MATERIAL SAFETY DATA SHEET
TR-7 TAR & MASTIC REMOVER

SECTION I - PRODUCT IDENTIFICATION

Manufacturer's Name: American Building Restoration Products, Inc.
9720 S. 60th St.
Franklin, Wisconsin 53132

Emergency Phone No.: Chemtrec 1-800-424-9300

Product Trade Name: TR-7 Tar & Mastic Remover
DOT Proper Shipping Name: Paint Related Material
3 UN1263 PG II

SECTION II - HAZARDOUS INGREDIENTS

	CAS NO.	AMT(%)	OSHA PEL	ACGIH TLV
Dichloromethane	75-09-2	65-75	TWA 25 ppm STEL 125 ppm	50 ppm
Methanol	67-56-1	10-20	TWA 200 ppm STEL 250 ppm	200ppm
Toluene	108-88-3	3-7	TWA 100 ppm STEL 150 ppm	50 ppm
Acetone	67-64-1	1-3	TWA 500 ppm STEL 750 ppm	750 ppm
2-Furanmethanol	98-00-0	3-6	TWA 50 ppm	10 ppm

SECTION III - PHYSICAL DATA

Boiling Point 56 - 60°C
Speci□c Gravity @ 60°F 0.960 - 0.990
Vapor Pressure Formulation (Calculated) > 134 mm Hg at STP pH (100% Solution) 6.0 - 7.0
Vapor Density (Calculated) < 2 (Air = 1) Appearance Clear to light amber
Odor Aromatic ether like odor Solubility in Water Partly miscible

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: <40°F (SW-1020A)
Flammable Limits: Explosive in Oxygen: LEI: 0 UEI: 66.4
Extinguishing Media: CO2, Dry Chemical or Foam
Special Fire Fighting Procedures: Use self-contained breathing apparatus. Use water to cool fire-exposed containers.
Unusual Fire and Explosion Hazards: Avoid Sparks.

SECTION V - HEALTH HAZARD DATA

Route of Entry Inhalation: Yes Skin: Yes Ingestion: Yes
Acute Health Effects

Dichloromethane:

INHALATION: Irritant/Narcotic/Chemical asphyxiant/Carcinogen. 2300ppm Immediately Dangerous to Life or Health. Human exposure to 100ppm has resulted in upper respiratory tract irritation; concentrations as low as 200ppm have produced temporary neurobehavioral effects; 500-1000ppm for 1-2 hours has caused lightheadedness and elevated carboxyhemoglobin level; 2300ppm for 30 minutes has caused nausea and narcosis; 5000ppm has caused headache, fatigue, neurasthenic disorders and digestive disturbances. Other symptoms may include dizziness, tingling, numbness of the extremities, a sensation of heat, a sensation of fullness in the head, drunkenness, stupor, dullness and mental confusion. Massive exposure may cause pharyngeal erosion, pulmonary edema, staggering, hemolysis with gross hematuria, rapid unconsciousness and death. Recovery is generally complete if exposure is terminated before anesthetic death. Exposure to high levels may also cause cardiac arrhythmias.
SKIN: Irritant. May cause effects ranging from mild irritation to severe pain, paresthesias and possibly burns, depending on the intensity of contact.
EYE CONTACT: Irritant. Vapor concentrations above 2000ppm may cause irritation. Direct contact may cause pain and extreme irritation, but it is not likely to cause serious injury.
INGESTION: Narcotic/Chemical asphyxiant. May cause rapid, then slowed respiration, glottal and pharyngeal edema, intravascular hemolysis with gross hematuria, gastrointestinal ulceration and hemorrhage and carboxyhemoglobinemia. These symptoms may progress rapidly to unconsciousness and lack of response to painful stimuli. Pharyngeal erosions may disturb the swallowing mechanism resulting in aspiration pneumonia. In addition, symptoms of central nervous system depression may occur followed by convulsions and paresthesia of the extremities. Large doses may cause liver and kidney damage. The estimated lethal dose for an adult is 25 grams.

