MATERIAL SAFETY DATA SHEET

WHMIS, SAFE HANDLING, AND DISPOSAL INFORMATION

ISSUE DATE: 07/22/2004	PRODUCT NAME: **Eco Strip**	HAZ CLASS: IRR
SUPERSEDES: Original	PRODUCT TYPE: Paint Remover	PAGE: 1 of 4

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

BEAVER RESEARCH COMPANY
3700 KILGORE ROAD
PORTAGE, MI 49002

TELEPHONE: (269)382-0133, 8AM-5PM (EST), M-F

FAX: (269)382-0214

TRANSPORTATION AND CHEMICAL EMERGENCY: CHEMTEL - 800-255-3924, Outside USA - 813-248-0573

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	% WT	CAS #	LD_{50}(Route, Species)	LC_{50}(Species)
Benzyl Alcohol	30-40	100-51-6	1230 mg/kg (oral, rat)	N/AV
Petroleum Distillate, Naphthenic	5-<10	68477-31-6	N/AV	N/AV
Glycolic Acid	1-<5	79-14-1	1938 mg/kg (oral, rat)	3.6 mg/L/ 4hr (rat)

SECTION 3 – HAZARDS IDENTIFICATION

ROUTES OF ENTRY: (X)Skin Contact, (X)Skin Absorption, (X)Eye Contact, (X)Inhalation, (X)Ingestion
TARGET ORGANS: Eyes, skin, and mucous membranes.
EMERGENCY OVERVIEW: Moderate eye, skin, and respiratory irritant.

WHMIS SYMBOLS:

SPECIAL NOTE: MSDS data pertains to the product as dispensed from the container. Adverse health effects would not be expected under recommended conditions of use so long as prescribed safety precautions are practiced. See product bulletin for use instructions.

POTENTIAL HEALTH EFFECTS: Chronic contact may lead to inflammation or dermatitis.

SECTION 4 - FIRST AID MEASURES

SKIN CONTACT: Immediately flush contaminated skin with plenty of water. Get medical attention for burns.
EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower lids. Get immediate medical attention.
INHALATION: Move exposed person to fresh air. If irritation persists, get medical immediate attention.
INGESTION: If this product is swallowed, DO NOT INDUCE VOMITING. If victim is conscious give plenty of water to drink. Get medical attention at once.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABILITY: Combustible CONDITIONS: Must be heated above 90°C to ignite vapors.
EXTINGUISHING MEDIA: (X)Water, (X)Alcohol Foam, (X)CO2, (X)Dry Chemical, (X)Water Fog
FLASH POINT (°C): 105°C (PMCC)
FLAMMABLE LIMITS, LEL: N/AV UEL: N/AV%
AUTO IGNITION TEMPERATURE: >400°C
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors can travel to a source of ignition and flash back. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Toxic gases may form when this product comes in contact with extreme heat.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained positive pressure breathing apparatus. Keep containers cool with water spray.
HAZARDOUS COMBUSTION PRODUCTS: Carbon oxides and dark smoke may be created by combustion.
NFPA® "DIAMOND" RATING: Health(3), Flammability(1), Reactivity(0), Special Hazards(None)

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPECIAL LEAK AND SPILL PROCEDURES: Observe safety procedures in SECTION 7 & 8 during clean up. Spilled product may be slippery to walk on. Ventilate the area with fans. SMALL SPILL: apply an inert absorbent material on the spill, pick up, and place in a designated waste container. Do not return spilled stripper to the original container. LARGE SPILL: dike off to prevent sewer entry or ground runoff, and reclaim for reuse or disposal. Place only in well vented plastic containers. For remaining residues, if allowed thoroughly rinse off spill area with water, otherwise see SMALL SPILL instructions. The ideal choice for a waste container is an open top dense polyethylene or polypropylene plastic.

