

MATERIAL SAFETY DATA SHEET
ALSAN TRAFIK HP 510 ZERO

Offerte en français

WHMIS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
		NOT REGULATED

SECTION I: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Use: Waterproofing polyurethane primer single-component.

Formula number: 642.1

Manufacturer: Soprema Canada
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SOPREMA (8:00am to 5:00pm): 1 800 567-1492

CANUTEC (Canada) (24h.): 613 996-6666

CHEMTREC (USA) (24h.): 1 800 424-9300

EMERGENCY OVERVIEW!!!

Caution! Combustible liquid and vapours. The vapours are heavier than air and may spread long distances to a distant ignition source (such as a pilot light, and any object that sparks, such as an electric motor) and flash back.

Harmful if inhaled. May cause irritation to eyes, skin and respiratory tract. Harmful or fatal if swallowed. May cause cancer. This product contains isocyanates. May cause allergic or asthmatic symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.

SECTION II: COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Parachlorobenzenetrifluoride (PCBTF)	108-65-6	40-70	Not established	Not established
Diphenylethane diisocyanate (MDI)	101-68-8	3-7	0.005 ppm	Not established
[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane	2530-83-8	0.1-1	Not established	Not established
Benzoyl Chloride	98-88-4	0.1-1	0.5 ppm	1 ppm

SECTION III: POTENTIAL HEALTH EFFECTS

Effects of Short-Term (Acute) Exposure

INHALATION

Inhalation of vapours of this product may cause irritation of the respiratory system. Inhalation of MDI (isocyanates) may cause a sensitization of the respiratory system.

PCBTF: Inhalation of vapors of this product may cause irritation of mucous membrane and cause cough and respiratory difficulties. (2)

MDI: Exposures by inhalation are unlikely to occur unless MDI is heated or forms an aerosol or mist during pouring or spraying operations. Short-term inhalation exposure to isocyanates can cause respiratory and mucous membrane irritation. Symptoms include eye and nose irritation, dry or sore throat, runny nose, shortness of breath, wheezing and laryngitis. Coughing with chest pain or tightness may also occur, frequently at night. These symptoms may occur during exposure or may be delayed several hours. Some people may become sensitized to MDI (see *Effects of Long-term (Chronic) Exposure* for information). High aerosol concentrations could cause inflammation of

the lung tissue (chemical pneumonitis), chemical bronchitis with severe asthma-like wheezing, severe coughing spasms and accumulation of fluid in the lungs (pulmonary oedema), which could prove fatal. Symptoms of pulmonary oedema may not appear until several hours after exposure and are aggravated by physical exertion. (1)

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: Vapour generated at ambient temperature should not cause any harmful health effect at short term. Nevertheless this product can form methanol in case of hydrolysis. Vapours of methanol may cause dizziness, drowsiness, visual troubles and also tingling, numbing and lancinating pains to hands and forearms. This product may cause a sensitization by inhalation. (2)

SKIN CONTACT

Frequent or prolonged contacts can remove the natural fat from the skin and may cause redness, skin irritation and dermatitis. This product contains isocyanates (MDI) which may cause skin sensitization.

PCBTF: PCBTF cause skin irritation. Prolonged contact is more irritating due to the defatting action of this solvent: dermatitis (dry, red skin) may result. (2)

MDI: MDI can cause moderate irritation. Isocyanates, in general, can cause skin discolouration (staining) and hardening of the skin after repeated exposures. Skin sensitization, resulting in dermatitis, may occur in some individuals. Skin contact is not expected to result in the absorption of harmful amounts. (1)

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: This product causes a minor irritation. An increase of skin pigmentation can occur. (2)

Benzoyl Chloride: Benzoyl chloride is corrosive to skin based on animal information. Effects depend on the concentration of the solution and the duration of contact. (1)

EYE CONTACT

The vapours may cause eye irritation with tearing and discomfort, redness and pain. Eye contact with the product may cause moderate irritation.

