

# COLTACK

*Disponible en français*

WHMIS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
		 <p><b>ADHESIVE</b> Class 3 UN1133 P.G.: II</p>

## SECTION I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product name:** Coltack  
**Use:** Adhesives composed of bitumen and polyurethane.

**Code of MSDS:** CA U DRU SS FS 022  
**Formula number :** 560.1  
**Revision date:** July 15, 2008  
**Revised by:** Michel Galtier, Health and Safety Supervisor  
 (800) 567-1492  
[mgaltier@soprema.ca](mailto:mgaltier@soprema.ca)

**Manufacturer:** Soprema Canada  
 1675 Haggerty Street  
 Drummondville (Quebec) J2C 5P7  
 CANADA  
 Tel.: (819) 478-8163

**Distributors:**

Soprema Inc. 44955 Yale Road West Chilliwack (B.-C.) V2R 4H3 CANADA Tel.: (604) 793-7100	Soprema USA 310 Quadral Drive Wadsworth (Ohio) 44281 UNITED STATES Tel.: (800) 356-3521
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**In case of emergency:**

SOPREMA (8:00am to 5:00pm – Eastern time): (800) 567-1492  
 CANUTEC (Canada) (24h.): (613) 996-6666  
 CHEMTREC (USA) (24h.): (800) 424-9300  
 Poison Control Centre: Consult local telephone directory

### EMERGENCY OVERVIEW!!!

**CAUTION!** This product and its vapours are very flammable. The vapours are heavier than air and may spread long distances. Distant ignition and flash back are possible. Do not smoke. Adequate ventilation to the outside must be provided. All ignition source must be eliminated near working area (spark-producing devices or switches, furnaces, all pilot lights). Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.

May cause irritation to eyes, skin and respiratory tract. Harmful or fatal if swallowed. Ingestion of the product can cause severe lung injury when aspirated. Inhalation of high vapour concentrations may cause central nervous system (CNS) depression (headache, nausea, dizziness, drowsiness, incoordination and unconsciousness). This product contains isocyanates. May cause sensitization by inhalation and by contact with skin.

**SECTION II. COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS**

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Asphalt	8052-42-4	60-100	0.5 mg/m <sup>3</sup>	Not established
Toluene	108-88-3	5-10	20 ppm	Not established
Methylene Di p-phenyl Di Isocyanate (MDI) and isomers	101-68-8	1-5	0.005 ppm	Not established
Stannane dibutylbis[(1-oxododecyl)oxy]	77-58-7	0.1-1	0.1 mg/m <sup>3</sup> (OSHA PEL)	Not established

**SECTION III. POTENTIAL HEALTH EFFECTS**

*Effects of Short-Term (Acute) Exposure*

**INHALATION:**

Inhalation of vapours of toluene and isocyanates (MDI) can occur. The exposition to vapours of solvents over exposure limits may cause irritation of the respiratory system and central system depression (headaches, dizziness, nausea, tiredness, confusion and coma). MDI may cause respiratory sensitization, an allergic reaction (e.g. asthma, difficulty to breath, angina) which becomes evident upon re-exposure to this material.

**Toluene:** Symptoms are related to exposure concentration. At approximately 50 ppm, slight drowsiness and headache have been reported. Irritation of the nose, throat and respiratory tract has occurred between 50 and 100 ppm. Concentrations of about 100 ppm have caused fatigue and dizziness; over 200 ppm have caused symptoms similar to drunkenness (giddiness), numbness, and mild nausea; over 500 ppm have caused mental confusion and incoordination. (1)

**MDI:** MDI has a very low vapour pressure. Therefore, airborne exposures are unlikely to occur unless MDI is heated or forms an aerosol or mist during pouring, frothing 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 isocyanates. (1)

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** Not likely route of entry unless heated. Mist or fog if inhaled can cause harm. (2)

**SKIN CONTACT:**

Frequent or prolonged contacts can remove the natural fat from the skin and may cause redness, skin irritation and dermatitis. Isocyanates (MDI) may cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Isocyanates can cause skin discoloration and hardening of the skin after repeated exposures. Toluene can be absorbed through the skin but skin contact is not expected to result in the absorption of harmful amounts. (1)