SECTION 7 – HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT: Prior to use, all organic solvents, and products containing heavy metals, such as chromate conversion compounds must be removed from the area. Wear protective gear (see Section 8). DO NOT use in enclosed space. Open containers slowly to relieve pressure build up. Keep product out of eyes. Avoid contact with skin. Keep away from food and food products. Keep out of the reach of children. Do not immediately seal waste containers; spent material is packaged in vented, plastic containers.
STORAGE REQUIREMENTS: Protect container against physical damage by storing in a designated, cool, dry, ventilated area away from foodstuffs. Do not store above 120ºF (48ºC). Store large quantities in buildings designed and protected for storage of NFPA Class IIIB combustible liquids.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

HAZARDOUS INGREDIENT	OSHA PEL/STEL	ACGIH TLV/STEL	OTHER (Specify)
Benzyl Alcohol	N/AV	N/AV	IRR, CBL
Petroleum Distillate, Naphthenic	N/AV	N/AV	IRR, CBL
Glycolic Acid	N/AV	N/AV	COR

HMIS III® CODES: Health (3), Flammability (1), Physical Hazard (1), Chronic Hazard: No
ENGINEERING CONTROLS: No extra measures are needed if TLV is not exceeded. Use local exhaust ventilation (explosion proof) to keep vapor concentration (TLV) below exposure limits. Maintain a safety shower and eye wash station near the work area.
PERSONAL PROTECT EQUIP: (X)Gloves, (X)Respirator, (X)Eyes, (X)Footwear, (X)Clothing, ( )Other (Specify)
RESPIRATORY PROTECTION: Use engineering controls to reduce emission levels. If exposure limits for hydrogen peroxide are exceeded, wear an approved NIOSH respirator of either an organic/acidic mist or a full-face air supplied type.
PROTECTIVE CLOTHING: Wear Neoprene® rubber gloves, boots, and apron. Wear a protective rain suit for spray application use.
EYE PROTECTION: Wear tight fitting goggles and face shield, for material transfer and application.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Orange, viscous emulsion
ODOR: Mild acrid odor
ODOR THRESHOLD: 10 ppm
SPECIFIC GRAVITY: 1.0
VAPOR DENSITY (Air=1): >1
VAPOR PRESSURE (mmHG): 15.5 mmHg20ºC
EVAPORATION RATE (WATER=1): 20
BOILING POINT (ºC): 100-205ºC (decomposes)
MELTING POINT (ºC): <0ºC
PH (CONC): 2-3 PH (10%): N/AP
COEFFICIENT WATER/OIL DISTRIBUTION: <1
SOLUBILITY IN WATER: 57.7%
VOC (EPA Method 24): 397 g/L

SECTION 10 – STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable
INCOMPATIBILITY (AVOID): Avoid contact with strong mineral acids, strong oxidizers, or strong alkalis
REACTIVITY/CONDITIONS: Decomposes when heated above 70-80ºC.
CONDITIONS TO AVOID: Do not expose to open flame and sparks.
HAZARDOUS DECOMPOSITION PRODUCTS: May decompose to carbon monoxide, carbon dioxide, or other organic products.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE EXPOSURE EFFECTS: Vapors and mists are irritating to eyes and respiratory system. Eye and skin contact produces stinging and a white wound that clears in a short period of time. Prolonged eye or skin contact may cause more serious burns. Ingestion may cause gastrointestinal complications.
CHRONIC EXPOSURE EFFECTS: Repeated contact (over period of a few weeks) may produce dermatitis.
IRRITANCY OF PRODUCT: Moderate; SKIN AND RESPIRATORY SENSITIZATION: Not likely to occur.
GENETIC TOXICITY: This product contains no known ingredients listed by OSHA, ACGIH, IARC, NTP or Health Canada, which are considered carcinogenic, teratogenic, nor other known ingredients that would interfere with reproduction.

