SAFETY DATA SHEET

SOPRASEAL STICK PRIMER

Offerte en français

GHS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
		 **ADHESIVE** **Class 3** **UN1133** **P.G.: II**

SECTION I: IDENTIFICATION

Use: Primer used to enhance adhesion of self-adhesive membranes on porous surfaces.

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

Distributors:
Soprema Inc.
44955 Yale Road West
Chilliwack (BC) V2R 4H3
CANADA
Tel.: 604 793-7100

Soprema USA
310 Quadral Drive
Wadsworth (Ohio) 44281
UNITED STATES
Tel.: 1 800 356-3521

Soprema USA
12251 Seaway Road
Gulfport (Mississippi) 39507
UNITED STATES
Tel.: 228 701-1900

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

Highly flammable liquid and vapors. May be fatal if swallowed and enters airways. Harmful if swallowed. May cause respiratory irritation or drowsiness or dizziness. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames and hot surfaces. No smoking. Use explosion proof electrical equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not eat or drink when using this product. Avoid breathing vapors. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Wear protective gloves, eye protection and an organic vapor respirator. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. Dispose of container in accordance with local, regional and national regulations.

SECTION III: COMPOSITION AND INFORMATION ON HAZARDOUS INGREDIENTS

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Naphtha	64742-49-0	15-40	400 ppm	500 ppm
May contain:				
n-Heptane	142-82-5		400 ppm	500 ppm
n-Hexane	110-54-3		50 ppm (skin)	Not established
Acetone	67-64-1	10-30	250 ppm	500 ppm
Toluene	108-88-3	5-10	20 ppm	Not established

Effects of Short-Term (Acute) Exposure

INHALATION

Inhalation of vapours of this product can occur while using the product. The exposition to these vapours over exposure limits may cause irritation of the respiratory system and CNS depression (headaches, dizziness, nausea, tiredness, confusion and coma).

Naphtha: The main effect of short-term inhalation exposure is depression of the CNS. The effects reported in studies with volunteers at 5 000 ppm were marked dizziness/giddiness (at 4 minutes); incoordination (at 7 minutes); hilarity or a state of stupor (at 15 minutes) that persisted for 30 minutes after exposure. Subjects reported reduced appetite, slight nausea and a gasoline-like taste that persisted for several hours after exposure. Lower exposures produced only slight dizziness (1 000 ppm for 6 minutes or 2 000 ppm for 4 minutes). The fatal concentration has been reported to be 16 000 ppm. Mucous membrane irritation may occur at high vapour concentrations. (1)

Acetone: In one study, volunteers exposed to concentrations up to 500 ppm reported no harmful effects. In other studies, concentrations of approximately 300-500 were reported to cause slight irritation of the nose and throat. Exposure to 250 ppm for 4 hours has caused mild effects on performance in some behavioural tests (auditory tone discrimination and a mood test). As concentrations approach 1 000 ppm, noticeable irritation has occurred and some people have reported headaches, light-headedness and tiredness. Inhalation of concentrations higher than 2 000 ppm can cause dizziness, a feeling of drunkenness, drowsiness, nausea and vomiting. Unconsciousness may result if exposure is extremely high (greater than 10 000 ppm). Intolerable nose and throat irritation would also occur at these concentrations. Even higher concentrations can cause collapse, coma and death. (1)

Toluene: The main effect of inhaling toluene vapour is on the CNS. 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 has caused symptoms similar to drunkenness (giddiness), numbness, and mild nausea; over 500 ppm has caused mental confusion and incoordination. At higher concentrations (estimated at 10 000 ppm) further depression of the CNS can result in unconsciousness and death. Most serious incidences of exposure have occurred when the vapour has accumulated in confined spaces. (1)

SKIN CONTACT

Prolonged or repeated contact may cause defatting of the skin and produce dermatitis (dryness, irritation, redness and cracking).

