EnSolv® SC

SAFETY DATA SHEET

Date: June 1, 2021 - **Replaces:** April 1, 2019 - **Revision:** 3

1. Product and Company Identification

Product Name:	*EnSolv® SC* Spray Degreaser
Synonyms:	None
Product Description:	Stabilized solvent mixture - Spray Can
Product General Use:	Industrial use solvent for cold wipe and spray applications where worker exposure is controlled. **FOR INDUSTRIAL USE ONLY - NOT FOR CONSUMER SALE OR USE.**
Manufacturer:	Enviro Tech International, Inc. 1800 N. 25th Avenue Melrose Park, IL, 60160 www.envirotechint.com
Emergency Contact:	CHEM-TEL 24-HR EMERGENCY CONTACT U.S, Canada, Puerto Rico, U.S. Virgin Islands (800) 255-3924 INTERNATIONAL CALLS: +01-813-248-0585
Non-Emergency Contact:	(708) 344-6641 Hours: Mon-Fri 8am-4pm CST

2. Hazards Identification

Classification

Skin Irritation	Category 2
Eye Irritation	Category 2A
Carcinogen	Category 2B (IARC)
Reproductive Toxicity	Category 1B
Specific Target organ toxicity - CNS - (single exposure)	Category 3 – (H335, H336)
Ingestion (Acute Toxicity Oral)	Category 4
Specific Target organ toxicity - CNS - (repeated exposure)	Category 1

Emergency Overview

This product is non-flammable per UN 31.4. Product contains gas under pressure. Do not store at temperatures above 122°F/50°C as can may burst violently or explode. Do not puncture, incinerate or crush can. Product vapors will form a flammable mixture at a concentration of 3.8% to 9.5% by volume with air. (ASTM E-681).

Signal Word: Danger.

Hazard Statements

H229 Pressurized container: may burst if heated
H240 Heating may cause an explosion
H302 Harmful if swallowed
H315 Causes skin irritation.
H320 Causes eye irritation.
H333 May be harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

H350 May cause cancer.
H360 May damage fertility or the unborn child.
H372 Presumed to have the potential to produce significant nervous system toxicity in humans through prolonged or repeated exposure

Prevention

P103 Read label before use.
P102 Keep out of reach of children.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P211 Do not spray on an open flame or other ignition source.
P233 Keep container tightly closed.
P251 Pressurized container: Do not pierce or burn, even after use.

P260 Do not breathe fume/gas/mist/vapors/spray.
P262 Do not get in eyes, on skin or clothing.
P263 Avoid contact during pregnancy/while nursing.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release into the environment.
P280 Wash face, hands and any exposed skin thoroughly after handling.
P281 Use personal protective equipment as required.
P282 Wear full face shield. Wear Viton or Silvershield gloves. DO NOT use natural rubber or cloth gloves when handling this product.
P284 Wear respiratory protection. Wear full face mask.

Response

P308 + P313	IF EXPOSED or concerned: Get medical advice/attention
P305 + P351 + P338 + P337	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists, get medical advice/attention
P303 + P361 + P353 + P352	IF ON SKIN: remove immediately all contaminated clothing. Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs, get medical advice/attention.
P304 + P340	IF INHALED: Remove individual to fresh air and keep at rest in a position comfortable for breathing.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P306 + P361+ P363	IF ON CLOTHING: remove all contaminated clothing immediately. Wash contaminated clothing before reuse.

Storage & Disposal:

P403	Store in a dry place.
P404 + P233	Store in a well-ventilated place. Keep container tightly closed.
P411	Store at temperatures not exceeding 50°C/122°F.
P501	Dispose of contents/container in accordance with Fedeal, state and local regulations. Do not puncture, incinerate or crush empty cans.