SECTION 12 - ECOLOGICAL INFORMATION

BIODEGRADABILITY (40 CFR 796.3100): Chemical Oxygen Demand (COD): 1466 g/L (theoretical)
AQUATIC TOXICITY (EPA-600-4-91-002): Not determined.
OTHER: Entry of large quantities of product in waterways may be toxic to marine animals.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Do not put product in metal containers for disposal. Consult your local, state (provincial), and federal agencies for proper disposal method in your area. Do not contaminate water supply when disposing of wastes or containers.

SECTION 14 – TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: Not Regulated
TDG/DOT HAZARD CLASS: N/AP TDG/DOT PACKING GROUP: N/AP PIN: N/AP
TDG/DOT ID NUMBER : N/AP TDG/DOT LABEL/PLACARD: N/AP

SECTION 15 – REGULATORY INFORMATION

WHMIS CLASSIFICATION: D2B
RCRA HAZARDOUS WASTE NOS: None; SARA 313 TOXIC CHEMICALS: None
TSCA: All components of this product are registered under regulations of the Toxic Substances Control Act.
RQ CERCLA 40 CFR PART 302: None
This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations (CPR).* The MSDS contains all of the information required by the *CPR*.

SECTION 16 – OTHER INFORMATION

TRADE NAME AND SYNONYMS: Paint Stripper
SPECIFICATION: None
HMRA ID: N/AV
CONTRACT NUMBER: N/AP

OTHER: Thank you for your interest in and use of Beaver Research products. We are pleased to be of service to you by supplying this Material Safety Data Sheet for your files. Beaver Research is concerned for your health and safety. Our products can be used safely with proper protective equipment and with proper handling practices consistent with label instructions and the MSDS. Before using any product, be sure to read the complete label and the Material Safety Data Sheet.

As a further word of caution, Beaver Research advises that serious accidents have resulted from the misuse of "emptied" containers, which retain residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such container to heat flame, sparks, or other sources of ignition; they may explode or develop harmful vapors and possibly cause injury or death. Empty containers must be cleaned by triple rinsing with water or an appropriate solvent. Empty containers must be sent to a drum reconditioner before reuse.

This MSDS also complies with information required by OSHA 29 CFR 1910.1200, and with additional information requirements stated in FED-STD-313D. It was formatted as outlined by the ANSI Standardized MSDS 16 Part Format Z400.1-1998 and by the Canada's "Controlled Product Regulations", Section 12.

DISCLAIMER: All statements, technical information and recommendations contained herein are based on available scientific tests or data, which we believe to be reliable. The accuracy and completeness of such data are not warranted or guaranteed. We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. Beaver Research assumes no liability or responsibility for loss or damage resulting from the improper use or handling of our products, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the product label and Material Safety Data Sheet. Revisions: added COD to section 12.

MATERIAL SAFETY DATA SHEET

WHMIS, SAFE HANDLING, AND DISPOSAL INFORMATION

MSDS FORMAT EXPLANATION, TERMS, AND ABBREVIATIONS

SECTION 1: COMPANY IDENTIFICATION AND EMERGENCY CONTACTS – The MSDS Heading and Section 1 identifies the labeled product, synonyms, identifiable part numbers, preparation/issue/ date, and the name, address, and phone and emergency contact numbers for Beaver Research Chemical Company.

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS – Identifies all hazardous ingredients in the material.

CAS#: Chemical Abstract Services Registry Number - A universally accepted numbering system for chemical substances.
HAZARDOUS INGREDIENTS: Chemical substances determined to be potential health or physical hazards based on the criteria established in the OSHA Hazard Communication Standard 29 CFR 1910.1200 and disclosed in accordance with Ingredients Disclosure List of Canada's Hazardous Products List
LC50: The concentration of a substance in air when administered by means of inhalation during a defined time period is expected to cause the death of 50% of a specified animal population.
LD50: The single dose of a substance when administered by a defined route is expected to cause the death of 50% of a specified animal population.

SECTION 3: HAZARDS IDENTIFICATION – Discusses the health effects and symptoms a person may encounter when exposed to the material.