PCBTF: Eye contact with the product may cause irritation, redness and pain. The vapours may cause eye irritation with tearing and discomfort, redness and pain. (2)

MDI: Contact with MDI liquid, mist and aerosols may cause slight irritation with tearing and discomfort. (1)

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: This product causes a light irritation. (2)

Benzoyl Chloride: Benzoyl chloride is corrosive to eyes based on animal information. (1)

INGESTION

It is unlikely that toxic amounts of this product would be ingested with normal handling and use.

Effects of Long-Term (Chronic) Exposure

PCBTF: Chronic inhalation and ingestion may cause chronic fluoride poisoning (fluorosis) characterized by weight loss, weakness, anemia brittle bones, and stiff joints. Chronic exposure to fluoride compounds may cause systemic toxicity.

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: Vapour generated at ambient temperature should not cause any harmful health effect. Long-term repeated overexposure at concentrations of methanol vapours (by-products in case of hydrolysis) is unlikely to occur. (2)

RESPIRATORY SENSITIZATION

MDI: The sensitization is usually caused by a very large exposure or by multiple exposures. Although varying periods of exposure (1 day to years) may elapse before sensitization occurs, it develops more often during the first few months of exposure. Sensitized individuals react to very low levels of MDI (as low as 0.0014 ppm) that have no effect on unsensitized people. At first, the symptoms may appear to be a cold or mild hay fever. However, severe asthmatic symptoms can develop and include wheezing, chest tightness, shortness of breath, difficulty breathing and/or coughing. Fever, chills, general feelings of discomfort, headache and fatigue can also occur. Symptoms may occur immediately upon exposure, within an hour or several hours after exposure or both and/or at night. Typically the asthma improves with removal from exposure (e.g. weekends and vacations) and returns, in some cases, in the form of an "acute attack", on renewed exposure. Sensitized people who continue to work with MDI may develop symptoms sooner after each exposure. The number and severity of symptoms may increase. Following removal from exposure, some workers may continue to have persistent respiratory problems such as asthmatic symptoms, bronchial problems and hypersensitivity to MDI. Others may recover fully and may gradually lose their sensitivity within several years. MDI may also cause hypersensitivity pneumonitis, another allergic lung disease, which is characterized by symptoms such as shortness of breath, fever, tiredness, non-productive cough, and chills. Several studies have shown that continued exposure to low levels of MDI and other isocyanates may cause impaired lung function, such as diminished respiratory capacity. Other studies have shown that extremely low levels of MDI (e.g. less than 0.003 ppm) do not decrease lung function. Cross-sensitization between different isocyanates may occur. People sensitized to toluene diisocyanate (TDI)

or hexamethylene diisocyanate (HDI) may show sensitization to MDI, without having previous exposure to this chemical. (1)

SKIN SENSITIZATION

MDI: Allergic contact dermatitis can be developed from contact with MDI. (1)

CARCINOGENICITY

PCBTF: This product is not classified carcinogenic by the International Agency for Research on Cancer (IARC), the American Conference of Governmental Industrial Hygienists (ACGIH), nor the US National Toxicology Program (NTP). (2)

MDI: The IARC has concluded that this chemical is not classifiable as to its carcinogenicity to humans (Group 3). The ACGIH has not assigned a carcinogenicity designation to this chemical. The NTP has not listed this chemical in its report on carcinogens. (1)

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: This product is not classifiable carcinogenic by the IARC or by the ACGIH. (2)

Benzoyl Chloride: The IARC has concluded that this chemical is probably carcinogenic to humans (Group 2A). The ACGIH has designated this chemical as not classifiable as a human carcinogen (A4). The NTP has not listed this chemical in its report on carcinogens. (1)

TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY

No information available.

REPRODUCTIVE TOXICITY

PCBTF: Based on animal studies, limited effects on reproduction have been observed. (2)

No information is available on others products.

