ELASTOCOL STICK

SECTION 1. Company Information

Product Description

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

Trade Names

Elastocol Stick

Code of MSDS	Formula #
CA U DRU SS FS 035 B	423.1

Manufacturer

International Building Components, Inc.
21428 Woods Creek Road
Monroe, WA, 98272 USA
Telephone - (360)794.2151
Fax - (360)863.8434
Toll Free - 1.888.610.2151
Web - www.waterblocksystems.com

WHMIS | **Protective Clothing** | **TDG and DOT**

ADHESIVE
Class 3
UN1133
P.G.: II

EMERGENCY OVERVIEW!!!

Red liquid with strong solvent odor. ***CAUTION!*** This product and its vapors are extremely flammable. The vapors are heavier than air and may spread long distances. Distant ignition and flash back are possible. Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.

May cause skin, eye and respiratory tract irritation. Harmful or fatal if swallowed. Ingestion of the product can cause severe lung injury when aspirated. Inhalation of high concentrations of this product may cause central nervous system (CNS) depression (headache, nausea, dizziness, drowsiness, incoordination and unconsciousness).

In Case of Emergency

CHEMTREC (USA): (800) 424-9300
Poison Control Center: Consult local telephone directory

SECTION 2. Composition and Information on Dangerous Ingredients

NAME	*CAS #*	*% WEIGHT*	*EXPOSURE LIMIT (ACGIH)*	
			TLV-TWA	*TLV-STEL*
Naphtha	64742-49-0	30-60	400 ppm (recommends the same as and/or heptane)	Not available
and / or				
n-Hexane	110-54-4	15-40	-	-
Methylcyclopentane	96-37-7	1-5	400 ppm	500 ppm
3-Methylpentane	96-14-0	7-13	-	-
2-Methylpentane	107-83-5	1-5	-	-
Acetone	67-64-1	15-40	500 ppm	750 ppm

SECTION 3. Potential Health Effects (Effects of Short-Term (Acute) Exposure)

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

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
High concentrations (more than 1000 ppm) can cause irritation of the respiratory system and central nervous system depression (headaches, dizziness, nausea, tiredness, confusion and coma). No other data available. (2)

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 behavioral tests (auditory tone discrimination and a mood test). As concentrations approach 1000 ppm, noticeable irritation has occurred and some people have reported headaches, light-headedness and tiredness. Inhalation of concentrations higher than 2000 ppm can cause dizziness, a feeling of drunkenness, drowsiness, nausea and vomiting. Unconsciousness may result if exposure is extremely high (greater than 10000 ppm). Intolerable nose and throat irritation would also occur at these concentrations. Even higher concentrations can cause collapse, coma and death. Tolerance to the effects of acetone can develop. Tolerance means that, with repeated exposures, higher concentration are required to produce symptoms which had previously been observed at lower concentrations. One case report describes two men who were working in a confined space with extremely high acetone concentrations (measured at 12000 ppm, 3 hours after the accident). Low concentrations (up to 50 ppm) of trichloroethane were also detected. After working in the area 4 hours, the men noticed irritation of the throat, headache, weakness in the legs and a feeling of drunkenness. The men then left the area for 1 hour. Upon returning, one man collapsed and the other felt faint. Rescuers, who were exposed for 2 to 3 minutes, experienced symptoms similar to the workers. The man who lost consciousness regained consciousness a short time later but was confused, drowsy, unsteady on his feet, felt nauseated and was vomiting. The other man had, at this point, also lost consciousness and was vomiting. Both men fully recovered. (1)

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

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
Prolonged or repeated contacts may cause irritation of skin and produce dermatitis. No other data available. (2)

Acetone:
Acetone is either slightly irritating or not irritating, based on animal and limited human information. Application of 1 ml of acetone in a small glass tube to six male volunteers for 30 or 90 minutes resulted in only mild redness and swelling at 90 minutes. The risk of developing health effects following the absorption of acetone through unbroken skin is very slight. There are several reports of people, usually young children, becoming ill following skin exposure to acetone while lightweight casts were being put on broken limbs. The symptoms experienced were similar to those described following high inhalation exposures. In all cases, a large amount of acetone came into contact with the skin for several hours and inhalation exposure may also have occurred. These reports are not considered relevant to people exposed to acetone at work. (1)

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

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane*:*
In the event of contact with the eyes, these products can cause irritation. No other data available. (2)