**EYE CONTACT:**

The vapours may cause irritation with tearing and discomfort, redness and pain. Eye contact with the product may cause moderate to severe irritation. Alterations in vision, for example, reduced acuity and suppressed colour vision, have been documented following exposure to mixed solvents. (1)

**INGESTION:**

It is unlikely that toxic amounts of this product would be ingested with normal handling and use. If significant amount of the product were ingested, symptoms as described for inhalation might occur. This product may cause irritation, mouth and throat burns and abdominal pains. The product can be aspirated (inhaled) into the lungs during ingestion or vomiting. Aspiration of even a small amount of liquid could result in a life threatening accumulation of fluid in the lungs. Severe lung damage (oedema), respiratory failure, cardiac arrest and death may result. (1)

*Effects of Long-Term (Chronic) Exposure*

**NERVOUS SYSTEMS:**

**Toluene:** Long-term exposure to solvent may cause harmful effects on the nervous system, but there is not enough information available to draw firm conclusions. Symptoms such as headaches, irritability, depression, insomnia, agitation, extreme tiredness, tremors, and impaired concentration and short-term memory have been reported following long-term occupational exposure to solvents. This condition is sometimes generally referred to as "organic solvent syndrome". Numerous studies of rotogravure printers, painters and rubberized-matting workers with chronic exposure to toluene are inconclusive about chronic central nervous system (CNS) damage. Some studies report changes such as memory loss, sleep disturbances, loss of ability to concentrate, or incoordination, while others report no effects. Recent studies using sensitive neurobehavioral tests have shown altered scores for exposed workers but whether or not these indicate CNS damage is not clear. (1)

**Asphalt, MDI, Stannane dibutylbis[(1-oxododecyl)oxy]:** No human or animal information is available.

### SECTION III. POTENTIAL HEALTH EFFECTS

#### **SENSITIZATION:**

**MDI:** Respiratory sensitization has developed in people working with isocyanates. 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 isocyanates (for 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, difficult 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 isocyanates 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 isocyanates. Others may recover fully and may gradually lose their sensitivity within several years. Isocyanates 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. Exposure to isocyanates is likely to cause aggravation to individuals with existing respiratory disease, such as chronic bronchitis and emphysema. (1)

#### **TARGET ORGANS:**

**Toluene:** A number of case reports and occupational studies have suggested that liver and kidney damage may result from long-term occupational exposure to toluene. However, it is not possible to attribute these effects directly to a specific exposure because generally there was exposure to other chemicals at the same time, particularly other solvents, and there was no information provided on the exposure levels or duration of exposure. There is some evidence to suggest that long-term exposure to toluene may affect hearing. However, the limited information available does not allow a conclusion to be drawn. Although minor changes in blood parameters have been observed, it is generally accepted that toluene does not cause significant blood disorders. (1)

**Asphalt, MDI, Stannane dibutylbis[(1-oxododecyl)oxy]:** No human or animal information is available.

#### **CARCINOGENICITY:**

**Toluene:** There have been several human population studies which have examined the possible relationship between toluene exposure and cancer. Cancers of most sites were not significantly associated with toluene exposure in any study. The International Agency for Research on Cancer (IARC) has concluded there is inadequate evidence for the carcinogenicity of toluene in humans. There is evidence suggesting a lack of carcinogenicity to o-toluene in experimental animals. The International Agency for Research on Cancer (IARC) has concluded that this chemical is not classifiable as to its carcinogenicity to humans (Group 3). 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)

**MDI:** The risk of cancer associated with exposure to isocyanates has been examined in 4 human population studies. No strong association or consistent pattern has been observed. It is not possible to draw any conclusions from this case report. The International Agency for Research on Cancer (IARC) has determined there is inadequate evidence for the carcinogenicity of MDI or polymeric MDI in humans. There is limited evidence for the carcinogenicity of a mixture containing MDI and polymeric MDI in experimental animals. The International Agency for Research on Cancer (IARC) has concluded that this chemical is not classifiable as to its carcinogenicity to humans (Group 3). The American Conference of Governmental Industrial Hygienists (ACGIH) has not assigned a carcinogenicity designation to this chemical. The US National Toxicology Program (NTP) has not listed this chemical in its report on carcinogens. (1)

