SAFETY DATA SHEET

Prepared in accordance with
OSHA 2012 Hazard Communication Standard
29 CFR 1910.1200

SECTION 1: PRODUCT IDENTIFICATION

Manufacturer's Name: Environmental Specialists Inc.
1101 Andrews Avenue
Youngstown, OH 44505
www.esrecycling.com

Emergency Telephone Number
PERS (800) 633 – 8253
Information Telephone Number
(888) 331 – 3443

Product Number: 108834
Product Name: ESI 10% VOC Brake Cleaner
Date of Preparation September 13, 2023

Use of substance/mixture: Multi-purpose solvent
Synonyms: None
Formula: Aliphatic Hydrocarbon Mixture

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Physical, Flammable Liquids	Category 2
Health, Acute Toxicity, Oral	Category 5
Health, Acute Toxicity, Dermal	Category 4
Health, Skin Corrosion/Irritation,	Category 2
Health, Serious Eye Damage/Eye Irritation	Category 1
Health, Acute Toxicity, Inhalation	Category 4
Health, Specific Target Organ Toxicity - Single exposure	Category 3
Environmental, Hazards to the Aquatic Environment - Acute	Category 2

GHS HAZARD PICTOGRAMS

GHS SIGNAL WORD: DANGER

HAZARD STATEMENTS:

Highly flammable liquid and vapor.
May be harmful if swallowed.
Harmful in contact with skin.
Causes skin irritation.
Causes serious eye damage.
Harmful if inhaled.
May cause drowsiness or dizziness.
Toxic to aquatic life.

PRECAUTIONARY STATEMENTS:

Keep away from heat/sparks/open flames/hot surfaces.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/gas/mist/vapors/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/ face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER or doctor/physician if you feel unwell.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.
Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Store locked up**.**
Dispose of contents/container to an approved waste disposal plant**.**

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %
Acetone	67-64-1	80 – 90%
Xylene (mixed isomers)	1330-20-7	3 – 9%
Ethyl benzene	100-41-4	1 – 3%
Methyl acetate	79-20-9	5 – 12%

SECTION 4: FIRST AID MEASURES

Eye Contact: Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Do not use eye ointment. Seek medical attention immediately.

Skin Contact: Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before reuse.

Ingestion: **Aspiration hazard**: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If the victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave the victim unattended and observe closely for adequacy of breathing. Seek medical attention.

Inhalation: Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.

Acute and Delayed Symptoms: Overexposure to vapors may result in respiratory tract irritation, coughing, nausea, headaches, vomiting, and CNS depression. Prolonged or repeated contact may dry skin and cause irritation.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties: NFPA Class – IB Flammable Liquid

Flash Point: Seta Flash Closed Cup = 2º F

Hazardous Combustion Products: Carbon dioxide, carbon monoxide, unidentified organic compounds. Decomposition and combustion materials may be toxic.

Extinguishing Media: SMALL FIRES: Use dry chemical, carbon dioxide, water fog, or inert gas to extinguish all fires.

LARGE FIRES: Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frothing and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fires as the water may spread the fire to a larger area.

Unusual Fire & Explosion Hazards: **Flammable Liquid!** This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. If container is not properly cooled it can rupture in the heat of the fire.

Special Fire Fighting Procedures: Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition product and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat: cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities if liquid enters sewers or waterways.

SECTION 6: ACCIDENTIAL RELEASE MEASURES

Spill Management:

HIGHLY FLAMMABLE! Spills of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Avoid direct contact with material.

For large spills, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant. See Sections 2 and 7 for additional information on hazards and precautionary measures.

Containment and Cleaning up

Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations. Recommended measures are based on the most likely spill scenarios for this material; however, local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

Environmental Precautions:

Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use foam on spills to minimize vapors Use water sparingly to minimize environmental contamination and reduce disposal requirements. If a spill occurs on water, notify appropriate authorities, and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

SECTION 7: HANDLING AND STORAGE

Handling Precautions:

FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN

A spill or leak can cause an immediate fire or explosion hazard. Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Do not contact with oxidizable materials. Do not breathe vapor. Use only with adequate ventilation and personal protection. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Prevent contact with food and tobacco products. Do not take internally.