MUTAGENICITY

PCBTF: Based on some studies, this product is not considered has mutagenic. (2)

MDI: In one case report, MDI caused DNA damage in human white blood cells after inhalation exposure to 5 to 20 ppb. This report provides insufficient information for determining the mutagenicity of MDI. No other human or animal in vivo studies have been reported. (1)

SECTION IV: FIRST AID MEASURES

SKIN CONTACT

Remove contaminated clothing. Wash thoroughly with soap and water. If irritation persists, get medical attention.

EYE CONTACT

Flush thoroughly with water for at least 15 minutes. If irritation persists, get medical attention.

INHALATION

In case of gas or vapour inhalation, move victim to fresh air. If breathing is difficult, give oxygen. If breathing stops, give respiratory assistance. Obtain medical assistance.

SWALLOWING

Do not induce vomiting. Immediately contact local poison control centre. Should vomiting occur, be sure to keep the victim's head below hips to avoid aspiration of vomit into the lungs. Maintain the victim at rest and obtain immediate medical attention.

SECTION V: FIRE-FIGHTING MEASURES

FLAMMABILITY: Combustible liquid, Class II (NFPA)

EXPLOSION DATA: Sensitivity to mechanical impact: No
Sensitivity to static charge: Can accumulate static charge by flow.

FLASH POINT: 43°C (ASTM D93)

AUTO-IGNITION TEMPERATURE: Not available

FLAMMABILITY LIMITS IN AIR: (% in volume) 0.9 – 10.5 (PCBTF)

FIRE AND EXPLOSION HAZARDS

This product and its vapours may ignite by heat, sparks or flames. Vapours may form explosive mixtures with air. Vapours are heavier than air and may travel a considerable distance to a source of ignition and flash back to a leak or open container. The product may ignite on contact with strong oxidizing agents. Do not cut, puncture or weld empty containers.

COMBUSTION PRODUCTS

Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion. Toxic and/or irritating gases or fumes can emanate from empty containers when submitted to high temperatures. Combustion of this product may release: gaseous hydrocarbons, hydrogen fluoride, hydrogen chloride, carbon oxides, formaldehyde, acetaldehyde, methylglyoxal, nitrogen oxides, hydrogen cyanide, silicon oxides, phosgene, hydrochloric acid and other irritating and toxic fumes.

FIRE FIGHTING INSTRUCTIONS

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

EXTINGUISHING MEDIA

Foam anti-alcohol or universal, dry chemical powder, CO₂, sand.

SECTION VI: ACCIDENTAL RELEASE MEASURES

RELEASE OR SPILL

Ventilate area. Wear appropriate protective equipment during cleanup. Eliminate all sources of ignition. Shut off source of leak if you can do it without risk. Contain the spill. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Sweep or shovel into containers with lids, use clean non-sparking tools (sp.: plastic) to collect absorbed material. Cover and remove to appropriate well ventilated area until disposal. Do not touch or walk through spilled material. Wash spill area with soap and water. Prevent entry into waterways, sewers, basements or confined areas. Dispose of material according to the local environmental regulations.

SECTION VII: HANDLING AND STORAGE

HANDLING

This product and its vapours are combustible and toxic. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing mist, vapour or dust. Wash hands thoroughly after handling. Before handling, it is very important that ventilation controls are operating and protective equipment requirements are being followed. People working with this product should be properly trained regarding its hazards and its safe use. Eliminate all ignition sources (e.g. sparks, open flames, hot surfaces). Keep away from heat. Ground transfer containers to avoid static accumulation. Tightly reseal all partially used containers. 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. Keep storage areas clear of combustible materials. No smoking near storage area. Store away from incompatible materials. Store the product according to occupational health and safety regulations and fire and building codes. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment near storage area. Inspect all containers to make sure they are properly labelled.

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

HANDS: Wear gloves made from polyvinyl alcohol (PVA) or nitrile.

RESPIRATORY: If the TLV is exceeded, if use is performed in a poorly ventilated confined area, use an approved respirator in accordance with standards.

EYES: Wear chemical safety goggles in accordance with standards.