3. Composition and Ingredient Information

n-Propyl Bromide	CAS 106-94-5	> 93% by weigh
1,2-butylene oxide	CAS 106-88-7	< 0.1% by weight

Carbon dioxide (propellant)	CAS 124-38-9	> 10 % by weight
Specific percentages of composition have been withheld as a trade secret per 1920.1200(i)(1)		

4. First Aid Measures

INHALATION	Remove person to fresh air. Give oxygen if breathing is difficult. Apply CPR respiration if individual is not breathing.
EYE	Flush eyes with water for at least 15 minutes. Seek emergency medical advice.
SKIN	Remove contaminated clothing and shoes. Wash contaminated areas immediately with soap and water. Seek medical advice.
INGESTION	Drink large amounts of water. DO NOT induce vomiting. Seek emergency medical advice. Rinse mouth with water.
NOTE TO PHYSICIAN	Treat symptomatically.

5. Fire Fighting Measures

EXTINGUISHING MEDIA	Extinguishing media should be chosen based on surrounding conditions - use carbon dioxide, dry chemical powder, alcohol foam or polymer foam. Water may be effective for cooling but not extinguishing.
FIRE FIGHTING PROCEDURE	Use NIOSH/MSHA approved/equivalent self-contained breathing apparatus in positive pressure mode. Use water spray or fog to cool exposed equipment and containers.
UNUSUAL FIRE AND EXPLOSION HAZARDS	Containers can burst violently or explode when heated, due to excessive pressure build-up. The product is not flammable. Do not use near heat source or open flame, as vapors may be in the flammable range and an explosion could occur. Thermal decomposition may produce carbon monoxide, carbon dioxide, hydrogen halide and bromides.

6. Accidental Release Measures

Contain spillage or leakage with dikes or absorbent material to prevent migration into sewer or waterway. For large spills, evacuate and ventilate the area. Wear self-contained breathing apparatus and recommended personal protective equipment. Absorb with earth, sand, or other non-combustible absorbent material and place in closed container for disposal.

7. Handling and Storage

HANDLING	Wear full face mask and approved organic respirator. Avoid contact with skin, eyes and clothing. Use Viton or Silvershield gloves when handling this product. Nitrile, neoprene or butyl gloves offer less protection and should be used for splash protection only. DO NOT use natural rubber or cloth gloves when handling this product.

STORAGE	Store indoors in well ventilated, cool, dry area away from incompatible materials (see materials to avoid). Store upright with cap in place. Do not store at temperatures above 122°F/50°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep container closed when not in use. Keep away from heat, sparks, and open flame.

8. Exposure Controls and Personal Protection

EXPOSURE LIMITS	In all cases, worker exposure to all chemicals, including this product, should be kept as low as possible. No OSHA PEL has been published for n-propyl bromide. USEPA states an exposure level to nPB in the range of 18 to 30 ppm is protective of workers. (Federal Register May 30, 2007). ACGIH TLV - .10 ppm for n-propyl bromide. The documentation for the ACGIH nPB TLV states that the TLV applies to nPB with an iPB content of 0.1 to 0.2 % by weight. The iPB content of nPB in this product is shown by GC analysis to be at or more than an order of magnitude below that level, at 0.01% or below. **Carbon Dioxide:** OSHA PEL 5000 ppm. ACGIH TLV 5000 ppm
RESPIRATORY PROTECTION	Wear full face mask with NIOSH/MSHA approved/equivalent organic vapor respirator.
CLOTHING/GLOVES	Use Viton or Silvershield gloves when handling this product. Nitrile, neoprene or butyl gloves offer less protection and should be used only for splash protection. DO NOT use natural rubber, cloth or synthetic material gloves when handling this product.
EYE PROTECTION	Wear full face mask.
WORK/HYGIENIC PRACTICES	Do not eat, drink or smoke while working with this product. Launder soiled clothes. Provide emergency eye bath and safety shower. Handle in accordance with good industrial hygiene and safety practice

Appropriate Engineering Controls: Ventilation system with 10 or more air changes per hour is recommended, but should be rated depending on local conditions, using process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels as low as possible. Safety shower and eye wash stations should be available.