Naphtha: Naphtha is a moderate to severe skin irritant, based on human information. Harmful effects are not expected to occur by skin absorption. (1)

Acetone: Acetone is a non-irritant to very mild irritant, based on animal and limited human information. The risk of developing health effects following the absorption of acetone through unbroken skin is very slight. (1)

Toluene: Toluene is a moderate skin irritant, based on animal evidence. Prolonged contact may cause dermatitis (dry, red skin). Liquid toluene is absorbed through the skin slowly. Therefore, harmful effects are not expected by this route of exposure. Despite widespread use of toluene, there are no reports of skin sensitization. (1)

EYE CONTACT

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

Naphtha: Based on a report of skin irritation, eye contact with the liquid may result in irritation and pain. Concentrated vapour may cause slight irritation. However, during exposure to 5 000 ppm for 4 minutes there were no complaints of eye irritation. There is no human or animal information available. (1)

Acetone: Acetone is a severe irritant, based on animal and limited human information. (1)

Toluene: Toluene is a mild eye irritant, based on animal evidence. Very short exposure (3 to 5 minutes) to the vapour has caused slight eye irritation at 300 ppm. Longer exposures (6 to 7 hours) to concentrations above 100 ppm have also caused slight irritation. Alterations in vision, for example, reduced acuity and suppressed colour vision, have been documented following exposure to mixed solvents. It is not possible to attribute these effects to toluene directly. (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.

Naphtha: Animal toxicity information indicates that Naphtha has very low toxicity if ingested. Ingestion of extremely large doses may cause nausea, vomiting, headache and other symptoms of CNS depression, as described for "Inhalation" above. (1)

Acetone: Ingestion is not a typical route of occupational exposure. Several studies report no effects or minor effects (slight drowsiness) in people who ingested up to 20 grams/day for several days. Animal toxicity information also suggests that acetone is not very toxic following ingestion. If acetone is aspirated (breathed into the lungs during ingestion or vomiting) it can cause severe, life-threatening lung injury. Animal information suggests that acetone would be difficult to aspirate because it evaporates so quickly. Based on its physical properties, acetone can be aspirated into the lungs during ingestion or vomiting. (1)

Toluene: Toluene is readily absorbed following ingestion producing CNS depression. Symptoms will be similar to those described for inhalation. Toluene may be aspirated, which is the inhalation of a chemical into the lungs, during ingestion or vomiting. Severe lung irritation, damage to the lung tissues and death may result. Ingestion is not a typical route of occupational exposure. (1)

Effects of Long-Term (Chronic) Exposure

INHALATION

Naphtha: Nerve damage of the extremities, such as the hands and feet (peripheral neuropathy) has been reported in workers exposed to petroleum solvents containing mixtures of chemicals including heptane. (1)

SKIN CONTACT

Naphtha: Prolonged or repeated skin contact may cause dry, red, itchy skin (dermatitis). (1)

Acetone: Prolonged or repeated contact may cause defatting of the skin and produce dermatitis (dryness, irritation, redness and cracking). (1)

SKIN SENSITIZATION

Naphtha: There have been no reports of skin sensitization in people occupationally exposed to naphtha. Skin sensitization was not observed in a maximization test using 25 volunteers. (1)

Acetone: Acetone is not a skin sensitizer. (1)

EYES/VISION

Naphtha: Limited information suggests that naphtha may cause harmful vision changes such as blurred vision, impaired colour discrimination, reduced responsiveness of the eye to visual stimulation and constriction of visual field. The available studies have involved small numbers of employees and exposure concentrations have generally been high (e.g. 423 to 1 280 ppm for 5 years with higher peak concentrations). It has been suggested that these effects may be correlated with signs of peripheral neuropathy. (1)

TARGET ORGANS

Naphtha: Long-term exposure of rubber tire workers to a solvent mixture which included heptane caused some slight blood disorders. No conclusions can be drawn from this report because of the combined exposure. (1)

HEART/BLOOD VESSELS

Acetone: No statistically significant differences in mortality from circulatory system or heart disease were observed in 948 employees exposed to up to 1 070 ppm acetone for up to 23 years, when compared with the general United States population.(1)

BLOOD/BLOOD FORMING SYSTEM

Acetone: No significant changes in blood composition or chemistry were found in 60 workers who had worked at least 5 years in the acetate fibre manufacturing industry (exposures of 550-1 050 ppm). (1)

