In a series of tests, rats were given single oral doses of 0, 6 700, 10 000, 13 400, or 20 000 mg/kg ethylene glycol. All treated animals developed some degree of incoordination, lethargy and laboured breathing within 20 minutes of dosing. In one test, 12/24 animals dosed with either 13 400 or 20 000 mg/kg died before 48 hours. Ethylene Glycol disappeared from the bloodstream over 48 hours. Peak levels of blood and kidney oxalate were obtained at 8 hours. Detailed examination of the tissues indicated oxalate deposition in the kidneys with little damage to the kidneys, and inflammation of the membranes surrounding the brain (meninges). (1)

Effects of Long-Term (Chronic) Exposure

INHALATION
Ethylene Glycol: Rats, guinea pigs, rabbits, squirrel monkeys and dogs were exposed to 4 or 23 ppm ethylene glycol vapour (cited as 10 or 57 mg/m³, reagent grade) for 6 weeks (8 hours/day, 5 days/week). Some mild changes were noted from detailed examination of the tissues; however no comparison with controls was reported. (1)

INGESTION
Ethylene Glycol: Male Wistar rats were fed diets with, 0, 50, 150, 300 or 400 mg/kg/day ethylene glycol (99.4% pure) for up to 12 months. (Wistar rats are at increased risk for accumulating oxalate crystals and developing kidney injury from ethylene glycol exposure). There were no treatment related clinical signs at 50 or 150 mg/kg/day. Mortality occurred in 5/20 rats exposed to 300 mg/kg/day and 4/20 rats exposed to 400 mg/kg/day, with the remaining rats exposed to 400 mg/kg/day euthanized early due to excessive weight loss. An increased incidence of calcium oxalate crystals in the urine was observed in the 50 and 150 mg/kg/day groups, but there were no signs of kidney or bladder injury. Significant kidney and/or bladder damage was observed in animals exposed to 300 or 400 mg/kg/day. (1)

CARCINOGENICITY
Ethylene Glycol: The information located does not indicate that ethylene glycol is a carcinogen. In a 2-year study, mice were given ethylene glycol (greater than 99% purity) in the diet. Estimated reported doses were 0, 1 500, 3 000 or 6 000 mg/kg/day for males and 0, 3 000, 6 000 or 12 000 mg/kg/day for females. There were no increases in any type of tumour. (1)

TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY
Ethylene Glycol: In well-conducted studies, embryotoxicity (late resorptions), fetotoxicity (reduced foetal body weight) and teratogenicity (external, soft tissue and skeletal defects) have been observed in rats and mice exposed to high oral doses that caused no or minimal maternal toxicity. NTP-CERHR has also concluded that oral exposure to high doses of ethylene glycol causes developmental toxicity in rats and mice. Rats were given oral doses of 0, 1 250, 2 500 or 5 000 mg/kg/day ethylene glycol (greater than 99% pure) by gavage from days 6-15 of pregnancy. There was no significant effect on corrected maternal weight gain. At 2 500 and 5 000 mg/kg/day, there was a significant increase in relative kidney weight and a significant decrease in liver weight. In the offspring, there were dose-related decreases in number of live foetuses/litter and in average foetal body weight, both significant at 2 500 mg/kg/day. There was a significant increase in post-implantation loss at 5 000 mg/kg/day and a dose-related increase in the percentage of litters with one or more malformed foetuses, which was significant at all doses. There was a significant increase in external malformations at 5 000 mg/kg/day, in soft tissue abnormalities at 1 250 and 5 000 mg/kg/day, and in skeletal abnormalities at 2 500 and 5 000 mg/kg/day. (1)

REPRODUCTIVE TOXICITY
Ethylene Glycol: Ethylene Glycol is not a reproductive toxin. In one study in mice exposed by ingestion, there were significant effects on the testes and sperm but no effects on reproductive outcome. CERHR has concluded that data in mice are sufficient to demonstrate no effect on fertility in males or females following oral exposure of up to 2 826 mg/kg/day for 22 weeks. In addition, the data are sufficient to demonstrate that ethylene glycol is not a reproductive toxicant in male or female rats following dietary exposure up to 1 000 mg/kg/day for 7 weeks prior to mating in parental rats or from the time of conception through mating in offspring. (1)

MUTAGENICITY
Ethylene Glycol: The information locates does not indicate that ethylene glycol is mutagenic. Negative results were obtained in a study using live rats. No conclusions can be drawn from a limited unconfirmed study with positive results in rats. Most studies in cultured mammalian cell and bacteria have been negative. (1)

SECTION XII: ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS
Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life.

SECTION XIII: DISPOSAL CONSIDERATIONS

WASTE INFORMATION

Waste must be disposed of in accordance with federal, provincial, municipal and local environmental control regulations.

Consult your local or regional authorities.

SECTION XIV: TRANSPORT INFORMATION

This product is not regulated by DOT and TDG.

SECTION XV: REGULATORY INFORMATION

DSL: All constituents of this product are included in the Domestic Substances List (DSL – Canada)

TSCA: All constituents of this product are included on the Toxic Substances Control Act Inventory (TSCA – United States).

Proposition 65: This product contains chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION XVI: OTHER INFORMATION

GLOSSARY

ASTM: American Society for Testing and Materials
CAS: Chemical Abstract Services
CSA: Canadian Standardisation Association
DOT: Department of Transportation
EPA: Environmental Protection Agency (United States)
GHS: Globally Harmonized System
LD_{50}/LC_{50}: Less high lethal dose and lethal concentration published
RCRA: Resource Conservation and Recovery Act (United States)
TDG: Transportation of Dangerous Goods (Canada)
TLV-TWA: Threshold Limit Value – Time-weighted Average

References:

(1) CHEMINFO (2015) Canadian Centre of Occupational Health and Safety, Hamilton (Ontario) Canada

Code of MSDS: **CA U DRU SS FS 126**

For more information: 1-800-567-1492

The Material Safety Data Sheets of RESISTO Canada are available on Internet at the following site: **www.resisto.ca**

Justification of the update:

- GHS format.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.