9. Physical Properties

APPEARANCE	Clear, colorless to yellow liquid
ODOR/Odor Threshold	Characteristic / 10 ppm
pH LEVEL (water extract)	6.8
INITIAL BOILING POINT AND BOILING POINT	158°F (70°C)
MELTING POINT / FREEZING POINT	-110° C
FLAMMABILITY	Non-flammable (UN31.4)
EVAPORATION RATE (n butyl acetate = 1)	4.7

UPPER/LOWER FLAMMABILITY LIMITS (Contents)	3.8% to 9.5% by volume with air
VAPOR PRESSURE, mm Hg	134 @ 25°C
VAPOR DENSITY	4.24
SPECIFIC GRAVITY (25/25° C, H_2O = 1)	1.35 ± 0.01
WATER SOLUBILITY g/100mL @ 25°C	0.24
AUTO-IGNITION TEMPERATURE (Contents)	860°F (460°C)
DECOMPOSITION TEMPERATURE	860°F (460°C)
VISCOSITY	5.241 mPa s (20°C)
REFRACTIVE INDEX	1.43414
DIELECTRIC CONSTANT	8.78 @ 20°C
DIELECTRIC STRENGTH	18 kV

10. Stability and Reactivity

STABILITY	Stable under normal conditions.
CONDITIONS TO AVOID	Contains gas under pressure; may explode if heated. Avoid heat, open flame, electric arc and other ignition sources. Keep container closed when not in use.
INCOMPATIBILITY	Incompatible with strong alkalies, oxidizers, bases, reactive metals and natural rubber.
HAZARDOUS DECOMPOSITION	Thermal decomposition produces carbon monoxide, carbon dioxide, and hydrogen bromide.
HAZARDOUS POLYMERIZATION	Will not occur.
REACTIVITY	Organic Peroxide: No; Pyroforic: No; Water Reactive: No

11. Toxicological Information

n propyl bromide
In human liver cell bioassays, *nPB* showed no effects to DNA or for altered enzyme function at all cell concentrations tested and no effects for acute cytotoxicity at cell concentrations below 500 ppm.

LD_{50} oral rat: 4,260 mg/kg Dermal >2,0000 mg/kg
LC_{50} inhalation rat: 30 min. - 50,291 ppm 4 hr - 14,374 ppm
High concentrations are irritating to the respiratory tract and may cause headache, dizziness, nausea, vomiting or narcosis. Chronic overexposure at high levels may cause adverse effects in the central nervous system, reproductive system, respiratory system, kidney and liver. Persons having pre-existing diseases of the lungs, eyes or skin may have an increased susceptibility to the hazards of excessive exposure.

Cancer:	**NTP**	**IARC**	**OSHA**
n propyl bromide	Reasonably anticipated to be a human carcinogen	Group 2B	No
1,2-Butylene oxide	No	Group 2B	No

12. Ecological Information

"Available data on the organic carbon partition coefficient (K_{OC}) the breakdown processes in water and hydrolysis half-life, and the volatilization half-life indicate that nPB is less persistent in the environment than many solvents and would be of low to moderate concern for movement in soil. Based on the LC_{50}, the acute concentration at which 50% of tested animals die, nPB's toxicity to aquatic life is moderate, being less than that for ... trichloroethylene, hexane, *d*-limonene, and possibly some aqueous cleaners. Based on EPA's criteria for listing under the Toxics Release Inventory (U.S. EPA, 1992), we believe that nPB would not be sufficiently toxic to aquatic life to warrant listing under the Toxics Release Inventory. Based on its relatively low bio-concentration factor and log K_{OW} value, nPB is not prone to bioaccumulation." (USEPA - Federal Register May 30, 2007).