NERVOUS SYSTEM

Naphtha: Damage to the nervous system of the extremities (the hands, arms, legs and feet) has been observed in people occupationally exposed to naphtha. This condition is referred to as peripheral neuropathy. The majority of occupational cases have occurred in small industries where there was exposure to relatively high concentrations, usually for more than 8 hours/day. (1)

Acetone: No conclusions can be drawn from the human information located. Studies in animals have not shown neurotoxic effects from acetone. (1)

CARCINOGENICITY

Naphtha: There is no human or animal information available. 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 not assigned a carcinogenicity designation to this chemical. The US National Toxicology Program (NTP) has not listed this chemical in its report on carcinogen. (1)

Acetone: Acetone is not known to be a carcinogen. IARC has not evaluated the carcinogenicity of this chemical. ACGIH has designated this chemical as not classifiable as a human carcinogen (A4). Note: ACGIH has published a Notice of Intended Change to remove the designation of A4 (not classifiable as a human carcinogen). NTP has not listed this chemical in its report on carcinogens. (1)

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. Stomach cancer mortality, lung cancer rates and colorectal cancers were evaluated in some studies, but not others. Considering the multiple exposures in most studies and the inconsistencies in findings, it is not possible to conclude that toluene exposure is associated with cancer in humans. The International Agency for Research on Cancer (IARC) has concluded there is

inadequate evidence for the carcinogenicity of toluene in humans. 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)

TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY

Naphtha: There is no human information available. Naphtha has not produced teratogenicity or embryotoxicity in the few animal studies available. Fetotoxicity has been observed in the presence of maternal toxicity. (1)

Acetone: The information located is not sufficient to conclude that acetone causes developmental toxicity. No conclusions can be drawn based on the limited human information available. In animal studies, inhalation of acetone caused fetotoxicity in rats and mice and embryotoxicity in mice, but only at concentrations that also caused maternal toxicity. (1)

Toluene: Toluene is a developmental toxicity hazard, based on information obtained from animal studies. Fetotoxicity (reduced foetal weight), behavioural effects (effects on learning and memory) and hearing loss (in males) have been observed in the offspring of rats exposed by inhalation to 1 200 or 1 800 ppm toluene. These effects were observed in the absence of maternal toxicity. 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). (1)

REPRODUCTIVE TOXICITY

Naphtha: There is no human information available. Naphtha has caused severe testicular damage in male rats at concentrations which have produced significant other toxicity. (1)

Acetone: The information located is not sufficient to conclude that acetone causes reproductive toxicity. No conclusions can be drawn from the limited human information available. In an oral study in rats, effects on sperm were observed at a dose that caused significant other toxicity. (1)

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. (1)

MUTAGENICITY

Naphtha: The available information does not suggest that naphtha is mutagenic. Negative results were obtained in most tests using live animals and relevant routes of exposure. Positive results (chromosomal aberrations in bone marrow) were observed in male rats exposed by inhalation, but the purity of the sample was not specified. No human information was located. Negative results were obtained in cultured human cells (DNA damage, unscheduled DNA synthesis), with or without metabolic activation. (1)

Acetone: Acetone is not known to be a mutagen. No human information was located. There are no confirmed studies that show mutagenicity in live animals. (1)

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)

TOXICOLOGICALLY SYNERGISTIC MATERIALS

Naphtha: The neurotoxic effects of naphtha vapour can be enhanced in rats by both methyl ethyl ketone (MEK) and lead acetate, but are decreased by toluene. Pulmonary lesions in rats were also reported to be enhanced by co-exposure to MEK. Both toluene and xylene prevent testicular atrophy by naphtha. (1)

Acetone: A major effect of acetone is its enhancement of the toxicity of many other chemicals. Many occupational situations that involve acetone exposure also involve exposures to other potentially harmful chemicals. However, no human information on synergistic effects was located. (1)

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. (1)

POTENTIAL FOR ACCUMULATION

Naphtha: Naphtha is mainly absorbed through the lungs. Animal studies indicate that skin absorption is low. However, skin absorption may be increased by exposure to other solvents at the same time. Naphtha can also be absorbed through the gastrointestinal tract, but this route is not important in occupational exposures. Naphtha is metabolized in the liver. The composition of metabolites varies from one species to another. 2,5-Hexanedione is the major metabolite and is believed to be responsible for the peripheral neuropathy. Naphtha and its metabolites are eliminated in the urine and in exhaled air. (1)

