EnSolv Next -Spray Can

SAFETY DATA SHEET

Preparation Date: February 1, 2023 Rev 6 Replaces October 1, 2020

1. Product and Company Identification

Product Name:	***EnSolv Next*** - packaged in aerosol spray can
Identified Uses:	Precision Industrial Cleaning Solvent – **INDUSTRIAL USE ONLY - NOT FOR CONSUMER USE OR SALE**
Supplier:	Enviro Tech International, Inc. 1800 N 25th Avenue Melrose Park, IL 60160 708-343-6641 www.envirotechint.com Contact - sales@envirotechint.com
Emergency Contact:	Velocity EHS 24-HR EMERGENCY CONTACT U.S. & Canada,(800) 255-3924 - INTERNATIONAL CALLS: +01-813-248-0585. Non-Emergency (708) 344-6641 Hours: Mon-Fri 8am-4pm CST

2. Hazard Identification

This product has no flash point and is non-flammable per OSHA and DOT regulations. This product may flash if the vapor to air concentration is in the range of 5.4% to 9.4% and a high energy ignition source is present, such as a welding torch. *EnSolv Next* Spray Can product is non-flammable per UN 31.5.3 Enclosed Space Ignition Test.

Signal Word: **Warning**

Classification:

Skin irritation:	Category 2
Eye irritation:	Category 2B
Specific target organ toxicity (single exposure):	Category 3
Ingestion (Acute Toxicity):	Category 4

Hazard Statements:

H302: Harmful if swallowed.
H315: Causes skin irritation.
H320: Causes eye irritation.
H332: Harmful if inhaled.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements:

P271: Use in a well-ventilated area.
P273: Avoid release to the environment.
P261: Avoid breathing vapor/spray.
P312: Call a POISON CENTER or doctor if you feel unwell.

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 immediately all contaminated clothing. Wash contaminated clothing before reuse.

3. Composition / Information on Ingredients

1,2 trans-dichloroethylene	CAS 156-60-5	70 - 90% by weight
1,1,1,3,3-pentafluorobutane	CAS 406-58-6	15 - 25% by weight
methyl nonafluoroisobutyl ether	CAS 163702-08-7	1 - 5% by weight
methyl nonafluorobutyl ether	CAS 163702-07-6	1 - 5% by weight

EnSolv NEXT Spray Can Components

EnSolv NEXT mixture	CAS: N/A	> 65%
HFC-R134a Propellant	CAS: 811-97-2	< 45%

4. First Aid Measures

Inhalation:	Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Get medical attention if any discomfort continues.
Ingestion:	Do not induce vomiting. Never give liquid to an unconscious person. Get medical attention if any discomfort continues.
Skin Contact:	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye Contact:	Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5. Fire Fighting Measures

Flash point	NONE - ASTM 56. UN 31.5.3 Enclosed Space Ignition Test
Flammable Limits	5.4% to 9.4% vapor/air
Explosion Hazard	Aerosol containers when exposed to heat from fire, may build pressure and explode.
Extinguishing Media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable Extinguishing Media	Do not use water jet as an extinguisher, as this will spread fire.
Hazardous Combustion Products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
Special Fire Fighting Procedures	Avoid breathing fire vapors. Keep run-off water out of sewers and water sources. Dike for water control.
Protective Equipment:	Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental Release Measures

Personal Precautions	Wear protective clothing as described in Section 8.
Environmental Precautions	Do not discharge into drains, water courses or onto the ground. Contain spillages with sand, earth or any suitable adsorbent material.

Spill Clean Up Methods	Provide ventilation and confine spill. Do not allow runoff to sewer. Dam and absorb spillage with sand, sawdust or other absorbent. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Reference to other sections	For personal protection, see Section 8. For waste disposal, see Section 13

7. Handling and Storage

Handling:	Avoid spilling, skin and eye contact. Avoid inhalation of vapors and spray mists. In use, may form flammable/explosive vapor-air mixture.
Storage:	Store in tightly closed original container in a dry, cool and well-ventilated place.

8. Exposure Control and Personal Protection

1,2 trans-dichloroethylene	OSHA PEL 200 ppm TWA (8-hrs)
1,1,1,3,3-pentafluorobutane	Not Determined
methyl nonafluoroisobutyl ether	Not Determined

Protective Equipment

Process Conditions	Provide eyewash, quick drench.
Engineering Measures	Provide adequate general and local exhaust ventilation.
Respiratory Equipment	Suitable respiratory protection should be provided. Check that mask fits correctly per OSHA regulations and change filter regularly.
Hand Protection	Use suitable protective gloves if risk of skin contact. Silvershield or Viton gloves must be use if exposure is continuing. Nitrile gloves are for splash protection only.
Eye Protection	Wear approved safety goggles or full face shield.
Hygiene Measures	Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap & water if skin becomes contaminated. When using do not eat, drink or smoke.
Skin Protection:	Wear apron or protective clothing in case of splashes.