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** No human or animal information is available. The International Agency for Research on Cancer (IARC) has not evaluated the carcinogenicity of these chemicals. The American Conference of Governmental Industrial Hygienists (ACGIH) has not listed these chemicals. The US National Toxicology Program (NTP) has not listed these chemicals in its report on carcinogens. (1)

#### **TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY:**

**Toluene:** Toluene is a developmental toxicity hazard, based on information obtained from animal studies. A detailed review of toluene and its potential to cause teratogenicity/embryotoxicity in occupational situations has been published. This review concludes that although many occupational studies have evaluated general solvent exposure and pregnancy outcomes, few studies have specifically investigated toluene exposure. Most of these studies have involved exposure to solvents in general or to certain solvent classes, with toluene exposure addressed as a co-exposure or identified as a common exposure in a sub-group. Outcomes of concern included spontaneous abortion (miscarriage) and teratogenicity (congenital malformations). These studies do provide evidence suggesting there may be an association between occupational toluene exposure and the occurrence of spontaneous abortions. Nevertheless, further research is required before it will be possible to conclude that there is a causal relationship between toluene exposure and an increased incidence of spontaneous abortions. Concerns about the potential teratogenicity of toluene in humans have also arisen due to effects (usually renal/urinary) seen in solvent abuse cases (glue-sniffing). These extreme exposures to toluene, as well as other confounding factors such as tobacco and alcohol abuse, are not relevant to occupational situations. (1)

**Asphalt, MDI, Stannane dibutylbis[(1-oxododecyl)oxy]:** No human or animal information is available.

### SECTION III. POTENTIAL HEALTH EFFECTS

#### REPRODUCTIVE TOXICITY:

**Toluene:** No conclusions can be drawn based on the available human information. Reproductive effects have not been observed in animal studies. A review of toluene and its potential to cause reproductive toxicity in workers has been published. Three cross-sectional studies evaluated fertility in women exposed to toluene or in the wives of exposed men. No conclusions can be drawn. Another study suggests that menstrual function is not affected by exposure to toluene. Another report describes testicular atrophy and reduced spermatogenesis in one man who abused toluene for 10 years. This extreme exposure situation is not relevant to occupational exposures. (1)

**Asphalt, MDI, Stannane dibutylbis[(1-oxododecyl)oxy]:** No human or animal information is available.

#### MUTAGENICITY:

**Toluene:** Results from the available human studies are inconclusive. Both positive and negative results have been obtained in human studies, but no studies were carried out with toluene exposure only, or with adequate control of other factors. (1)

**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)

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** No human or animal information is available.

#### TOXICOLOGICALLY SYNERGISTIC MATERIALS:

**Toluene:** Exposure to other solvents such as benzene, xylene and ethanol (alcohol) slows the rate of clearance of toluene from the body, thereby enhancing the toxicity of toluene. The toxic effects of this material can probably be increased by the consumption of alcohol. No specific information is available, but alcohol increases the toxicity of related chemicals such as toluene. (1)

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** No human or animal information is available.

#### POTENTIAL FOR ACCUMULATION:

**Toluene:** Toluene is readily absorbed by inhalation or ingestion and tends to be deposited more in tissues that are fatty or have a rich blood supply (e.g. brain, liver, kidney) and excreted by the kidneys in the urine. It can also be exhaled unchanged. (1)

**Asphalt, MDI, Stannane dibutylbis[(1-oxododecyl)oxy]:** No human or animal information is available.

### 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:** Flammable Class 1B (NFPA)

**FLASH POINT:** 4°C

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

**AUTO-IGNITION TEMPERATURE:** Not available

**FLAMMABILITY LIMITS IN AIR: (% in volume)** Not available

#### FIRE AND EXPLOSION HAZARDS:

This product may be ignited by heat, sparks or flames. 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 as carbon oxide, nitrogen oxide, trace of hydrocyanic acid.

#### FIRE FIGHTING INSTRUCTIONS:

Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion. Approach fire from upwind. Evacuate area and fight fire from maximum distance. Always stay away from containers because of the high risk of explosion. Wear self-contained breathing apparatus and appropriate protective clothing in accordance with standards. Stop leak before attempting to put out the fire. 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:

Dry chemical powder, CO<sub>2</sub>, foam.