Acetone:
Acetone vapor causes mild irritation at concentrations of around 500 ppm. Irritation is very noticeable at 1000 ppm. Liquid acetone is severely irritating, based on animal and limited human information. In 3 human cases, acetone caused corneal injury which completely healed within 48 hours. In one unusual case, liquid acetone was held directly on the eye for a long time. In this particular case, there was permanent damage to the eye, with clouding of the cornea. (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, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

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. One case report describes a man who intentionally drank 200 ml (about 7 ounces) of acetone. Within one hour, he had flushed cheeks and appeared drunk. His breathing was shallow and his throat red and swollen. He soon lapsed into coma and did not regain consciousness for 12 hours. Four weeks later, he developed symptoms similar to diabetes (increased urination, thirst and blood sugar levels). The patient fully recovered within 5 months after the incident. (1)

SECTION 3b. Potential Health Effects (Effects of Long-Term (Chronic) Exposure)

INHALATION:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
Cases of neurotoxicity peripheral were reported in relation to an exposure to n-hexane. The exposure prolonged during weeks or months at levels exceeding much the allowed maximum concentration can cause neurotoxic disorders of which the weakness and a loss of feeling in the fingers, the hands, the arms and the feet. The chronic exposure to high levels of n-hexane damages initially the nervous system and causes a loss of feeling at the level of the extremities. Then, there is a more serious risk of nervous lesion. (2) Unlike n-hexane, 2-methylpentane does not appear to cause destruction of cells of the nervous system (peripheral neuropathy). Health effects specific to long-term exposure to 2-methylpentane have not been reported. (1)

Acetone:
Most human population studies indicate that acetone would not produced significant health effects following long-term exposure. In a series of studies, no statistically significant differences in causes of death or clinical laboratory results were observed in 948 employees exposed to up to 1070 ppm acetone over 23 years. Another study which reviewed 18 years of industrial experience with employees in a cellulose acetate production facility did not show an increased incidence of illness. One other study did not find significant changes in clinical chemistry tests conducted on 60 employees who had worked at least 5 years in the acetate fibre manufacturing industry (exposures of 550-1050 ppm). No conclusions can be drawn from other reports which have described effects following long-term acetone exposure. These reports are limited by factors such as the small number of workers studied, the fact that other exposures may have contributed to or caused the observed effects and/or possible self-reporting biases. In one study, 110 men were exposed to a mean concentration of 361 ppm acetone for an average of 14.9 years. These men reported more heavy headedness, nausea, faintness, weight loss, eye irritation than a comparison group with no acetone exposure. They also did not perform as well on some neurobehavioral tests (reaction time and digit span tests). A few historical reports have also described long-term exposure effects such as irritation of the airways, throat, stomach and occasionally, dizziness, attacks of giddiness and a loss of strength. (1)

TARGET ORGANS:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
Only one case report seems to indicate slight hepatic and renal injuries after an exposure at high concentrations of acetone. Therefore, the details mentioned in this report are not sufficient to draw a conclusion. (1)

CARCINOGENICITY:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
There is no human information. Animal information suggests that acetone is not carcinogenic. The International Agency for Research on Cancer (IARC) has not evaluated the carcinogenicity of this chemical. The American Conference of Governmental Industrial Hygienists (ACGIH) has designated this chemical as not classifiable as a human carcinogen (A4). The US National Toxicology Program (NTP) has not listed this chemical in its report on carcinogens. (1)

TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
There is no human information. Animal information suggests that acetone would only cause effects in the presence of maternal toxicity.(1)

REPRODUCTIVE TOXICITY:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
No firm conclusions can be drawn from the available studies. A study of 25 men exposed to acetone and styrene during the manufacture of reinforced plastics showed an increased percentage of abnormal sperm head shapes in exposed workers compared to controls. A study of 891 women who worked or were working in the semiconductor industry showed an increased risk of miscarriages among fabrication workers. Seven chemicals were strongly associated with the increased risk of miscarriage, one of which was acetone. No conclusions can be drawn from these two studies because of factors such as the small number of workers studied and the concurrent exposure to other potentially harmful chemicals. There is insufficient information for evaluation provided in a Russian study which reports increased complications of pregnancy and reduced birth weight in children of mothers exposed to acetone. One animal study showed sperm effects, in the presence of kidney damage. (1)

MUTAGENICITY:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
There is no human information available. Negative results have been obtained in tests using cultured human cells. Negative results have also been obtained in a study which used live animals, cultured mammalian cells and bacteria. (1)

TOXICOLOGICALLY SYNERGISTIC MATERIALS

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
It was reported that methylethylketone supported the neurotoxic effects due to the n-hexane or to methyl nbutylketone. The methylethylketone, by itself, does not cause any peripheral neuropathy but it can support the toxic effect of the alkane-based solvents on the liver and the kidneys. (2)