EMERGENCY OVERVIEW: Adverse effects on the human body from a single exposure with symptoms developing almost immediately after exposure or within a relatively short time.
POTENTIAL HEALTH EFFECT: Chronic effects that are most likely to occur from repeated exposure over a long period of time.
ROUTES OF ENTRY: The way one or more hazardous ingredients may enter the body and cause a generalized-systemic or specific-organ toxic effect.

SECTION 4: FIRST AID MEASURES – Describes the first aid procedures for each route of entry.

SECTION 5: FIRE FIGHTING MEASURES – Describes information about the fire and explosive properties of the product, and the fire fighting and extinguishing methods.

NFPA® RATING: National Fire Protection Association – A rating system that addresses the health, flammability, instability, and related hazards presented as acute exposures that are may occur as a result of fire, spill, or similar emergency. A numerical rating given in each of three hazard areas (Health/ Flammability/Reactivity) ranging from a low of zero to a high of 4. A fourth section is used only to denote special fire fighting measures/hazards.
PMCC: Flash point determined by the Pensky Martin Closed Cup method, ASTM D93

SECTION 6: ACCIDENTAL RELEASE MEASURES – Describes how to respond to product spills or leaks, and protective equipment required when containing the spill.

SECTION 7: HANDLING AND STORAGE – A list of general warnings to describe safe storage conditions and other conditions to safely handle the material.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION – Information on engineering controls and personal protective equipment required to help prevent or reduce exposure to the material.

ENGINEERING CONTROLS: Ventilation equipment or other devices required to reduce TLV limits to acceptable levels.
EXPOSURE LIMITS: The time weighted average (TWA) airborne concentration at which most workers can be exposed without any expected adverse effects. Primary sources include ACGIH TLVs, and OSHA PELs.

- **ACGIH:** American Conference of Governmental Industrial Hygienists.
- **OSHA:** Occupational Safety and Health Administration.
- **PEL:** Permissible Exposure Limit - A set of time weighted average exposure values, established by OSHA, for a normal 8-hour day and a 40-hour workweek.
- **PPM:** Parts per million - unit of measure for exposure limits.
- **SEN:** Sensitizer - Causes allergic reaction after repeated exposure.
- **(S) SKIN:** Skin contact with substance can contribute to overall exposure.
- **STEL:** Short Term Exposure Limit - Maximum concentration for a continuous 15-minute exposure period.
- **TLV:** Threshold Limit Value - A set of time weighted average exposure limits, established by the ACGIH, for a normal 8-hour day and a 40-hour workweek.

HMIS III® CODES: Hazardous Material Identification System - a rating system developed for estimating the hazard potential of a chemical under normal workplace conditions. A numerical rating given in each of three hazard areas (Health/ Flammability/Physical Hazard) ranging from a low of zero to a high of 4. The presence of a chronic hazard is indicated by a "YES" and an "*" .next to the Health rating.
OTHER EFFECTS (Specified):

- **CAR:** Carcinogen - A chemical listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA as a definite or possible human cancer causing agent.
- **CNS:** Central Nervous System depressant, which reduces the activity of the brain and spinal cord.
- **COR:** Corrosive - Causes irreversible injury to living tissue (e.g. burns).
- **EIR:** Eye Irritant Only - Causes reversible reddening and/or inflammation of eye tissues.
- **FBL:** Flammable - At temperatures less than 100°F, chemical gives off enough vapors to ignite if a source of ignition is present as tested with a closed cup tester.
- **HTX:** Highly toxic - the probable lethal dose for a 70 kg (150 lb.) man, which may be approximated as less than 6 teaspoons (2 tablespoons)
- **IRR:** Irritant - Causes reversible effects in living tissues (e.g. inflammation) - primarily skin and eyes.
- **OXD:** Oxidizer – A chemical which supplies its own oxygen and which helps other combustible material burn more readily.
- **TOX:** Toxic - The probable lethal dose for a 70 kg (150 kg) man is one ounce (2 tablespoons) or more.

RESPIRATORY PROTECTION: When recommended, use only MSHA and NIOSH approved respirators and dust masks.