Toluene:

INHALATION: Irritant/Narcotic/Neurotoxin. 500ppm is Immediately Dangerous to Life or Health. Odor detection may be insuf□cient for warning due to olfactory fatigue. Exposure to 100ppm may cause irritation. 200-600ppm for up to 8 hours caused fatigue, weakness, confusion, headache, nausea, impaired coordination and reaction time, paresthesias of the skin, euphoria, dizziness and dilated pupils. 800ppm caused rapid irritation, nasal mucous secretion, metallic taste, drowsiness and impaired balance. After effects including nervousness, muscular fatigue and insomnia lasted for several days. Death may be due to respiratory failure or ventricular □brillation.
SKIN CONTACT: Irritant. Contact with this liquid may cause irritation. Skin absorption does occur, but it is generally too slow to produce signs of acute systemic toxicity.
EYE CONTACT: Irritant. Liquid may cause irritation and corneal burns if not promptly removed. Concentrations around 300-800ppm may cause noticeable irritation and lacrimation. Corneal lesions and very □ne vacuoles have been reported in workers exposed to a solvent containing toluene. The lesions subsided following several days of non-exposure.
INGESTION: Narcotic. May cause a burning sensation in the epigastrium and abdominal spasms. Systemic effects may occur as described in acute inhalation. Aspiration of the liquid into the lungs may cause coughing, gagging, distress, acute hemorrhagic pneumonitis and rapidly developing edema. The approximate lethal dose in humans is 15-30 mL.

Methyl alcohol:

INHALATION: Narcotic/Neurotoxin. 6000ppm is Immediately Dangerous to Life or Health. May cause irritation of the mucous membranes, coughing, oppression in the chest, tracheitis, bronchitis, tinnitus, unsteady gait, twitching, colic, constipation, nystagmus and blepharospasm. Symptoms from occupational exposure include paresthesias, numbness and shooting pains in the hands and forearms. Metabolic acidosis and effects on the eyes and central nervous system may occur as detailed in acute ingestion.
SKIN CONTACT: Irritant/Narcotic/Neurotoxin. Contact with liquid may cause irritation. Skin absorption may occur and cause metabolic acidosis and effects on the eyes and central nervous system as detailed in acute ingestion.
EYE CONTACT: Irritant. Vapors may cause irritation. High concentrations have been reported to cause violent in□ammation of the conjuctiva and epithelial defects on the cornea. Mild irritation may occur with dilute solutions; the undiluted liquid has produced moderate corneal opacity and conjunctival redness in rabbits. Application of a drop of methanol in rabbit eyes caused a mild reversible reaction, graded 3 on a scale of 1-10 after 24 hours.
INGESTION: Narcotic/Neurotoxin. May cause mild and transient inebriation and subsequent drowsiness followed by an asymptomatic period lasting 8-48 hours. Following the delay, coughing, dyspnea, headache, dullness, weakness, vertigo or dizziness, nausea, vomiting, occasional diarrhea, anorexia, violent pain in the back, abdomen and extremities, restlessness, apathy or delirium and rarely, excitement and mania may occur. Rapid, shallow respiration due to metabolic acidosis, cold and clammy skin, hypotension, cyanosis, opisthotonos, convulsions, mild tachycardia, cardiac depression, peripheral neuritis, cerebral and pulmonary edema, unconsciousness and coma are possible. Effects on the eye may include optic neuritis, blurred or dimmed vision, dilated, unresponsive pupils, ptosis, eye pain, concentric constriction of visual □elds, diplopia, change in color perception, photophobia and optic nerve atrophy. Partial blindness or possibly delayed transient or permanent blindness may also occur. Bilateral sensorineural deafness has been reported in a single case. Liver, kidney, heart, stomach, intestinal and pancreatic damage may also occur. Death may be due to respiratory failure of rarely from circulatory collapse. As little as 15ml has caused blindness; the usual fatal dose is 60-240ml. Prolonged asthenia and irreversible effects on the nervous system including difficulty in speech, motor dysfunction with rigidity, spasticity and hypokinesis have been reported.