9. Physical and Chemical Properties

Appearance	Liquid
Color	Colorless.
Initial boiling point/boiling range	39° - 42°C
Relative density	1.252 @ 20°C
Viscosity	0.60 cPs @ 25°C
Flash point	None. ASTM 56

10. Stability and Reactivity

Stability	Stable under normal temperature conditions and recommended use. Forms an azeotrope and will not flash.
Conditions To Avoid	Aerosol containers when exposed to heat from fire, may build pressure and explode. Avoid heat, flames and other sources of ignition. Does not support combustion and will decompose when exposed to

	extreme conditions of heat at elevated temperatures, naked flames or incompatible materials.
Materials To Avoid	Strong oxidizing substances.
Hazardous Decomposition Products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological Information

1,2 trans-dichloroethylene

Acute toxicity

LD_{50} Oral - Rat	1,235 mg/kg
LD_{50} Oral - Mouse	2,122 mg/kg Remarks: Behavioral: Altered sleep time/change in righting reflex Behavioral: Somnolence (general depressed activity). Behavioral: Ataxia.
LC_{50} Inhalation - Rat	24,100 ppm Remarks: Behavioral: Somnolence (general depressed activity). A 90 day inhalation study in rats reported no adverse effects on body weight, clinical observations, food consumption, clinical or anatomical pathology parameters, or liver cell proliferation and an NOEL of 4000 ppm.
LD_{50} Dermal - Rabbit	> 5,000 mg/kg Remarks: Prolonged skin contact may cause skin irritation and/or dermatitis.
Skin - Rabbit	Skin irritation - 24 h.
Eyes - Rabbit	Eye irritation
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, OSHA or NTP.
Mutagenesis	Not mutagenic to E-coli or S. Typhimurium when tested with microsomal activation. Did not produce mutations in Saccharomyces cerevisiae with or without microsomal activation. No genetic effects were reported in a vivo host mediated mutagenic assay.
Developmental Toxicity	In an inhalation study in rats, significant fetal toxicity was observed only at maternally toxic concentrations (12,000 ppm). Based on the results of this study, trans-1, 2-dichloroethylene would not be considered to be a developmental toxicant.

1,1,1,3,3-Pentafluorobutane

Acute oral toxicity

LD_{50}	> 2,000 mg/kg - Rat
Acute inhalation toxicity:LC_{50} - 4 h	> 10,000 ppm - Rat
Skin corrosion/irritation	Rabbit - none
Serious eye damage/eye irritation	Rabbit - None Respiratory or skin sensitization:Guinea Pig - None
Genotoxicity in vitro	Did not show mutagenic effects
Genotoxicity in vivo	Did not show mutagenic effects. Ames Assay: Negative (OECD 471 & 472) Chromosomal Aberration Test: Negative (CHL Cell) (OECD 473)
Asphyxiation Hazard	Simple asphyxiant
Acute dermal toxicity	No data available Acute toxicity (other routes of administration): No data available

Toxicity to reproduction/fertility	NOAEC parent: 29,971ppm. Effects on fertility. NOAEC parent: 29,971 ppm Developmental Toxicity

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Acute oral toxicity	Undetermined
Acute inhalation toxicity	Rat LD_{50} > 5,000 mg/kg
Acute dermal toxicity	LD_{50} estimated to be > 5,000 mg/kg
Skin corrosion/irritation	No significant irritation
Serious eye damage/eye irritation	No significant irritation
Respiratory or skin sensitization	Not Classified
Genotoxicity in vitro	Did not show mutagenic effects
Genotoxicity in vivo	Did not show mutagenic effects.
Acute toxicity (other routes of administration)	No data available
Toxicity to reproduction/fertility	Not classified

***EnSolv NEXT* Mixture:**

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

12. Ecological Information

1,2 trans-dichloroethylene

Invertebrate Toxicity:	<110,000 ug/L 48 hour(s) (Mortality) Water flea (Daphnia magna)
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Results of PBT & vPvB assessment:	PBT/vPvB assessment not available as chemical safetyassessment not required/not conducted
USEPA SNAP	Acceptable
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

1,1,1,3,3-Pentafluorobutane

Biodegradability:	Not biodegraded (OECD 301 C) N/D
Bioaccumulation:	N/D Activated Sludge Study:100mg/L (OECD 209)
Fish Toxicity:LC50 (96hr) (Carp)	>76 mg/L
Other Information:Algal growth inhibition	ErC50>213mg/L EbC_{50}>213mg/L. Mobility inhibition (Daphnia magna): 48hr-EC_{50}>94mg/L
Acute toxicity to fish:LC_{50} - 96 h	> 200 mg/l - Brachydanio rerio (zebrafish) LC_0 - 96h : ca. 200 mg/l - Brachydanio rerio (zebrafish) LC_{50}- 96h : 450 mg/l - Fishes, Salmo gairdneri semi-static test Fresh water LC_{50} - 96 h : > 100 mg/l - Oncorhynchus mykiss (rainbow trout) semi-static test
Acute toxicity to daphnia and other aquatic invertebrates:EC_{50} - 48 h	980 mg/l - Daphnia magna (Water flea)
Toxicity to aquatic plants	NOEC - 72 h : 13.2 mg/l - Selenastrum