**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 absorbent material, dry earth, sand or other non-combustible material and transfer to containers. Sweep or shovel into containers with lids, use clean non-sparking tools 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 this product according to environmental regulations.

**SECTION VII. HANDLING AND STORAGE****HANDLING:**

This product is very flammable and toxic. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing mist, vapour or dust. Wash thoroughly after handling. Persons with antecedents of asthma, allergies, chronic or periodic respiratory disorders should never manipulate this product. 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 containers in a cool well-ventilated area out of direct sunlight and away from humidity, 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**

<b>HANDS:</b>	Wear gloves made from PVA <sup>®</sup> or Silvershield <sup>®</sup> .
<b>RESPIRATORY:</b>	If the TLV is exceeded, if use is performed in a poorly ventilated confined area, use an approved respirator in accordance with standards.
<b>EYES:</b>	Wear chemical safety goggles in accordance with standards.
<b>OTHERS:</b>	Eye bath and safety shower.
<b>CONTROL OF VAPOURS:</b>	Local exhaust is needed to control vapour and dust level to below recommended limits.

**SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES**

<b>PHYSICAL STATE:</b>	Paste
<b>ODOUR AND APPEARANCE:</b>	Black paste with solvent odour.
<b>ODOUR THRESHOLD:</b>	Not available
<b>VAPOUR DENSITY (air = 1):</b>	Heavier than air
<b>EVAPORATION RATE (Butyl acetate = 1):</b>	Not available
<b>BOILING POINT (760 mm Hg):</b>	Not available
<b>FREEZING POINT:</b>	Not available
<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1):</b>	0.96 kg/L
<b>SOLUBILITY IN WATER (20°C):</b>	Not soluble
<b>VOLATILE ORGANIC COMPOUND CONTENT (V.O.C.):</b>	150 g/L
<b>VISCOSITY:</b>	15 000 centipoises

**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. Exposed to high temperatures this product can emit dangerous decomposition products, such as fumes, carbon oxide, nitrogen oxide, hydrocyanic acid, amines and alcohols.

**INCOMPATIBILITY:**

Keep away from oxidizing agent and from highly acid and basic materials to avoid exothermic reactions.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

This product slowly reacts with water and cause an emanation of carbonic gas which would lead to pressure increasing in closed container.

**HAZARDOUS POLYMERISATION:** None

## SECTION XI. TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL DATA:

<b>Toluene (1):</b>	LC50 (inhalation, rat, 4 hours):	7 350 ppm
	LD50 (oral, rat)	2 600-7 500 mg/kg
	LD50 (dermal, rabbit):	12 225 mg/kg
<b>MDI (1):</b>	LC50 (inhalation, rat, 4 hours):	369-490 mg/m <sup>3</sup>
	LD50 (oral, rat):	178 mg/m <sup>3</sup>
	LD50 (dermal, rabbit):	> 10 000 mg/kg
<b>Stannane dibutylbis[(1-oxododecyl)oxy]:</b>	LC50 (inhalation, rat, 4 hours):	No information available
	LD50 (oral, rat):	450 mg/kg
	LD50 (dermal, rabbit):	No information available
<b>Asphalt:</b>	No information available.	

### *Effects of Short-Term (Acute) Exposure*

#### INHALATION:

**Toluene:** The major effect of toluene is on the central nervous system (CNS). Studies with rats have shown that up to approximately 1000 ppm causes excitation and increased activity. At approximately 2000 ppm, there is CNS depression with drowsiness, incoordination and unconsciousness. Death at higher concentrations is from respiratory failure. Animal studies have indicated that toluene is not directly toxic to the cardiovascular system. Recovery is rapid following cessation of exposure. Studies indicate no permanent damage to body systems. Studies in rats have shown hearing loss at high frequencies following toluene exposure both by inhalation (threshold concentration between 700 and 1000 ppm) and orally (620 mg/kg/day for 4 weeks). This effect has also been observed in a mouse strain that had a genetic predisposition to hearing loss. (1)

**MDI:** MDI has a very low vapour pressure and it is difficult to achieve vapour concentrations necessary for inhalation toxicity testing. Therefore, inhalation toxicity studies have focused on the effects of the aerosol. No significant effects were found when rats were exposed to 2, 5 and 15 mg/m<sup>3</sup> of MDI aerosol for 6 hours/day, 5 days/week for 2 weeks. Mice were exposed to MDI aerosols varying from 7 to 59 mg/m<sup>3</sup> for 4 hours. The overall effect was a decline in respiratory rate which was determined to be due mainly to MDI's action as a pulmonary irritant. (1)

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** No information available.