K_{OC}, ORGANIC-CARBON PARTITION COEFFICIENT	330
BREAK DOWN IN WATER	Hydrolysis is significant
HYDROLYSIS HALF-LIFE	26 DAYS
VOLATILIZATION HALF-LIFE FROM SURFACE WATERS	3.4 HOURS – 4.4 DAYS
LC_{50} (96 HOURS) FOR FATHEAD MINNOWS	67 mg/l
LOG K_{OW}	2.10
BIOCONCENTRATION FACTOR	23

13. Disposal Considerations

Follow Federal, State and Local governmental regulations. DO NOT flush into sanitary sewer or waterway. Do not puncture, incinerate or crush.

14. Transportation Information

HAZARDOUS MATERIAL DESCRIPTION	UN 1950. Aerosols, non-flammable NFPA: Level 1 Aerosol
DOT DESCRIPTION/PROPER SHIPPING NAMES	Limited Quantity. Aerosols, non-flammable. Ground Transportation Only

15. Regulatory Information

USMCA	Complies
TCSA	All of the components of this product are in the EPA TSCA inventory and are in compliance with 15 USC 2601-2629.
NESHAP	N/A
RCRA	N/A
HAP	N/A
VOC	1,345.26 g/l - 11.27 lbs/gal
GWP	1.57 - 100 year
SARA 313 Subject to reporting	1,2-butylene oxide CAS 106-88-7 < 0.1 % by weight n propyl bromide CAS 106-94-5 > 93.0 % by weight

SARA 311/312	Acute Health Hazard: Yes Chronic Health Hazard: Yes Fire Hazard: No Sudden Release of Pressure Hazard: No Reactive Hazard: No
CERCLA	40 CFR 302.4 Component: 1,2-butylene oxide CAS 106-88-7 RQ - 100 lbs
STATE REGULATION	**n-Propyl bromide:** CA PROP 65: WARNING: Known to the State of California to cause developmental, male and female reproductive effects. Known to the State of California to cause cancer. CAL/OSHA PEL 5 ppm CA Airborne Contaminants N-PROPYL BROMIDE - Can be absorbed through the skin Right to Know: Massachusetts: Higher hazard substance under TURA, New Jersey, Pennsylvania. **1,2-Butylene oxide:** Right to Know: Massachusetts, New Jersey, Pennsylvania, Rhode Island, Minnesota. California Air Toxics Hit Spots A-1 - Present.
SNAP	The Environmental Protection Agency (EPA) approved n-propyl bromide (nPB) as an acceptable substitute for ozone depleting compounds in the precision cleaning sector under the Significant New Alternatives Program (SNAP) Section 612 Clean Air Act. (USEPA - Federal Register May 30, 2007).
$ROHS_3$	Complies
WHMIS	Class D Division 2B, WHMIS - HC-1
ENCS	Complies
EEC (EINECS)	Complies
CANADA (DSL)	Complies

16. Other Information

Each user of this product should study this SDS carefully and consult appropriate expertise as necessary to become aware of and understand the data contained in this SDS and any hazards that may be associated with this product. The information provided in this Safety Data Sheet relates only to the specific material designated herein. The user is responsible for determining the conditions of safe use of this product and for complying with all Federal, State and Local governmental laws and regulations concerning its use. The information contained herein is accurate to the best of our knowledge. Enviro Tech International, Inc. makes no warranty, express or implied, including the warranty of merchantability and fitness for a particular purpose, and assumes no liability or responsibility for the accuracy, completeness, timeliness or usefulness of this information. Enviro Tech International, Inc assumes no liability for any damages incurred, whether directly or indirectly, as a result of any errors, omissions or discrepancies in this information. Enviro Tech International, Inc. assumes no liability for reliance on this data and assumes no liability for damages related to the use or misuse of this product in your process or in combination with other substances.

NFPA	Health 2	Flammability 1	Instability 0
HMIS	Health 2	Flammability 1	Physical Hazards 0

Preparation Date: June 1, 2021