OTHERS: Eye bath and safety shower.

CONTROL OF VAPOURS: Local exhaust is needed to control vapour and dust level to below recommended limits.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
ODOUR AND APPEARANCE:	Transparent liquid with strong odour
ODOUR THRESHOLD:	Not available
VAPOUR DENSITY (air = 1):	6.24 (PCBTF)
EVAPORATION RATE (Butyl acetate = 1):	Not available
BOILING POINT (760 mm Hg):	Not available
FREEZING POINT:	Not available
SPECIFIC GRAVITY (H₂O = 1):	1.3 kg / L
SOLUBILITY IN WATER (20°C):	Insoluble
VOLATILE ORGANIC COMPOUND (V.O.C.) CONTENT:	0 g / L
VISCOSITY:	100 Centipoises (Visco Brookfield, 25°C)

SECTION X: STABILITY AND REACTIVITY

STABILITY: This material is stable at handling and storage conditions recommended under the Section VII.

CONDITIONS OF REACTIVITY: Avoid excessive heat.

INCOMPATIBILITY: Keep away from oxidizing agents and from highly acid and basic materials to avoid exothermic reactions. Contact with water may accelerate product ripening.

HAZARDOUS DECOMPOSITION PRODUCTS: See section V "Combustion products" in case of decomposition by excessive heat. This product reacts with water and causes an emanation of carbonic gas which would lead to pressure increasing in closed containers. Peroxides can also form and generate the same situation.

HAZARDOUS POLYMERISATION: None.

SECTION XI: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA

PCBTF: (2)

CL50 (inhalation, rat):	4 470 ppm (4-hour exposition)
DL50 (oral, rat):	>6 700 mg/kg
DL50 (skin, rabbit):	>2 700 mg/kg

MDI: (1)

CL50 (inhalation, rat):	369 mg/m ³ (4-hour exposition)
DL50 (oral, rat):	> 10 000 mg/kg
DL50 (skin, rabbit):	> 10 000 mg/kg

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: (2)

DL50 (oral, rat):	> 24 000 mg/kg
DL50 (skin, rabbit):	> 4 000 mg/kg

Benzoyl Chloride: (1)

CL50 (inhalation, rat):	230 ppm (4-hours exposition); cited as 1.87 mg/L (2-hour exposure)
DL50 (oral, rat):	1 900 mg/kg
DL50 (skin, rabbit):	790 mg/kg

Effects of Short-Term (Acute) Exposure

INHALATION

PCBTF: No data (2)

MDI: No significant effects were found when rats were exposed to 2, 5 and 15 mg/m³ of MDI aerosol for 6 hours/day, 5 days/week for 2 weeks. (1)

EYE CONTACT

PCBTF: No data (2)

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: Irritating. Causes severe injuries of the eyes of rabbit. (2)

MDI: Methylene diphenyl diisocyanate (MDI) has been reported to cause slight eye irritation to rabbits. (1)

Benzoyl Chloride: Application of 0.1 ml of benzoyl chloride was corrosive to rabbits. (1)

SKIN CONTACT

PCBTF: No data (2)

MDI: Application of 0.5 ml of MDI caused slight to moderate irritation (92-95% MDI) to rabbits. (1)

INGESTION

PCBTF: No data (2)

MDI: Rats were given daily doses of 4.3 to 5 g/kg for 5 days. The only effect was a slight enlargement of the spleen to 2 of 5 rats. (1)

Effects of Long-Term (Chronic) Exposure

INHALATION

PCBTF: Within the context of a study of inhalation of 28 days conducted on rats (female and male), the animals have been exposed to 0, 100, 200, 500, and 1000 ppm, during six hours/day, 5 days/week. The clinical signs included an increase of activity at an exposure of 250 ppm and more. The liver and the kidney have shown an increased weight. At all levels of exposure, a hypertrophy of the liver cells of the males has been noted, probably caused by a reaction of adaptation generated by the increase of the liver metabolism. (2)

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: To rats, the repeated exposure to a breathable aerosol of an hydrolysate of this product did not cause any injury to the respiratory tract and did not show any sign of general toxicity. (2)

INGESTION

PCBTF: The level of no negative effect observable in the studies done with this product is between 10 and 100 mg/day. (2)

SKIN SENSITIZATION

MDI: The dose required to sensitize 50% of the animals was 0.73 mg/kg (mouse ear-swelling test (MEST)).