Acetone: Acetone does not accumulate. It is a normal by-product of mammalian metabolism and is found in virtually every organ and tissue, and in the blood. Acetone can enter the body by inhalation, ingestion or skin contact. It is metabolized by at least two pathways to compounds, that are used by the body to make glucose and other products of intermediary metabolism, with the generation of carbon dioxide. Acetone is excreted both unchanged, and following metabolism, mainly as carbon dioxide. (1)

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, fat). Toluene is metabolized in the liver and excreted by the kidneys in the urine. It can also be exhaled unchanged. (1)

SECTION IV: FIRST-AID MEASURES

SKIN CONTACT

Wash with plenty of water. If skin irritation occurs: Get medical advice. Take off immediately all contaminated clothing and wash it before reuse.

EYE CONTACT

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

INHALATION

Remove person to fresh air and keep comfortable for breathing. Call a poison center if you feel unwell.

SWALLOWING

Immediately call a poison center. Do NOT induce vomiting. Rinse mouth.

SECTION V: FIRE-FIGHTING MEASURES

FLAMMABILITY: Flammable liquid, Class 1B (NFPA)
EXPLOSION DATA: Sensitivity to mechanical impact: No
Sensitivity to static charge: Can accumulate static charge by flow.
FLASH POINT: -23°C (ASTM D93)
AUTO-IGNITION TEMPERATURE: Not available
FLAMMABILITY LIMITS IN AIR: (% en volume) Not available

FIRE AND EXPLOSION HAZARDS

This product and its vapours are easily ignited 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: CO, CO_2, Aldehydes, ketone, acrolein, halogenated compound.

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.

MEANS OF EXTINCTION
Anti-alcohol or universal foam, dry chemical powder, CO_2, sand. Use of water spray when fighting fire may be inefficient because of the low flash point of the product.

SECTION VI: ACCIDENTAL RELEASE MEASURES

RELEASE OR SPILL
Ventilate area. Wear appropriate protective equipment during cleanup. Eliminate all ignition sources. Shut off source of leak if it can be done without risk. Contain the spill. Absorb with inert material such as sand or earth. Sweep or shovel into containers with lids, use clean non-sparkling tools (sp.: plastic) to collect absorbed material. Cover and remove to appropriate well-ventilated area until disposal. Wash spill area with soap and water. Prevent entry into waterways, sewers or basements. Dispose of this product according to local environmental regulations.

SECTION VII: HANDLING AND STORAGE

HANDLING
This product and its vapours are extremely flammable and toxic. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing mist, vapour or dust. Wash 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 would 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 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 in vinyl poly-alcohol or viton.
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: Red liquid with strong solvent odour
ODOUR THRESHOLD: Not available
VAPOUR DENSITY (air = 1): Heavier than air
EVAPORATION RATE (Butyl acetate = 1): Not available
BOILING POINT (760 mm Hg): Not available
FREEZING POINT: Not available
SPECIFIC GRAVITY (H_2O = 1): 0.79 kg/L
SOLUBILITY IN WATER (20°C): Not soluble
VOLATILE ORGANIC COMPOUND (V.O.C.) CONTENT: 515 g/L
VISCOSITY: 250 centipoises (Visco Brookfield LVT)

SECTION X: STABILITY AND REACTIVITY

STABILITY: This material is stable.
CONDITIONS OF REACTIVITY: Avoid excessive heat.
INCOMPATIBILITY: Strong acids, strong oxidizing and reducing agents, basis, halogenated compounds.
HAZARDOUS DECOMPOSITION PRODUCTS: During a fire, irritating/toxic gases, such as carbon monoxide, carbon dioxide and other toxic and irritating compounds, such as formaldehyde, methanol, acetic acid, hydrogen peroxide, methane and ethylene oxide may be formed, depending on fire conditions
CONDITIONS TO AVOID: Open flames, sparks, electrostatic discharge, heat and other ignition sources; prolonged exposure to direct sunlight.
HAZARDOUS POLYMERISATION: None

SECTION XI: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA

n-Heptane: (1)