Acetone:
Acetone has increased the liver toxicity of chemicals, such as carbon tetrachloride, chloroform, trichloroethylene, bromodichloromethane, dibromochloromethane, N-nitrosodimethylamine and 1,1,2-trichloroethane, the lung toxicity of styrene and the toxicity of acetonitrile and 2,5-hexanedione in laboratory animals. It appears to inhibit the metabolism and elimination of ethyl alcohol, thereby potentially increasing its toxicity. Acetone can either increase or decrease the toxicity of 1,2-dichlorobenzene, depending on the concentration of acetone used. (1)

POTENTIAL FOR ACCUMULATION:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
Acetone 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. Acetone is metabolized by a number of routes to compounds, which 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. The main route of excretion is in the expired air, with very little excreted in the urine. Respiratory excretion is complete within 20 hours after inhalation. The amount of unchanged acetone excreted in the urine increases with increasing exposure concentration and duration, and with exercise during exposure. (1)

SECTION 4. 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 vapor 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 center. 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 5. 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: - 31°C (ASTM D93)
AUTO-IGNITION TEMPERATURE: Not available
INFLAMMABILITY LIMITS IN AIR: Not available (% en volume)

FIRE AND EXPLOSION HAZARDS:
This product and its vapors are easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors 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, CO2, 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, CO2, sand. Use of water spray when fighting fire may be inefficient because of the low flash point of the product.

SECTION 6. 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 7. Handling and Storage

HANDLING:
This product is extremely flammable and toxic. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing mist, vapor 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 labeled.

SECTION 8. 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 VAPORS: Local exhaust is needed to control vapor and dust level to below recommended limits

SECTION 9. Physical and Chemical Properties

PHYSICAL STATE: Liquid
ODOR AND APPEARANCE: Red liquid with strong solvent odor.
ODOR THRESHOLD: Not available
VAPOR DENSITY (air = 1)***:*** Heavier than air
EVAPORATION RATE : Not available (Butyl acetate = 1)
BOILING POINT (760 mm Hg)***:*** Not available
FREEZING POINT: Not available
SPECIFIC GRAVITY (H2O = 1)***:*** 0.79 kg/L
SOLUBILITY IN WATER (20°C)***:*** Not soluble
(V.O.C.) CONTENT: 363 g/L (VOLATILE ORGANIC COMPOUND)
VISCOSITY: 275 centipoises (Visco Brookfield LVT)

SECTION 10. Stability and Reactivity

STABILITY: This material is stable.
CONDITIONS OF REACTIVITY: Avoid excessive heat.
INCOMPATIBILITY: Strong oxidizing and reducing agents, basis, halogenated compounds.
HAZARDOUS DECOMPOSITION PRODUCTS: None known.
HAZARDOUS POLYMERISATION: None

SECTION 11. Toxicological Information (Effects of Short-Term (Acute) Exposure)

TOXICOLOGICAL DATA:

Naphtha:	LC50 (inhalation, rat, 4 hrs):	3 400 ppm (2)
	LD50 (oral, rat):	> 8 ml/kg (2)
	LD50 (dermal, rabbit):	> 4 ml/kg (2)
Acetone:	LC50 (male rat):	30000 ppm (4-hour exposure); cited as 71000 mg/m³ (4-hour exposure)
	LD50 (oral, mature rat):	6700 mg/kg (cited as 8.5 ml/kg)
	LD50 (dermal, rabbit):	Greater than 16000 mg/kg (cited as 20 ml/kg)

INHALATION:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
Numerous studies have evaluated the effects of acetone on the central nervous system (CNS). The concentration of acetone that causes unconsciousness depends on both the amount of acetone and the length of exposure. In general, acetone concentrations in excess of 8000 ppm are required to produce symptoms, regardless of the exposure duration and species tested. Drowsiness, incoordination, loss of reflexes, unconsciousness, respiratory failure and death have been observed following acetone exposure. Several studies have evaluated behavioral responses in animals following acetone exposure (for example, avoidance/escape behaviors). The results of these studies have been variable and it is not possible to draw a clear description of the possible effects of acetone. In one study, 10700 ppm was the acetone concentration required to reduce a behavioral response in mice by 50%. Acetone was the least potent of the chemicals tested in this study. The concentration of acetone which reduces the respiratory rate of mice by 50% (RD50) was reported to be 23480 ppm in one study and 77516 ppm in another. The RD50 is a measure of sensory irritation (nose, throat and respiratory irritation). These results indicate that acetone is a weak sensory irritant. (1)

