



MATERIAL SAFETY DATA SHEET
ROOFING N.I.S. ADHESIVE

Offerte en français

HEALTH CANADA 	PROTECTIVE CLOTHING 	TRANSPORT OF DANGEROUS GOODS NOT REGULATED
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SECTION I: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Use: Restoration of roof.

Manufacturer:
 ExpertSeal
 327 9th Avenue
 Richmond (Quebec) J0B 2H0
 CANADA
 Tel.: 819 826-1000

Distributor:
 Resisto Division, Soprema Canada
 1675 Haggerty Street
 Drummondville (Quebec) J2C 5P7
 CANADA
 Tel.: 819 478-8408 – 1 877 478-8408

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

EMERGENCY OVERVIEW

Black viscous liquid with solvent odour. **CAUTION!** This product and its vapours are combustible. The vapours are heavier than air and may spread long distances. Distant ignition and flash back are possible. Do not smoke. Adequate ventilation to the outside must be provided. All ignition sources must be eliminated near working area (spark-producing devices or switches, furnaces, all pilot lights).

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

SECTION II: COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Stoddard Solvent	8052-41-3	15-40	100 ppm	Not established

SECTION III: POTENTIAL HEALTH EFFECTS

Effects of Short-Term (Acute) Exposure

INHALATION

Stoddard solvent: Vapours or mist can cause irritation and CNS effects, such as headache, dizziness, intellectual impairment and fatigue. (1)

SKIN CONTACT

Stoddard solvent: Stoddard solvent is a moderate skin irritant, based on animal information. Repeated or prolonged exposure may result in contact dermatitis. (1)

EYE CONTACT

Stoddard solvent: The vapour, mist and liquid can cause mild eye irritation. The liquid has caused mild irritation in an animal study. (1)

INGESTION

Stoddard solvent: Animal studies indicate the oral toxicity of Stoddard solvent is low. However, it is very hazardous if even a few ml are aspirated (breathed into the lungs). Aspiration can occur easily with Stoddard solvent during ingestion or vomiting. It can cause severe lung injury and may even be fatal. Ingestion is not a typical route of occupational exposure. (1)

Effects of Long-Term (Chronic) Exposure

SKIN CONTACT

Stoddard solvent: Repeated or prolonged contact with the skin can cause irritation. Case reports indicate that when Stoddard solvent is allowed to remain in close contact with skin, as when clothing wet with Stoddard solvent is worn, blisters and sores may develop. (1)

INHALATION

Stoddard solvent: See effects described below.

NERVOUS SYSTEM EFFECTS

Stoddard solvent: Chronic organic solvent intoxication is the name given to a pattern of nervous system effects resulting from heavy exposure to a variety of organic solvents. It is a rare condition and seems to develop only after repeated overexposures. Symptoms include headache, dizziness, reduced memory, tiredness, joint pain, sleep disturbances, pain, numbness and tingling in the fingers and toes, decreased manual dexterity, depression, irritability, emotional instability, reduced ability to concentrate and nausea. The severe forms of chronic organic solvent intoxication may be reversible or only slowly reversible. Studies of painters suggest that long-term exposure (mean exposure 22 to 27 years) to organic solvents, such as Stoddard solvent, may cause chronic organic solvent intoxication. These painters were exposed to many different chemicals, over many years, and it is not possible to relate these effects to any one chemical. (1)

BLOOD EFFECTS

Stoddard solvent: Decreased bone marrow cell production (aplastic anaemia) has been seen in people exposed repeatedly for long periods (months to years) to Stoddard solvent. This condition was fatal in 4 of 5 case reports. It has been suggested that the presence of benzene may have been responsible for the aplastic anaemia. Benzene exposure is recognized as a cause of aplastic anaemia. Current commercial products of Stoddard solvent contain only trace amounts of benzene (less than 10 ppm). (1)

KIDNEY AND LIVER EFFECTS

Stoddard solvent: There is one case report of a worker developing kidney injury after intense, unprotected skin and inhalation exposures to Stoddard solvent 6 hours/day for one year. The worker experienced significant acute toxicity as a result of this exposure. There is one case report (1940) of a worker developing liver injury, as well as anaemia and stomach disorders, after working with his hands immersed or wet with Stoddard solvent for 3 months. The worker was employed in the

dry-cleaning industry and was exposed to other chemicals at the same time. An association of liver injury with exposure to organic solvents, such as Stoddard solvent, was found in one study of house painters. The painters were also exposed to many other chemicals and it is not possible to draw any conclusions from this study. (1)