- **MSHA:** Mine Safety and Health Administration
- **NIOSH:** National Institute for Occupational Safety and Health.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES – Detailed information about the chemical and physical properties of the product.

EVAPORATION RATE: Refers to the rate of change from the liquid state to the vapor state at ambient temperature and pressure in comparison to a given substance (e.g. water).
COEFFICIENT OIL/WATER: A relative measure of substance's solubility in water versus oil. A coefficient greater than 1 indicates better water solubility, and thereby indicates a greater tendency for a substance to be absorbed by one's mucous tissue in the eyes or lungs. A value of less than one indicates a greater tendency for fatty tissue under the skin to absorb the substance.
pH: A value representing the acidity or alkalinity of an aqueous solution (Highly Acidic = 1; Neutral = 7; Highly Alkaline = 14)
SOLUBILITY IN WATER: A description of the ability of the product to dissolve in water.
VOC CONTENT: The amount in grams per liter of the product that is regulated as a Volatile Organic Compound under the Clean Air Act and various state jurisdictions.

SECTION 10: STABILITY AND REACTIVITY – Identifies potentially hazardous chemical reactions and decomposition products.

STABILITY: Indicates the susceptibility of the product to spontaneously and dangerously decompose.
HAZARDOUS DECOMPOSITION: Breakdown products expected to be produced upon product decomposition by extreme heat or fire.
INCOMPATIBILITY: Keep product away from listed substances or conditions to prevent hazardous reactions.
REACTIVITY/CONDITIONS: Conditions under which the product will self react or react with other materials to produce a chemical reaction releasing excess pressure, heat, or releasing hazardous by-products.

SECTION 11: TOXICOLOGICAL INFORMATION – Discussion of data used to determine hazard materials identified in Section 3.

ACUTE TOXICITY: Adverse effects resulting within a short time period after single exposure to a substance.
CHRONIC TOXICITY: Adverse effects that occur to an individual or test animal that develops over time from a single exposure, or from prolonged or repeated exposure which does not occur from a single exposure.
TERATOGENIC: An agent capable of causing developmental malformations in the embryo or fetus.
CARCINOGENIC: As defined in Sec II, a definite or possible human cancer-causing agent.
MUTAGENIC: An agent, such as a chemical, ultraviolet light, or a radioactive element, that can induce or increase the frequency of mutation in an organism.

SECTION 12: ECOLOGICAL INFORMATION – Information helpful to determine the environmental impact of the material should it be released into the environment.

SECTION 13: DISPOSAL CONSIDERATIONS – Information that may be useful for proper disposal, reuse, or reclamation of the product.

SECTION 14: TRANSPORTATION DATA – Identifies the basic shipping information for proper identification of hazardous materials on shipping papers or package labeling.

SECTION 15: REGULATORY INFORMATION – Discusses various regulations under which the material falls.

CWA: Clean Water Act - Federal law that regulates chemical releases to bodies of water.
RCRA WASTE NOS: (Resource Conservation and Recovery Act) waste codes (40 CFR 261) applicable to the disposal of spilled or unusable product from the original container.
RQ: Reportable Quantity - The amount of the specific ingredient that, when spilled to the ground and, can enter a storm sewer or natural watershed, must be reported to the National Response Center, and other regulatory agencies.
SARA: Superfund Amendment and Reauthorization Act - Section 313 designates certain chemicals for possible reporting for the Toxic Chemical Release Inventory.
TSCA: Toxic Substances Control Act - A federal law requiring all commercial chemical substances to appear on an inventory maintained by the EPA.
WHMIS: The classification code for hazardous materials. The Workplace Hazardous Materials Information System (WHMIS) is Canada's hazard communication standard.

SECTION 16: OTHER INFORMATION - Other useful information that identifies this product.

OTHER ABBREVIATIONS USED:
N/AP: Not Applicable - Category is not appropriate for this product.
N/AV: Not Available - Insufficient information exists to make a determination for this item.

(Rev 01/22/04)