When performing repairs and maintenance on contaminated equipment, keep unnecessary people away from the area. Eliminate all potential ignition sources. Drain and purge equipment, as necessary, to remove material residues. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide ventilation to maintain exposure potential below applicable exposure limits. Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

Empty containers may contain material residues which can ignite with explosive force. Misuse of empty containers can be dangerous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers can cause fire, explosion, or release of toxic fumes from residues. Do not pressurize or expose empty containers to open flame, sparks, or heat. Keep container closed and drum bungs in place. All label warnings and precautions must be observed. Return empty drums to a qualified reconditioner. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling, or disposing of empty containers and/or waste residues of this material.

Static Accumulation Hazard: Electrostatic charge may accumulate (although unlikely) and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding of tanks, transfer piping, and storage tank level floats are necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. Special care should be given to ensure that special slow load procedures for "switch loading" are followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such as gasoline or naphtha). For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, “Recommended Practice on Static Electricity”, and/or the American Petroleum Institute (API) Recommended Practice 2003, “Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents”.

Storage:

Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes. "Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Store and transport in accordance with all applicable laws. Keep containers tightly closed and store in a cool, dry, well-ventilated place, plainly labeled, and out of closed vehicles. Keep away from all ignition sources. Ground all equipment containing this material. Containers should be able to withstand pressures expected from warming and cooling in storage. All electrical equipment in areas where this material is stored or handled should be installed in accordance with applicable regulatory requirements and the National Electrical Code.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls:

Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. All electrical equipment should comply with the National Electric Code. An emergency eye wash station and safety shower should be located near the workstation.

Personal Protective Equipment:

Personal protective equipment (PPE) selections vary based on the potential exposure conditions such as handling practices, concentration, and ventilation. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional knowledgeable with OSHA regulations. At a minimum safety glasses and skin protection should be worn. Additional PPE may be required based on specific working conditions.

Eye Protection:

Safety glasses equipped with side shields are recommended for minimal protection. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. Suitable eye wash water should be readily available.

Hand Protection:

Avoid skin contact. Wash hands with plenty of soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. Use chemical resistant gloves such as nitrile, or equivalent protection.

Skin Protection:

Avoid skin contact. Wear long-sleeved fire-retardant garments (e.g., Nomex®) while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, boots and additional facial protection. If product comes in contact with clothing, immediately remove soaked clothing and shower. Promptly remove and discard contaminated leather goods.

Respiratory Protection:

Use of a NIOSH-approved organic vapor respirator should be worn when the concentration of vapor exceeds applicable exposure limits. Respirator selection, use, and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Occupational Exposure Guidelines:

Applicable Workplace Exposure Levels

Substance	NIOSH	ACGIH	OSHA	OSHA
Acetone	TWA: 250 ppm	TWA: 500 ppm	TWA: 1000 ppm	TWA: 2400 mg/m^3
Xylene	TWA: 100 ppm	TWA: 100 ppm	TWA: 100 ppm	TWA: 435 mg/m^3
Ethyl benzene	TWA: 100 ppm	TWA: 100 ppm	TWA: 100 ppm	TWA: 435 mg/m^3
Methyl acetate	TWA: 200 ppm	TWA: 200 ppm	TWA: 200 ppm	TWA: 610 mg/m^3

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Color:	Clear, colorless	**Physical State:**	Liquid	**Partition Coefficient:**	Not Determined
Odor:	Solvent	**Vapor Pressure:**	Not Determined	**Explosive Limits:**	Not Determined
pH:	NA	**Vapor Density:**	Heavier than air	**Freeze Point:**	Not Determined
Density:	6.785 lb/gal	**Total VOC:**	1.018 lb/gal	**Exempt VOC:**	5.767 lb/gal
Flash Point:	2.0° F	**Solubility:**	Insoluble in water	**Decomposition Temp:**	Not Determined
Boiling Point:	132.98º F	**Evaporation Rate:**	>1 (Butyl acetate = 1)	**Viscosity:**	Not Determined

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Keep away from extreme heat, sparks, and open flames.