Acetone:

INHALATION: Irritant/Narcotic. 2500ppm is Immediately Dangerous to Life or Health. Vapor concentrations around 1000ppm may cause slight transient irritation of the upper respiratory tract. Exposure to 12000ppm has caused throat irritation and central nervous system depression with weakness of the legs, headache, dizziness, drowsiness, nausea and a general feeling of malaise. Other possible effects from exposure to high concentrations include dryness of the mouth and throat, incoordination of motion and speech, restlessness, anorexia, abdominal pain, vomiting, sometimes followed by hematemesis, hypothermia, dyspnea, slow, irregular respiration, slow, weak pulse, progressive collapse with stupor and in severe cases, coma. Blood glucose levels may be affected and fatal ketosis is possible.
SKIN CONTACT: Irritant. Cellular damage to the outer layers of the epitheluim with mild edema and hyperemia has been demonstrated in humans, but was readily reversible. Small amounts may be absorbed through intact skin.
EYE CONTACT: Irritant. In humans, vapors produce only slight irritation when the concentration is at or below 1000ppm. However, high vapor concentrations have caused corneal epithelial and conjunctival injury in animals. Liquid splashed in human eyes causes and immediate stinging sensation and, if washed promptly, damage only to the corneal epithelium characterized by microscopic gray dots and a foreign body sensation, which heals completely in 1-2 days.

INGESTION: Narcotic. May cause a fruity odor of the breath and mucous membrane and gastroenteric irritation. In acute cases, a latent period may be followed by restlessness, diarrhea, nausea and vomiting proceeding to hematemesis and progressive collapse with stupor. Hepatorenal lesions have been reported. The blood glucose level may be affected and ketosis may be fatal. 10-20 mL have been tolerated without ill effects. Large amounts have produced lethargy, pharyngeal and soft palate erosions and erythema. 200mL have caused stupor within a half hour, □ushed cheeks, shallow respiration and coma, which lasted for 12 hours. Renal glucosuria persisted for 5 months.

2-Furanmethanol:

Chemical Listed as Carcinogen or Potential Carcinogen

National Toxicology	IARC Monographs	OSHA Regulated
Yes	Yes	Yes
No X*	No X	No X

* NTP Draft Technical Report TR-482 (2-year inhalation studies rats and mice). Some evidence of carcinogenic activity in male rats, nasal neoplasms; equivocal evidence of carcinogenic activity in female rats, nasal and kidney neoplasms. Some evidence of carcinogenic activity in male mice, kidney neoplasms. No evidence of carcinogenic activity in female mice.

Signs and Symptoms Exposure: Detectable odor.

Acute Overexposure: Strong odor. Headache. Irritation of skin, eyes and respiratory tract. Central nervous system depression.

Chronic Overexposure: Skin rash. Allergic reactions.

Chronic Health Effects

Dichloromethane:

INHALATION: More than 100 workers exposed to levels below 500ppm have developed health problems including signi□cant upper respiratory irritation, exacerbation of coronary artery disease and a high incidence of neurotoxicity; increased complaints of chest pains were reported at concentrations of 10-35ppm. Repeated human exposure to 50-3600ppm has caused signs of toxic encephalopathy with acoustical and optical delusions and hallucinations. A case of serious cerebral deterioration was observed in an individual exposed for several years to dichloromethane. In a mortality study of two groups of workers, one exposed to acetone and the other to dichloromethane and acetone, a statistically signi□cant difference in deaths from diseases of the circulatory system and from ischemic heart disease were reported from the dichloromethane and acetone group. In another mortality study of workers exposed to dichloromethane, a signi□cant increase in hypertensive disease ad a "suggestive excess" of pancreatic cancer were reported. Liver disease has been reported in workers. In one study, an increase in serum bilirubin was observed in exposed workers, but no other sign of liver injury or hemolysis was reported. Adverse liver effects were observed in several animal species chemically exposed. Testicular atrophy was reported in mice exposed to 4000ppm over 2 years. Repeated inhalation by rodents prior to and/or during gestation caused fetal skeletal abnormalities and behavioral effects in newborn offspring.

CHRONIC: Prolonged or repeated contact may cause a dry, scaly and □ssured dermatitis due to defatting action of liquid on skin.

EYE CONTACT: Repeated or prolonged exposure to irritants may cause conjunctivitis.

INGESTION: Repeated ingestion by rats and mice resulted in histomorphological changes in the liver.