#### EYE IRRITATION:

**Toluene:** Toluene is a mild eye irritant. (1)

**MDI:** MDI has been reported to cause slight eye irritation. (1)

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** No information available.

#### SKIN IRRITATION:

**Toluene:** Toluene is a moderate skin irritant. (1)

**MDI:** MDI has been reported to cause slight to moderate irritation. The sensitizing potency of MDI was investigated. MDI was less potent than hexamethylene diisocyanate (HDI) and dicyclohexylmethane diisocyanate (HMDI), but more sensitizing than toluene diisocyanate (TDI). Cross reactivity was observed between MDI and HDI, HMDI and TDI. (1)

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** No information available.

### *Effects of Long-Term (Chronic) Exposure*

#### INHALATION:

**Toluene:** Daily inhalation by rats of toluene concentrations below 400 ppm for up to 24 months resulted in no significant toxicity. Evidence for chronic CNS neurotoxicity is inconclusive. Numerous studies on rats and mice have shown reduced performance on some neurobehavioral tests but not others, both during and after toluene inhalation exposures (usually at greater than 500 ppm). (1)

**Asphalt, MDI, Stannane dibutylbis[(1-oxododecyl)oxy]:** No information available.

#### INGESTION:

**Toluene:** No significant toxicity was seen after oral administration of up to 590 mg/kg to female rats for up to six months. (1)

**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 in 2 of 5 rats. (1)

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** No information available.

#### CARCINOGENICITY:

**Toluene:** The International Agency for Research on Cancer (IARC) has concluded there is inadequate evidence for the carcinogenicity of toluene in experimental animals. (1)

**MDI:** There is no animal information on the carcinogenicity of MDI itself. In one study, polymeric MDI containing 44.8-50.2% monomeric MDI was tested for carcinogenicity by inhalation in rats. An increased incidence of lung tumours was observed. The International Agency for Research on Cancer (IARC) has determined there is limited evidence for the carcinogenicity of a mixture containing monomeric and polymeric MDI to experimental animals. (1)

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** No information available.

**SECTION XI. TOXICOLOGICAL INFORMATION**

**TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY:**

**Toluene:** Toluene does cause developmental effects in animals, based on fetotoxicity (reduced foetal weight), behavioural effects (effects on learning and memory) and hearing loss (in males) observed in the offspring of rats exposed by inhalation to 1200 or 1800 ppm toluene. These effects were observed in the absence of maternal toxicity. (1)

**Asphalt, MDI, Stannane dibutylbis[(1-oxododecyl)oxy]:** No information available.

**REPRODUCTIVE TOXICITY:**

**Toluene:** No adverse effects on reproduction were observed in several studies on both rats and mice, even at maternally toxic exposures. (1)

**Asphalt, MDI, Stannane dibutylbis[(1-oxododecyl)oxy]:** No information available.

**MUTAGENICITY:**

**Toluene:** There is insufficient information available to conclude that toluene is mutagenic. There is some evidence that toluene can cause chromosome damage in vivo when administered to mice by injection, although conflicting results have been obtained and this route of exposure is not considered relevant to occupational situations. (1)

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

**Asphalt, Stannane dibutylbis[(1-oxododecyl)oxy]:** No information available.

**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**

<b>NAME OF PRODUCT:</b>	Coltack	<b>IDENTIFICATION NUMBER:</b>	UN 1133
<b>CLASSIFICATION (TDG - DOT):</b>	Class 3	<b>SHIPPING NAME:</b>	Adhesives
<b>CONTAINERS FOLLOW THE STANDARDS OF:</b>		<b>PACKING GROUP:</b>	II
Canada:	CAN / CGSB-43.150-97		
USA:	CFR 49 parts 100 to 199		

**SECTION XV. REGULATORY INFORMATION**

**Canada - WHMIS:** Class B2: Flammable material (flash point inferior to 37.8°C)  
 Class D1A: Immediate and serious toxic effects (meets criteria for very toxic material with the LC50 of the MDI)  
 Class D2A: Material causing other very toxic effects (teratogenicity and embryotoxicity of toluene and respiratory sensitization of MDI)  
 Class D2B: Material causing other toxic effects (irritant effects of toluene and skin sensitization of MDI).

