

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND MANUFACTURER'S IDENTIFICATION

Product ID: 492885
Product Name: Pentrazen EP
Revision Date: Jan 04, 2021
Version: 3.0
Manufacturer's Name: Zenex International
Address: 1 Zenex Circle Cleveland, OH, US, 44146
Emergency Phone: 1-800-535-5053
Information Phone Number: (440)-232-4155
Fax:
Product/Recommended Uses: Foaming Rust Penetrant

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SECTION 2) HAZARDS IDENTIFICATION

Classification

Aerosols - Category 1
Gases Under Pressure - Liquefied Gas
Carcinogenicity - Category 1

Pictograms



Signal Word

Danger

Hazardous Statements - Physical

H222 - Extremely flammable aerosol.
H280 - Contains gas under pressure; may explode if heated.

Hazardous Statements - Health

H350 - May cause cancer.

Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.

Precautionary Statements - Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 - Do not spray on an open flame or other ignition source.
P251 - Do not pierce or burn, even after use.
P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

Precautionary Statements - Response

P308 + P313 - IF exposed or concerned: Get medical attention.

Precautionary Statements - Storage

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.

P403 + P405 - Store in a well-ventilated place. Store locked up.

Precautionary Statements - Disposal

P501 - Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 3) COMPOSITION, INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0068476-86-8	Petroleum gases, liquefied, sweetened	14% - 23%
0064742-52-5	MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) HEAVY NAPHTHENIC	8% - 18%
0064742-96-7	HEAVY ALIPHATIC NAPHTHA	3% - 7%
0000079-20-9	METHYL ACETATE	2% - 4%
0008009-03-8	PETROLATUM	1.1% - 2%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

If exposed/If you feel unwell/If concerned: Call a POISON CENTER or doctor.

Eliminate all ignition sources if safe to do so.

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

Ingestion

Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

Most Important Symptoms/Effects, Acute and Delayed

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only. Do not direct a solid stream of water or foam into hot, burning pools. This may result in frothing and increased fire intensity.

Unsuitable Extinguishing Media

No data available.

Specific Hazards in Case of Fire

Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Product is highly flammable and forms explosive mixtures with air, oxygen, and all oxidizing agents. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a build up of internal pressures. Cool with water.

Empty Containers retain product residue which may exhibit hazards of material; therefore do not pressurize, cut, glaze, weld or use for any other purposes.

Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment

Wear liquid tight chemical protective clothing in combination with positive pressure self-contained breathing apparatus (SCBA).

Personal Precautions

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up

Absorb liquids in vermiculite, dry sand, earth, or similar inert material and deposit in sealed containers for disposal.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Do not cut, drill, grind, weld, or perform similar operations on or near containers. Do not pressurize containers to empty them.

Store at temperatures below 120°F.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA TWA (mg/m ³)	OSHA TWA (ppm)	OSHA STEL (mg/m ³)	OSHA Carcinogen	OSHA Skin designation	OSHA Tables (Z1, Z2, Z3)	ACGIH TWA (mg/m ³)	ACGIH TWA (ppm)
DIETHANOLAMINE							1 (IFV)	
HEAVY ALIPHATIC NAPHTHA	2000	500				1	[(L)]; [5 (I)];	(L)
METHYL ACETATE	610	200				1		200
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) HEAVY NAPHTHENIC	2000	500				1	[(L)[N159](L)[N800]]; [5 (I)[N159]5 (I)[N800]];	(L)[N159](L)[N800]
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) LIGHT PARAFFINIC	2000	500				1	[(L)[N159](L)[N800]]; [5 (I)[N159]5 (I)[N800]];	(L)[N159](L)[N800]
MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-DEWAXED HEAVY PARAFFINIC	2000	500				1	[(L)]; [5 (I)];	(L)
MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-REFINED (MILD) LIGHT PARAFFINIC 1	2000	500				1		
MOLYBDENUM (IV) SULFIDE	5					1	[0.5 (R)]; [10 (I), 3 (R)];	
Petroleum gases, liquefied, sweetened	2000	500				1		