	capricornutum(green algae) static test Fresh water EC_{50} - 72 h : > 114 mg/l - Selenastrum capricornutum (green algae) static test Fresh water
Chronic toxicity to fish	NOEC: ca. 38.2 mg/l - 30 Days - Pimephales promelas (fathead minnow)
Toxicity to terrestrial plants	NOEC: >= 6,000 g/l Endpoint: Growth rate
Stability in water	Hydrolysis not significant, Medium, Water, Soil,
Photolysis	Not significant, Medium, Water
Photodegradation	Indirect photo-oxidation. Half-life indirect photolysis: ca. 10.8 y Air
Biodegradability	Aerobic. Method: readybiodegradability/MITI2 % 28 Days. Not readily biodegradable.
Bioconcentration factor (BCF)	Does not bioaccumulate.
Adsorption potential (Koc)	Adsorption. Soil/sediments Koc: ca. 9 not significant
	Results of PBT & vPvB assessment: No data available
USEPA SNAP	Acceptable
Acute aquatic toxicity	Low toxicity for aquatic organisms

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No information available.

13. Disposal Considerations

Disposal Methods: Dispose of waste and residues in accordance with local authority requirements. Confirm disposal procedures with environmental engineer and local regulations. Do not allow runoff to sewer, waterway or ground.

14. Transportation Information

General: UN1950, Aerosols, non-flammable, 2.2 Limited Quantity

Proper Shipping Name: Aerosol Spray Precision Industrial Cleaning Solvent

The above transportation information is valid as of the date of publication of this SDS. Given that regulatory changes are made on an ongoing basis, ETI recommends checking new transportation regulations regularly.

15. Regulatory Information

1,2 trans-dichloroethylene

USA TSCA	Listed in Inventory. Active.
USA HAP	Not Listed.
USA SARA 302	Not subject to the reporting requirements,
USA SARA 304	N/A
USA SARA 313/312	Hazards: Serious eye damage or eye irritation. Specific target organ toxicity (single or repeated exposure)
USA SARA 313	This material does not contain any chemical components with known CAS numbers that exceed the threshold (Deminimis) reporting levels established by SARA Title III, Section 313.
RCRA Sec. 3001 Haz. Waste	Listed. U079, FO24 and F025 (40 CFR 261.33)

USA CERCLA	Reportable quantity - 1,000 LBS (454 kgs).
Safe Drinking Water Act	NPDWR: MCLG - 100 ppb MCL of 100 ppb
Clean Water Act Section 307(a)(1)	Listed as toxic pollutant. Subject to effluent limitations.
Clean Water Act Section 304	Included in the list of total toxic organics (TTO) (40CFR 413.02(I)).
USEPA SNAP	Acceptable: Metals Cleaning, Electronics Cleaning, Precision Cleaning, Aerosol Solvents, Adhesives & Coatings Sectors. ODP - 0.00024
State Right To Know	Massachusetts, Pennsylvania, New Jersey
California List of Hazardous Substances	Listed
State Air Regulations Allowable Ambient Levels	New Hampshire (Env-A 1400: Regulated Toxic Air Pollutants). Rhode Island (Air Pollution Regulation No. 22) Chemicals of High Concern to Children Minnesota (Toxic Free Kids Act Minn. Stat. 116.9401 to 116.9407).
California's Safer Consumer Products Program	Listed as candidate chemical (2019)
California Bio-monitoring:	Designated priority chemical for biomonitoring (2019).
Massachusetts Toxic Use Reduction Act (TURA):	Listed
$ROHS_3$:	Complies

International

EU REACH:	EC 205-860-2
Europe EINECS:	Listed in inventory
Canada DSL:	Listed in Inventory
Canada WHMIS:	B2, D2B. Not listed on Ingredient Disclosure List
Canada CEPA:	Not Listed
Australia AICS:	Listed in Inventory
Korea KECI:	Listed in Inventory
Japan ENCS:	Listed in Inventory
Philippines PICCS:	Not Listed.

1,1,1,3,3-Pentafluorobutane

US - TSCA	Listed in Inventory
USA SARA 302	None
USA SARA 313	None
USEPA SNAP	Acceptable.
ROHS 3	Complies

International

REACH	Listed in Inventory
EU - EINECS/ELINCS	Listed in Inventory
Canada – DSL/NDSL	Listed in Inventory
Japan – CSCL	Listed in Inventory
Korea - KECI	Listed in Inventory
China - IECSC	Listed in Inventory
Australia	Listed in Inventory
New Zealand	Listed in Inventory

US - TSCA	Listed in Inventory
USA SARA 302	None
USA SARA 313	None
USEPA SNAP	Acceptable
US VOC:	Exempt
ROHS 3	Complies
REACH	Listed in Inventory

International

EU - EINECS/ELINCS	Listed in Inventory
Canada – DSL	Listed in Inventory

16. OTHER INFORMATION

Only trained personnel should use this material. Since empty containers retain product residue, follow label warnings, even after container is emptied. 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. he 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. 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.

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