CARCINOGENICITY

Stoddard solvent: The International Agency for Research on Cancer (IARC) has reviewed the carcinogenicity of petroleum solvents (including Stoddard solvent in a sub-group of white spirits). The IARC concluded that petroleum solvents are not classifiable as to their carcinogenicity to humans. Subsequent studies of carcinogenicity patterns in people working in the dry cleaning and laundry industry show an increase in various cancers including kidney and bladder cancer. However, these studies are extremely difficult to evaluate because the workers were exposed to many different solvents, including tetrachloroethylene, a suspected carcinogen. The IARC has concluded that this chemical is not classifiable as to its carcinogenicity to humans (Group 3). The American Conference of Governmental Industrial Hygienists (ACGIH) has not assigned a carcinogenicity designation to this chemical. The US National toxicology Program (NTP) has not listed this chemical in its report on carcinogens. (1)

TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY

Stoddard solvent: Two studies have made associations between exposure to white spirit (Stoddard solvent) and birth defects. No conclusions can be drawn because of small numbers, other exposures and other limiting factors. (1)

REPRODUCTIVE TOXICITY

Stoddard solvent: No human or animal information available. (1)

MUTAGENICITY

Stoddard solvent: Not mutagenic when tested on cultured human blood cells (in vitro). Also negative in animal studies and bacterial test. (1)

TOXICOLOGICALLY SYNERGISTIC MATERIALS

Stoddard solvent: No information available. (1)

POTENTIAL FOR ACCUMULATION

Stoddard solvent: Because of its solubility in fat, Stoddard solvent may accumulate in fat to some extent. (1)

SECTION IV: FIRST AID MEASURES

SKIN CONTACT

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

EYE CONTACT

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

INHALATION

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

SWALLOWING

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

SECTION V: FIRE-FIGHTING MEASURES

FLAMMABILITY: Combustible Class II (NFPA)

EXPLOSION DATA: Sensitivity to mechanical impact: Probably not sensitive. Stable material.

Sensitivity to static charge: Can accumulate static charge by flow or agitation.

FLASH POINT: 37.8-39°C (100-102°F) (Closed cup)
(Stoddard solvent)

AUTO-IGNITION TEMPERATURE: 229°C (444°F) (Stoddard solvent)

FLAMMABILITY LIMITS IN AIR: (% in volume) 0.9 – 6 (Stoddard solvent)

FIRE AND EXPLOSION HAZARDS

Combustible liquid, Can release vapours that form explosive mixtures with air at, or above 37.8°C. 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. Liquid can accumulate static charge by flow or agitation. During a fire, irritating/toxic gases may be generated. Can accumulate in confined spaces, resulting in a toxicity and flammability hazard. Containers may explode in heat of fire. 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.

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 VI: ACCIDENTAL RELEASE MEASURES

RELEASE OR SPILL

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

SECTION VII: HANDLING AND STORAGE

HANDLING

This product and its vapours are 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 empty containers.

STORAGE

Store in a cool well-ventilated area out of direct sunlight and away from heat and ignition sources. Keep storage areas clear of combustible materials. No smoking near storage area. Store away from incompatible materials. Store the product according to occupational health and safety regulations and fire and building codes. Storage area should be clearly identified, clear of obstruction and accessible only to trained and

authorized personnel. Inspect periodically for damage or leaks. Have appropriate fire extinguishers and spill clean-up equipment near storage area. Inspect all containers to make sure they are properly labelled.

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

HANDS: Wear gloves made from polyvinyl alcohol (PVA) or 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: Viscous liquid
ODOUR AND APPEARANCE: Black liquid with solvent odour
ODOUR THRESHOLD: Not available
VAPOUR DENSITY (air = 1): Heavier than air
EVAPORATION RATE (Butyl acetate = 1): 0.1 (Stoddard solvent)
BOILING POINT (760 mm Hg): Not available
FREEZING POINT: Not available
SPECIFIC GRAVITY (H₂O = 1): Not available
SOLUBILITY IN WATER (20°C): Insoluble
VOLATILE ORGANIC COMPOUND (V.O.C.) CONTENT: 234 g/L
VISCOSITY: Not available