Incompatibility with Other Materials: Strong oxidizers

Hazardous Decomposition Products: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids, and gases, including carbon monoxide, carbon dioxide and other organic compounds will evolve when this material undergoes combustion or thermal or oxidative degradation.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Symptoms of Exposure:

Substance	Inhalation LC_{50}	Oral LD_{50}	Skin Absorption LD_{50}
Acetone	>50,000 mg/m^3 – Rats – 8 Hr	5,800 mg/kg – Rat	>15,800 mg/kg – Rabbit
Xylene	5,000 mg/m^3 – Rat – 4 Hr	2,119 mg/kg – Mouse	>1,700 mg/kg – Rabbit
Ethyl benzene	17.4 mg/l – Rat – 4 Hr	3500 mg/kg – Rat	15,4000 mg/kg – Rabbit
Methyl acetate	No data available	5,000 mg/kg – Rat	5,000 mg/kg – Rabbit

Inhalation: High concentrations of aerosol or mist may be generated at high temperatures and may be irritating to the respiratory tract, including nose and throat, and may cause difficulty breathing. This may be particularly true with people who have a high level of sensitivity and allergic reactions. Exposure to high levels of solvent mist concentration may lead to chronic pulmonary conditions such as chronic bronchitis, pneumonia, and emphysema.

Ingestion: May cause mild irritation of the digestive tract, including cramping, diarrhea, nausea, and vomiting. Aspiration into the lungs – by initial ingestion or vomiting – may cause mild to severe pulmonary injury.

Skin: Prolonged and/or repeated exposure may cause mil skin irritation, including redness, burning, temporary drying/cracking, and acute dermatitis. Contact with hot material may cause burns. Chronic symptoms of exposure include skin cracking, drying and dermatitis.

Eyes: Contact may cause slight to moderate irritation, including burning, redness, and tearing.

SECTION 12: ECOLOGICAL INFORMATION

Acetone:
Toxicity to daphnia and EC_{50} – Daphnia magna (Water flea) – 13,500.00 mg/l – 48 hr other aquatic invertebrates
Ethyl benzene:
Toxicity to fish LC_{50} – Cyprinodon variegatus (sheepshead minnow) – 88.00 mg/l – 96 hr
LC_{50} – Lepomis macrochirus (Bluegill) – 88 mg/l – 96 hr
NOEC – Cyprinodon variegatus (sheepshead minnow) – 88 mg/l – 96 hr
LC_{50} – Oncorhynchus mykiss (rainbow trout) – 4.2 mg/l - 96 h
Toxicity to Daphnia EC_{50} – Daphnia magna (Water flea) – 2.90 mg/l – 48 hr and other aquatic invertebrates

Methyl acetate:
Toxicity to fish – Danio rerio (zebra fish) – 250 – 350 mg/l – 96 hr
Toxicity to daphnia EC_{50} – Daphnia magna (Water flea) – 700 – 1,000 mg/l – 24 hr and other aquatic invertebrates

SECTION 13: DISPOSAL CONSIDERATIONS

Material Disposal: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated, to determine the proper waste classification and disposal methods in compliance with applicable regulations.

Container Disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard if heated above the flash point. Do not puncture, cut, or weld uncleaned drums. Send drums to a recycler or metal reclaimer.

Local Legislation: Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14: TRANSPORTATION INFORMATION

US DOT Status:

Shipping Name: UN1993, Flammable Liquid, N.O.S. (Acetone, Methyl Acetate), 3, PGII, ERG# 128
UN/NA #: UN1993
Hazard Class: 3, Flammable Liquid
Packing Group: II
North American Emergency Response Guide #: 128

SECTION 15: REGULATORY INFORMATION

TSCA Inventory

This product contains constituents listed on the TSCA Inventory.

SARA 302/304 Emergency Planning and Notification

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355.

There are no components in this product on the SARA 302 list.

SARA 311/312 Hazard Identification

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 311 and 312 to submit aggregate information on chemical by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories:

Immediate (Acute) Health Effects:	Yes
Delayed (Chronic) Health Effects:	Yes
Fire Hazard:	Yes
Sudden Release of Pressure Hazard:	No
Reactivity Hazard:	No

SARA 313 Toxic Chemical Notification and Release Reporting

This product contains constituents listed in 40 CFR 372 and therefore are subject to the requirements of Section 313 of SARA.

CERCLA

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQs) including petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4.

Chemical substances that are present in this product are subject to CERCLA.

SECTION 16: OTHER INFORMATION

NFPA Ratings: Health: 2
Flammability: 3
Reactivity: 0

HMIS Ratings: Health: 2
Flammability: 3
Reactivity: 0

0 – Least, 1 – Slight, 2 – Moderate, 3 – High, 4 – Extreme

These values are obtained using the guidelines or published evaluations by the National Fire Protection Association (NFPA) of the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION: 10% VOC Brake Cleaner

NOTICE: The information herein is based on data considered to be accurate at date of preparation. No warranty is made as to the accuracy or completeness of the foregoing data and safety information. No responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.