Toluene:

INHALATION: Prolonged or repeated exposure may cause mucous membrane irritation, vomiting, insomnia, nosebleeds, chest pains, euphoria, headache, vertigo, nausea, anorexia, momentary loss of memory, loss of coordination and impairment of reaction time, tinnitus, impaired speech, vision and/or hearing, alcohol intolerance, petechiae and abnormal bleeding. Bone marrow hypoplasia and leukopenia have been reported occasionally, but may be due to benzene contamination. Examination of workers exposed to 100-1100ppm revealed hepatomegaly, mild macrocytosis, moderate erythropenia and absolute lymphocytosis but no leukopenia. Other workers exposed to toluene fumes developed leukopenia and especially neutropenia. Within 6 months, they showed decreased prothrombin level and increased coagulation time. Periodontal effects were also noted. Volunteers exposed to 200ppm for 6 hours/day for 2 days showed a signi□cant increase in heart rate. Cardiac sensitization may occur and may result in cardiac arrest due to ventricular □brillation. Repeated inhalation to the point of euphoria has caused irreversible encephalopathy with cerebellar ataxia, rhythmic limb movements, disequilibrium, bizarre behavior, emotional ability, optic atrophy and diffuse cerebral atrophy. Other neuropsychiatric effects may include dizziness, syncope, paresthesias, peripheral neuropathy, hallucinations, lethargy and coma. Intentional snif□ng can produce renal tubular defects with metabolic acidosis, electrolyte abnormalities and potassium loss. Severe muscle weakness leading to limb paralysis and cardiac arrhythmias may result from the hypokalemia; however, sensory function and tendon re□exes are not impaired. Gastrointestinal effects may include abdominal pain, nausea, vomiting and hematemesis. Chromosome changes were observed in some workers up to two years after cessation of exposure to toluene. Women occupationally exposed to toluene and other varnish solvents have reported menstrual disorders, underweight offspring who did not nurse well and fetal asphyxia.

One case study indicated toluene apparently crossed the placenta and created cerebellar damage in an unborn infant. Dysmenorrhea has been reported in women occupationally exposed to toluene levels of 60-100ppm. Reproductive effects have also been reported in animals.
SKIN CONTACT: Prolonged or repeated contact with the liquid may cause defatting of the skin with a dry □ssured dermatitis. Repeated application to rabbit skin produced slight to moderate irritation and slight necrosis. Topical application of 10 g/kg produced and increase in plasmic and lymphoid reticular cells in bone marrow of rats, while 1 g/kg had no effect.
EYE CONTACT: Repeated or prolonged contact with irritants may cause conjunctivitis.
INGESTION: No effects were reported in rats fed up to 590 mg/kg/day for 193 days. Administration to animals during gestation produced signi□cant embryolethality and an increase in cleft palate in offspring.

Methyl alcohol:

INHALATION: Repeated or prolonged exposure may cause effects as in acute ingestion. Repeated exposure to 200-375ppm caused recurrent headaches in workers. Exposure for 4 years to 1200-8000ppm resulted in marked diminution of vision and enlargement of the liver in a workman. Reproductive effects have been reported in animals.
SKIN CONTACT: Repeated or prolonged contact with the liquid may cause defatting of the skin resulting in erythema, scaling and eczematoid dermatitis. Chronic absorption may result in metabolic acidosis and effects as detailed in acute ingestion.
EYE CONTACT: Repeated or prolonged contact may cause conjunctivits.
INGESTION: Repeated ingestion may cause visual impairment and blindness and other systemic effects as detailed in acute ingestion. Reproductive effects have been reported in animals.

Acetone:

INHALATION: Workers exposed to 500ppm/6 hours/6 days experienced mucous membrane irritation, an unpleasant smell, heavy eyes, overnight headache and general weakness accompanied by hematologic changes. Recovery occurred in several days. Workers exposed to 1000ppm for 3 hours/day for 7-15 years reported chronic inflammation of the respiratory tract, stomach and duodenum, dizziness, loss of strength and asthenia. Drowsiness, vertigo, sensation of heat and coughing have also been reported from chronic exposure to low concentrations. Reproductive effects have been reported in animals.
SKIN CONTACT: Repeated or prolonged exposure may cause dermatitis with drying, cracking and erythema due to the defatting action accompanied by persistent paresthesia of the fingers. The amount absorbed through the skin increases directly with the frequency and extent of the exposure. 2 of 3 guinea pigs exposed by skin contact for 3 weeks developed cataracts by the end of 3 months.
EYE CONTACT: Prolonged or repeated exposure to the vapors may cause irritation or conjunctivitis.
INGESTION: Rats administered 25000ppm in their drinking water for 14 days showed depressed growth, □uid intake and feed consumption. Rats given 100,000ppm showed mild debilitation, depressed weight gain, emaciated appearance and bone marrow hyperplasia. Male rats in 13 week studies developed depressed sperm motility and caudal and epididymal weights, an increased incidence of abnormal sperm and nephrophathy. Rats developed anemia and splenic pigmentation (hemosiderosis) at levels of 20000-50000ppm. In both the 14 day and 13 week studies, mice developed centrilobular hepatocellular hypertrophy.