EYE IRRITATION (RABBIT):

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
Undiluted acetone is a severe eye irritant. Application of 0.005 ml of undiluted acetone produced severe irritation (graded 5/10). In a standard Draize test, application of 0.1 ml undiluted acetone resulted in severe irritation, while 1-30% solutions resulted in minimal irritation. In a modified Draize test,application of 0.1 ml undiluted acetone was reported to cause corrosive eye injury. (1)

SKIN IRRITATION:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
Undiluted acetone is not irritating to the skin. Uncovered application of 0.01 ml undiluted acetone produced no irritation in rabbits (graded 1/10). Acetone was also not irritating in guinea pigs. Application of 0.5 ml to the skin over 3 to 8 weeks produced cataracts in the eyes of guinea pigs. In a later study, conducted similarly, acetone produced cataracts in guinea pigs, but not rabbits. Statistical analysis of the data was not conducted. The development of cataracts may be an effect specific to guinea pigs. (1)

INGESTION:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
In a study designed to evaluate the aspiration risk, acetone was found to evaporate too quickly to be aspired. However, if ingested very quickly, acetone can be an aspiration hazard. Oral exposure to large doses of acetone in drinking water for 14 days has produced mild toxicity in rats and mice. Compared to controls, male rats receiving approximately 4300 or 7000 mg/kg/day and female rats given 8500 mg/kg/day had lower mean body weights. No significant changes in body weight were observed in mice. Kidney and liver weights were higher for exposed rats and mice. Slight liver injury was observed in female mice exposed to 5500 mg/kg/day and male mice exposed to 6300 mg/kg/day. Mild harmful effects were observed in rats and mice exposed to high oral doses for 13 weeks. Rats were exposed to up to approximately 3400 mg/kg/day for 13 weeks. Rats receiving the high dose had decreased body weight and liver and kidney weights were increased in rats receiving 1600 mg/kg/day or greater. Kidney damage was observed in males. However, this kidney effect may be specific to male rats and not relevant to other species or sexes. Mice were similarly exposed. Liver weights were increased and spleen weights decreased in females given the high dose. (1)

SECTION 11b. Toxicological Information (Effects of Long-Term (Chronic) Exposure)

INHALATION

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane:
No data available. (1)

2-Methylpentane:
Rats were exposed by inhalation to 1500 ppm 9 hours/day, 5 days/week for 30 weeks. During the exposure period, the animals experienced a significant loss of weight. There were no signs of polyneuropathy evident in the exposed rats. (1)

Acetone:
No significant harmful effects were observed in rats exposed by inhalation to 19000 ppm intermittently for 8 weeks. (1) weights decreased in females given the high dose. (1)

INGESTION:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane:
No data available. (2)

2-Methylpentane:
Rats were exposed by ingestion, daily, to 0.4 mL to 1.2 mL of 99 percent pure isohexane for 8 weeks. The results indicate that 2méthylpentane may cause very slight peripheral nerve impairment. Rats orally administered with 0.5 g/kg/day 5 days per week for 4 weeks experienced kidney damage. Thirty percent of the animals died. (1)

Acetone:
No significant behavioral changes were observed in male rats administered 0.5% acetone in their drinking water for 6 weeks. Neurotoxic effects (e.g. peripheral neuropathy) were not observed in rats exposed 0.5-1% acetone in their drinking water for 12 weeks. (1)

CARCINOGENICITY:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
Acetone has been used as a vehicle in dermal studies using mice. Mice generally received one or two 0.2 ml applications/week for 6 months to 2 years without an increased incidence of tumors. (1)

TERATOGENOCITY, EMBRYOTOXICITY, FETOTOXICITY:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
The available information suggests that inhalation of acetone can cause fetotoxicity in rats and mice and embryotoxicity in mice, but only in the presence of maternal toxicity. Rats were exposed by inhalation to 440, 2200 or 11000 ppm acetone on days 6-19 of pregnancy. Signs of toxicity (body weight effects) were observed in mothers exposed to the highest concentration. The only statistically significant effect observed in the offspring was fetotoxicity (reduced foetal weight) in the high exposure group. Mice were exposed by inhalation to 440, 2200 or 6600 ppm acetone on days 6-17 of pregnancy. The high exposure group animals were initially exposed to 11000 ppm for one day and then the concentration was decreased to 6600 ppm because the mice experienced severe narcosis.Minimal maternal toxicity (increased liver weight) was then observed at 6600 ppm. Fetotoxicity (reduced foetal weight) and slight, but statistically significant, embryotoxicity (foetal deaths) were observed in the high exposure group. In a preliminary screening test (the Chernoff/Kavlock test), acetone was administered orally at a dose of 3500 mg/kg/day to female mice on days 6-15 of pregnancy. In this study, the results indicated that acetone warranted high priority for additional developmental testing. No other conclusions can be drawn from this study. No conclusions can be drawn from one other study because the animals were exposed to acetone and several other potentially harmful chemicals at the same time. (1)