LC_{50} (inhalation, rat):	25 000 ppm (103 g/m³) (4-hour exposure)
LD_{50} (oral, rat):	More than 15 000 mg/kg
LD_{50} (dermal, rabbit):	Not available

n-Hexane: (1)

LC_{50} (male rat):	38 500 ppm (4-hour exposure); cited as 77 000 ppm (271 040 mg/m³) (1-hour exposure)
LD_{50} (oral, 14-day old rat):	15 840 mg/kg

Acetone: (1)

LC_{50} (male rat):	30 000 ppm (4-hour exposure)
LD_{50} (oral, female rat):	5 800 mg/kg
LD_{50} (dermal, rabbit):	> 15 800 mg/kg

Toluene: (1)

LC_{50} (inhalation, rat):	7 350 ppm (4-hour exposure)
LD_{50} (oral, rat):	2 600-7 500 mg/kg
LD_{50} (dermal, rabbit):	12 225 mg/kg

Effects of Short-Term (Acute) Exposure

INHALATION
Naphtha: The primary effect of inhaling Naphtha is depression of the CNS. The order of symptoms shown by experimental animals with increasing dosage is irritation, irregular respiration, prostration, coma, convulsions and death resulting from respiratory arrest. Mice exposed to 8 000 ppm for 5 minutes showed irritation, irregular respiration and unconsciousness. At 10 000-15 000 ppm there were signs of narcosis within 30 to 50 minutes. 15 000-20 000 ppm for 30 to 60 minutes caused convulsions and death. Respiratory arrest occurred in 3 of 4 mice within 3 minutes at 48 000 ppm. (1)

Acetone: Numerous studies have evaluated the effects of acetone on the CNS. The degree of CNS depression depends on both the concentration of acetone and the length of exposure. Drowsiness, incoordination, loss of reflexes, unconsciousness, respiratory failure and death have been observed. In general, acetone concentrations in excess of 8 000 ppm are required to produce symptoms, regardless of the exposure duration and species tested. (1)

Toluene: The major effect of toluene is on the CNS. Studies with rats have shown that up to approximately 1 000 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 1 000 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)

EYE IRRITATION
Naphtha: There is no information available.

Acetone: Acetone is a severe irritant. (1)

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

SKIN IRRITATION
Toluene: Toluene is a moderate skin irritant. (1)

SKIN CONTACT
Naphtha: No deaths and no effects on weight gain occurred in guinea pigs for up to one month following skin application of 3 500 mg/kg undiluted naphtha (applied as a single 2 ml dose) for one week. Skin application of 1 320-3 300 mg/kg (cited as 2-5 ml/kg) of commercial naphtha (45% naphtha), under cover, for 4 hours, resulted in discomfort and incoordination in rabbits. Deaths occurred at the highest dose, five days after exposure. (1)

Acetone: Acetone is a non-irritant to very mild irritant. (1)

INGESTION
Naphtha: Oral toxicity is relatively low unless the material is aspirated into the lungs. Aspiration of 0.2 ml naphtha caused convulsions and death in rats within seconds. The rapid deaths appeared to be due to cardiac arrest, respiratory paralysis and asphyxia rather than pulmonary oedema or haemorrhaging. (1)
Acetone: Oral exposure to large doses of acetone in drinking water for 14 days has produced mild toxicity in rats and mice. (1)

Effects of Long-Term (Chronic) Exposure

INHALATION
Naphtha: No major toxic effects have been reported in long-term inhalation studies. No toxic effects were seen in rats exposed to 400 or 3 000 ppm for 26 weeks. Some changes in liver enzymes were noted but not in blood parameters. Naphtha has been shown to cause some hearing loss in rats exposed to 4 000 ppm for 28 days. There was a significant increase in the auditory threshold of the mid-range frequencies (8 and 16 kHz). These effects were not seen in the low exposure group (800 ppm). Rats exposed to Naphtha at 3 000 ppm for 16 weeks showed no evidence of peripheral nerve damage. Similar negative neurological findings were reported in rats exposed to concentrations of 1 500 ppm for 30 weeks or 3 000 ppm for 26 weeks. Metabolic studies with Naphtha with single 6-hour exposures of rats to 1 800 ppm or 2 000 ppm have shown that a neurotoxic metabolite (2,5-heptanedione) is present in urine of exposed animals. Although the 2,5-heptanedione is a metabolite minor (present at less than 1%), it is not possible to erase the neurotoxic effects of an exposure to Naphtha. (1)

Acetone: No significant harmful effects were observed in rats exposed by inhalation to 19 000 ppm (3 hours/day, 5 days/week) for 8 weeks. (1)

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)

INGESTION
Naphtha: There is no information available.