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: Negative results in a test of mark to human (Human patch test). (2)

TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: No effect has been noticed at 500 and 1500 mg/kg/day. (2)

MUTAGENICITY

MDI: It is not possible to conclude that MDI is mutagenic. (1)

[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane: This product shows to be slightly mutagenic in some in vitro procedures. It is unlikely that this product presents an important genotoxic hazard, because there were no local oncogenic reactions following the repeated chronic application on mouse skin. (2)

CARCINOGENICITY

MDI: IARC has determined there is limited evidence for the carcinogenicity of a mixture containing monomeric and polymeric MDI to experimental animals. (1)

Benzoyl Chloride: IARC has concluded that there is inadequate evidence for the carcinogenicity of benzoyl chloride to experimental animals. (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 DISPOSAL

This product is listed as hazardous waste. Consult local, state, provincial or territory authorities to know disposal methods. Also listed as hazardous waste by the RCRA (USA); waste disposal as to follow EPA regulations. Do not dispose of waste with normal garbage or sewers systems.

SECTION XIV: TRANSPORT INFORMATION

CLASSIFICATION (TDG – DOT): Not Regulated.

IDENTIFICATION NUMBER: Not applicable.

SHIPPING NAME: Not applicable.

PACKING GROUP: Not applicable.

CONTAINERS FOLLOW THE STANDARDS.

SECTION XV: REGULATORY INFORMATION

WHMIS: Class B2: Combustible liquid (flash point between 37.8°C and 93.3°C)

Class D1A: Very toxic material causing immediate and serious effect: (MDI: CL50)

Class D2A: Very toxic material causing other effects. (MDI: respiratory tract sensitization)

Class D2B: Poisonous and infectious material - Other effects – Toxic (MDI: skin irritation, skin sensitization)

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

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

HMIS (USA):		NFPA (USA):	
Health:	2	Health:	2
Flammability:	3	Flammability:	3
Reactivity:	1	Reactivity:	0
Protective equipment:	B	Specific hazard:	-

SECTION XVI: OTHER INFORMATION

Glossary:

ANSI: American National Standards Institute

ASTM: American Society for Testing and Materials

CAS: Chemical Abstract Services

CSA: Canadian Standardisation Association

DOT: Department of Transportation (United States)

EPA: Environmental Protection Agency (United States)

HMIS: Hazardous Material Information System

LD50/LC50: Less high lethal dose and lethal concentration published

NFPA: National Fire Protection Association (United States)

OSHA: Occupational Safety & Health Administration (United States)

RCRA: Resource Conservation and Recovery Act (United States)

TDG: Transportation of Dangerous Goods

TLV-TWA: Threshold Limit Value – Time-weighted average

WHMIS: Workplace Hazardous Materials Information System (Canada)

References:

- (1) CHEMINFO (2008) Canadian Centre of Occupational Health and Safety, Hamilton (Ontario) Canada.
- (2) Material Safety Data Sheet of the supplier.

Code of MSDS: CA U DRU SS FS 121

This MSDS has been prepared by: Michel Galtier
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The Material Safety Data Sheets of SOPREMA Canada are available on Internet at the following site: <http://www.soprema.ca>

Justification of the update:

- Alsan Trafik HP 510 has been replaced by Alsan Trafik HP 510 Zero.

This MSDS contains all the information required by ANSI Z-400.1-1998 standard (United States), by regulation 29 CFR Part 1910.1200 of the Hazard Communication Standard of OSHA, and is in accordance with standard DORS/88-66 OF WHMIS Canada.

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