MUTAGENICITY:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
Negative results were obtained in the peripheral blood cells of mice that received 5000 – 20000 ppm acetone in drinking water for 13 weeks. Negative results have been obtained in tests using cultured mammalian cells and bacteria. Positive and negative results have been obtained in one studies using yeast. (1)

SKIN SENSITIZATION:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

Acetone:
Negative results were obtained in the Mouse Ear Sensitization test. (1)

REPRODUCTIVE TOXICITY:

Naphtha, n-Hexane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane:
No data available. (2)

REPRODUCTIVE TOXICITY: (continued)

Acetone:
Sperm effects have been observed in rats already experiencing kidney damage. No effects on fertility have been observed. Rats and mice were exposed to up to 50000 ppm acetone in drinking water for 13 weeks. Sperm motility was decreased and the percentage of abnormal sperm was increased in male rats, at the high dose (approximately 4300 mg/kg/day). These same male rats had experienced kidney damage. Similar effects were not observed in the mice. No effects on reproductive or testicular toxicity were observed in male rats exposed to 0.5% acetone in their drinking water for 6 weeks. (1)

SECTION 12. Ecological Information

ENVIRONMENTAL EFFECTS:
Do not allow product or runoff from fire control to enter grounds, basements, storm or sanitary sewers, lakes, rivers, streams. 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 13. 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 14. Transport Information

NAME OF PRODUCT:	Elastocol Stick	***DENTIFICATION NUMBER:***	UN 1133
CLASSIFICATION (TDG and DOT):	Class 3	***SHIPPING NAME:***	Adhesives

Containers follow the standards of: Canada: CAN / CGSB-43.150-97
USA: CFR 49 parts 100 to 199

PACKING GROUP: II

SECTION 15. Regulatory Information

WHMIS: Class B2: Flammable liquid (flash point below 37.8°C).
Class D2B: Other toxicological effects (acetone, severe irritant for eyes).

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).

HMIS (USA):	Health Hazard: 1 Fire Hazard: 3 Reactivity: 0 Personal protection: 2	***NFPA (USA):***	Fire Hazard:3 Reactivity: 0 Health: 1 Specific Hazard: -

SECTION 16. Other Information

Glossary:

ACGIH:	American Conference of Governmental Industrial Hygienists
ANSI:	American National Standards Institute
ASTM:	American Society for Testing and Materials
CAS:	Chemical Abstract Services
CFR:	Code of Federal Regulations (United States)
CSA:	Canadian Standardisation Association
DOT:	Department of Transportation
DSL:	Domestic Substances List (Canada)
EPA:	Environmental Protection Agency (United States)
HMIS:	Hazardous Material Information System
IARC:	International Agency of Research on Cancer
LC50:	(Lethal concentration50) Concentration of a substance in air that causes dead of 50 % mortality of a defined animal population
LD50:	Lethal dose50) Single dose of a substance that, when administrated by a define route in an animal assay, is expected to cause the death of 50 % of a defined animal population
NFPA:	National Fire Protection Association
NIOSH:	National Institute for Occupational Safety and Health (United States)
N.S.O.:	Not Specified Otherwise
NTP:	National Toxicology Program (United States)
OSHA:	Occupational Safety & Health Administration (United States)
RCRA:	Resource Conservation and Recovery Act (United States)
RTECS:	Registry of Toxic Effects of Chemical Substances
TDG:	Transportation of Dangerous Goods (Canada)
TLV-TWA:	Threshold Limit Value – Time-weighted Average
TSCA:	Toxic Substances Control Act
WHMIS:	Workplace Hazardous Materials Information System (Canada)

Reference:
(1) CHEMINFO (2003) Canadian Center of Organisational Health and Safety, Hamilton (Ontario) Canada
(2) Material Safety Data Sheet of the supplier

For more information: 1-888-610-2151

The Material Safety Data Sheets of are available online at **www.waterblocksystems.com**

Justification of the update:
· Addition in the list of dangerous ingredients: Naphtha and/or n-Heptane, Methylcyclopentane, 3-Methylpentane, 2-Methylpentane. (Section II)
· Addition of data. (Sections III and XI)

This MSDS contains all the information required by ANSI Z400.1 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 of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.