Acetone: Mild harmful effects were observed in rats and mice exposed to high oral doses for 13 weeks. (1)

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

SKIN SENSITIZATION
Naphtha: There is no information available.

Acetone: Acetone is not a skin sensitizer. (1)

CARCINOGENICITY
Naphtha: There is no information available.

Acetone: Acetone is not known to be a carcinogen. (1)

Toluene: IARC has concluded there is inadequate evidence for the carcinogenicity of toluene in experimental animals. Toluene was not carcinogenic in mice and rats exposed by inhalation to up to 1 200 ppm for 24 months. (1)

TERATOGENOCITY, EMBRYOTOXICITY, FETOTOXICITY
Naphtha: Naphtha has not produced embryotoxicity or teratogenicity in rats following inhalation, or in mice following oral exposure to naphtha. Fetotoxicity was observed in mice following ingestion and in rats following inhalation of doses which produced maternal toxicity.

Acetone: The information located is not sufficient to conclude that acetone causes developmental toxicity. Inhalation of acetone has caused fetotoxicity in rats and mice and embryotoxicity in mice, but only at concentrations that also caused maternal toxicity. (1)

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 1 200 or 1 800 ppm toluene. These effects were observed in the absence of maternal toxicity. (1)

REPRODUCTIVE TOXICITY
Naphtha: Severe testicular effects have been observed in rats and mice following inhalation and oral exposure to concentrations which have produced significant other toxicity (peripheral neuropathy). In some cases, sperm production has stopped and sometimes the damage has been irreversible. (1)

Acetone: The information located is not sufficient to conclude that acetone causes reproductive toxicity. Effects on sperm have been observed in rats exposed orally to a dose that caused significant other toxicity. No effects on fertility have been observed. (1)

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

MUTAGENICITY
Naphtha: There is no information available.

Acetone: Acetone is not known to be a mutagen. There are no confirmed studies that show mutagenicity in live animals. Negative results have been obtained in most studies with cultured mammalian cells and bacteria. (1)

Toluene: There is insufficient information available to conclude that toluene is mutagenic.(1)

TOXICOLOGICAL SYNERGISMS
Acetone: Acetone has increased the liver and/or kidney toxicity of many chemicals including carbon tetrachloride, chloroform, trichloroethylene, bromodichloromethane, dibromochloromethane, N-nitrosodimethylamine and 1,1,2-trichloroethane. It also enhances the lung toxicity of styrene, the lethality of acetonitrile and the neurotoxicity 2,5-hexanedione in laboratory animals. (1)

SECTION XII: ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS
Do not allow product or runoff from fire control to enter grounds, basements, 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 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 considered as dangerous material. Consult local, state, provincial or territory authorities to know disposal methods. This material is also known as dangerous waste by RCRA (USA); disposal should follow EPA regulations.

SECTION XIV: TRANSPORT INFORMATION

CLASSIFICATION (TDG and DOT): Class 3
IDENTIFICATION NUMBER: UN 1133
SHIPPING NAME: Adhesives
PACKING GROUP: II
CONTAINERS FOLLOW THE STANDARDS.

Classification based on Section V of this document.

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 in the Toxic Substances Control Act Inventory (TSCA – USA).
Prop. 65: This product contains chemicals known to the State of California to cause reproductive toxicity.

SECTION XVI: OTHER INFORMATION

GLOSSARY

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

Reference:
(1) CHEMINFO (2018) Canadian Centre for Occupational Health and Safety, Hamilton (Ontario) Canada

Code of SDS: **CA U DRU SS FS 026**

For more information: 1 800 567-1492

The Safety Data Sheets of SOPREMA Canada are available on Internet at the following site: **www.soprema.ca**

Justification of the update:
- New formula.