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

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

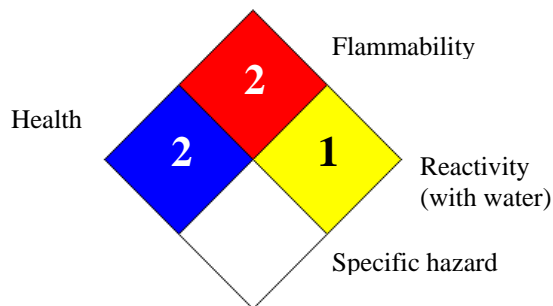
**USA – OSHA 29 CFR 1910.1200:** This product meets criteria for hazardous material as defined by 29 CFR 1910.1200

**HMIS (USA):**

(with water)

2	<b>HEALTH</b>
2	<b>FLAMMABILITY</b>
1	<b>REACTIVITY</b>
B	<b>PROTECTIVE EQUIPMENT</b>

**NFPA (USA):**



## SECTION XVI: OTHER INFORMATION

### Glossary:

<b>ACGIH:</b>	American Conference of Governmental Industrial Hygienists
<b>ANSI:</b>	American National Standards Institute
<b>ASTM:</b>	American Society for Testing and Materials
<b>CAS:</b>	Chemical Abstract Services
<b>CFR:</b>	Code of Federal Regulations (United States)
<b>CSA:</b>	Canadian Standardisation Association
<b>DOT:</b>	Department of Transportation (United States)
<b>DSL:</b>	Domestic Substances List (Canada)
<b>EPA:</b>	Environmental Protection Agency (United States)
<b>HMIS:</b>	Hazardous Material Information System
<b>IARC:</b>	International Agency for Research on Cancer
<b>LC50:</b>	(Lethal concentration <sub>50</sub> ) Concentration of a substance in air that causes death of 50% mortality of a defined animal population.
<b>LD50:</b>	(Lethal dose <sub>50</sub> ) Single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause the death of 50% of a defined animal population.
<b>NFPA:</b>	National Fire Protection Association (United States)
<b>NIOSH:</b>	National Institute for Occupational Safety and Health
<b>NTP:</b>	National Toxicology Program
<b>OSHA:</b>	Occupational Safety & Health Administration (United States)
<b>PEL:</b>	Permissible Exposure Limit
<b>RCRA:</b>	Resource Conservation and Recovery Act (United States)
<b>RTECS:</b>	Registry of Toxic Effects of Chemical Substances
<b>TDG:</b>	Transportation of Dangerous Goods
<b>TLV:</b>	Threshold Limit Value
<b>TWA:</b>	Time-weighted average
<b>TSCA:</b>	Toxic Substances Control Act (United States)
<b>WHMIS:</b>	Workplace Hazardous Materials Information System (Canada)

### References:

- (1) CHEMINFO (2007) Canadian Centre of Organisational Health and Safety, Hamilton (Ontario) Canada
- (2) Material Safety Data Sheet of the supplier

**This MSDS has been prepared by:** Michel Galtier  
**For more information:** SOPREMA CANADA 1-800 567-1492

The Material Safety Data Sheets of SOPREMA are available on Internet at the following site: <http://www.soprema.ca>

### Justification of the update:

- The Formula number has been modified. (Section I)
- Methyl Ethyl Cetone (MEK) and Petroleum Naphtha have been deleted from the list of Dangerous Ingredients. (Section II)
- Sections III and XI have been modified due to the removal of MEK and Naphtha.
- The Flash Point passed from -4°C to 4°C. (Section V)
- The Class B3 has been replaced by B2 (flash point inferior to 37.8°C). (Section XV)
- The codification for Protective Equipment (HMIS) and Specific hazard (NFPA) has been modified. (Section XV)

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.

**To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier or any of its subsidiaries assumes any liability whatsoever for the accuracy or 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.**