SECTION X: STABILITY AND REACTIVITY

STABILITY: This material is stable.
CONDITIONS OF REACTIVITY: Avoid excessive heat, open flame, static discharge, sparks and other ignition sources.
INCOMPATIBILITY: Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS: None identified.
HAZARDOUS POLYMERIZATION: None

SECTION XI: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA

Stoddard solvent: (1)
LC₅₀ (rat): > 880 ppm (4-hour exposure)
LD₅₀ (oral, rat): > 5 000 mg/kg
LD₅₀ (dermal, rabbit): > 3 000 mg/kg

Effects of Short-Term (Acute) Exposure

INHALATION

Stoddard solvent: Short-term animal studies have shown depression of the CNS and irritation of the eyes, nose and throat. Rats exposed for an 8-hour period to 1 400 ppm Stoddard solvent experienced eye irritation, developed a bloody discharge around the nose and showed signs of slight loss of coordination. Similar effects were seen in rats exposed for an 8-hour period to 800 ppm but there was no loss of coordination. No effect was seen in rats exposed for 8 hours to 420 ppm. (1)

EYE IRRITATION

Stoddard solvent: Stoddard solvent is a mild eye irritant. Caused minimal irritation in rabbits when 0.1 ml was applied in a standard Draize test. (1)

SKIN IRRITATION

Stoddard solvent: Stoddard solvent is a moderate skin irritant. In a standard Draize test, application of 0.5 ml of Stoddard solvent (boiling range 160.6-199.4°C) to the intact and abraded skin of rabbits for 24 hours caused moderate skin irritation (scored 4.5/8). (1)

Effects of Long-Term (Chronic) Exposure

INHALATION

Stoddard solvent: Long-term animal studies have shown only lung irritation and slight liver and kidney effects. (1)

SKIN SENSITIZATION

Stoddard solvent: No sensitization seen when tested on guinea pigs. (1)

TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY

Stoddard solvent: No foetal effects were reported following maternal exposure of rats to 100 or 300 ppm white spirits 6 hours/day during pregnancy. No further details were reported. No effects were obtained in another study with exposures up to 950 ppm, in spite of maternal toxicity. (1)

MUTAGENICITY

Stoddard solvent: Stoddard solvent injected into mice, or rat bone marrow, did not produce chromosomal aberrations. It did not induce mutations in sperm of male rats exposed prior to mating. No mutagenicity was seen in tests with bacteria or mouse lymphoma cells. (1)

SECTION XII: ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial and federal regulations may require that environmental and / or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life.

SECTION XIII: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

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

SECTION XIV: TRANSPORT INFORMATION

This product is not regulated by DOT and TDG.

SECTION XV: REGULATORY INFORMATION

WHMIS

B3: Combustible liquid (flash point higher than 37.8°C).
D2B: Toxic material causing other effects (Stoddard solvent has irritant effects).
DSL: All constituents of this product are included on the Domestic Substances List (DSL – Canada).
TSCA: All constituents of this product are included on the Toxic Substances Control Act Inventory (TSCA – United States).

HMIS (USA):		NFPA (USA):	
Health	1	Health	1
Flammability	2	Flammability	2
Physical hazard	0	Instability	0
Protective equipment	G	Specific hazard	-

SECTION XVI: OTHER INFORMATION

GLOSSARY

ANSI:	American National Standards Institute
ASTM:	American Society for Testing and Materials
CAS:	Chemical Abstract Services
CSA:	Canadian Standardisation Association
DOT:	Department of Transportation (United States)
EPA:	Environmental Protection Agency (United States)
HMIS:	Hazardous Material Information System
LD₅₀/LC₅₀:	Less high lethal dose and lethal concentration published
NFPA:	National Fire Protection Association (United States)
OSHA:	Occupational Safety & Health Administration (United States)
RCRA:	Resource Conservation and Recovery Act (United States)
TDG:	Transportation of Dangerous Goods
TLV-TWA:	Threshold Limit Value – Time-weighted Average
TWA:	Time-weighted average
WHMIS:	Workplace Hazardous Materials Information System (Canada)

Reference:

- (1) CHEMINFO (2009) Canadian Centre of Occupational Health and Safety, Hamilton (Ontario) Canada

Code of MSDS:
For more information:

CA U DRU SS FS 137
1 800 567-1492

The Material Safety Data Sheets of RESISTO Canada are available on Internet at the following site: www.resisto.ca

Justification of the update:

- Triennial update.

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

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Bar Codes:

Roofing N.I.S. Adhesive:

6 23680 53040 9

6 23680 53041 6