Chemical Ingredients Listed as a Carcinogen or Potential Carcinogen
National Toxicology Program: Dichloromethane
IARC Group 2B: Possibly carcinogenic to humans.
Irritating to eyes, possibly severe. May cause eye damage. Skin irritation may occur. Additional effects may include tingling sensation. Vapor exposure may cause irritation, possibly severe. Additional effects may include nausea, blood in the urine, irregular heartbeat, headache, drunkenness, numbness, suffocation, lung congestion, blood disorders, lack of sense of smell, metallic taste, headache, drowsiness, tingling sensation, dilated pupils, liver and kidney damage, nerve damage, ringing in the ears, digestive disorders, twitching, visual disturbances, low body temperature, yellowing of the skin and eyes, stomach pain, bloody vomit, difficulty breathing and coma. Ingestion may cause blood in the urine, drunkenness, tingling sensation, suffocation, blood disorders, convulsions, lung congestion, nausea, vomiting, possibly with blood, diarrhea, difficulty breathing, low blood pressure, irregular heartbeat, headache, drowsiness, disorientation, hearing loss, intolerance of the eyes to light, blindness, bluish skin color, nerve damage, convulsions, redness of the skin and coma.

Emergency and First Aid Procedures for Overexposure

Inhalation: Remove person to fresh air. If necessary, restore and support breathing. If breathing is difficult, give oxygen. Get immediate medical attention.
Eyes: Immediately flush with water for 15 minutes while lifting eyelids and rolling eyes. Get immediate medical attention.
Skin: Wash promptly with soap and water. May dry out skin. Get medical attention if irritation occurs. Remove contaminated clothing. Launder clothing before reuse.

Ingestion: Get immediate medical attention. If conscious and medical help is not readily available, give 1 to 2 glasses of water and keep at rest. Never attempt to give anything by mouth to an unconscious person. Induce vomiting only at the advice of a physician.
Methanol Poisoning: Give ethanol, 50% (100 proof), 1.5 ml/kg orally initially, diluted to not more than 5% solution, followed by 0.5-1.0 ml/kg every 2 hours orally or intravenously for 4 days in order to reduce metabolism of methanol and to allow time for its excretion. Blood ethanol level should be in the range of 1-1.5 mg/ml. Antidote should be administered by qualified medical personnel.

SECTION IV - REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Keep away from sparks, heat and open flame.
Incompatibility: (Materials to Avoid): Strong Oxidants
Hazardous Decomposition Products: Phosgene, CO, CO2, aldahydes and asphyxiants, HCL.
Hazardous Polymerization: Will Not Occur

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled: Isolate source of leak. Provide adequate ventilation. Use self-contained breathing apparatus.
Waste Disposal Method: Contact Local, State, & Federal agencies to ensure compliance of disposal method with current regulations. NOTE: Empty containers can have residues, gases or mists and are subject to proper waste disposal.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection: Continuous flow supplied-air respirator, hood or helmet
Ventilation: Local Exhaust: Adequate
Mechanical: Use explosion proof equipment
Protective Gloves: Impervious gloves recommended.
Eye Protection: Splash proof chemical goggles or face shield.
Other Protective Equipment: Impervious protective wear.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing: Keep in cool place.
Store in sealed container. Keep from sources of ignition.
Other Precautions: Use adequate ventilation.

SECTION X - PREPARATION DATE OF MSDS

Occupational Health & Safety Dept.

Date: 2/12/2014
Supersedes: 10/23/13

DISCLAIMER

The information contained herein is based on the data available to us and is believed to be correct. However, American Building Restoration Products, Inc. makes no warranty, expressed or implied regarding the accuracy of this data of the results to be obtained from the use thereof. American Building Restoration Products, Inc. assumes no responsibility for injury from the use of the product described herein.

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