Chemical Name	NIOSH STEL (ppm)	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations	NIOSH TWA (mg/m3)	NIOSH TWA (ppm)
Diethanolamine				A3	Liver & kidney dam	Skin; A3	15	3
HEAVY ALIPHATIC NAPHTHA				[A2]; [A4];	URT irr	[A2]; [A4];		
METHYL ACETATE	250		250		Headache; dizziness; nausea; eye dam (degeneration of ganglion cells in the retina)		610	200
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) HEAVY NAPHTHENIC				[A2[N159]A2 [N800]]; [A4 [N159]A4 [N800]];	URT irr [N159]URT irr [N800]	[A2[N159]A2 [N800]]; [A4 [N159]A4 [N800]];		
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) LIGHT PARAFFINIC				[A2[N159]A2 [N800]]; [A4 [N159]A4 [N800]];	URT irr [N159]URT irr [N800]	[A2[N159]A2 [N800]]; [A4 [N159]A4 [N800]];		
MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-DEWAXED HEAVY PARAFFINIC				[A2]; [A4];	URT irr	[A2]; [A4];		
MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-REFINED (MILD) LIGHT PARAFFINIC 1								
MOLYBDENUM (IV) SULFIDE				A3	LRT irr	A3		
Petroleum gases, liquefied, sweetened								

Chemical Name	NIOSH STEL (mg/m3)	OSHA STEL (ppm)	NIOSH Carcinogen
Diethanolamine			
HEAVY ALIPHATIC NAPHTHA			
METHYL ACETATE	760		
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) HEAVY NAPHTHENIC			
MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) LIGHT PARAFFINIC			
MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-DEWAXED HEAVY PARAFFINIC			
MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-REFINED (MILD) LIGHT PARAFFINIC 1			
MOLYBDENUM (IV) SULFIDE			
Petroleum gases, liquefied, sweetened			

(C) - Ceiling limit, (IFV) - Inhalable fraction and vapor, (L) - Exposure by all routes should be carefully controlled to levels as low as possible, A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, dam - Damage, irr - Irritation, URT - Upper respiratory tract

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	6.55 lb/gal
Density VOC	1.32 lb/gal
% VOC	20.1%
<hr/>	
Appearance	Black, thin liquid
Odor Threshold	N.A.
Odor Description	Petroleum
pH	N.A.
Water Solubility	N.A.
Flammability	Flash point below 73°F/23°C
Vapor Pressure	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.

Upper Explosion Level	N.A.
Vapor Density	N.A.
Melting Point	N.A.
Freezing Point Low	N.A.
Boiling Point	N.A.
High Boiling Point	N.A.
Decomposition Pt	N.A.
Auto Ignition Temp	N.A.
Evaporation Rate	Slower than ether

SECTION 10) STABILITY AND REACTIVITY

Stability

The product is stable under normal storage conditions.

Conditions to Avoid

Avoid heat, sparks, flame, high temperature and contact with incompatible materials.
Dropping containers may cause bursting.

Incompatible Materials

Avoid strong oxidizers, reducers, acids, and alkalis.

Hazardous Reactions/Polymerization

None known.

Hazardous Decomposition Products

None.

SECTION 11) TOXICOLOGICAL INFORMATION

Likely Route of Exposure

Inhalation, ingestion, skin absorption.

Skin Corrosion/Irritation

No data available.

Serious Eye Damage/Irritation

No data available.

Carcinogenicity

May cause cancer.

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Respiratory/Skin Sensitization

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration Hazard

No data available.

Acute Toxicity

No data available.

LD50 (Rodent - rat, Oral) : >5000 mg/kg, Toxic effects : Details of toxic effects not reported other than lethal dose value.

LD50 (Rodent - rabbit, Administration onto the skin) : >2000 mg/kg, Toxic effects : Details of toxic effects not reported other than lethal dose value.

0000079-20-9 METHYL ACETATE

LC50 (rat): 16000-32000 ppm (4-hour exposure) (9)

LD50 (oral, rat): greater than 5000 mg/kg (4)

LD50 (oral, rabbit): 3700 mg/kg (cited as 50 millimols/kg) (10)

LD50 (skin, rabbit): greater than 5000 mg/kg (4)

SECTION 12) ECOLOGICAL INFORMATION**Toxicity**

No data available.

Persistence and Degradability

No data available.

Bio-Accumulative Potential

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS**Waste Disposal**

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

	IATA Information	IMDG Information	U.S. DOT Information
UN number:	UN1950	UN1950	UN1950
Proper shipping name:	Aerosols, flammable	Aerosols	Aerosols
Hazard class:	2.1	2.1	2.1
Packaging group:	NA	NA	NA
Hazardous substance (RQ):			No Data Available
Marine Pollutant:		No Data Available	No Data Available
Note / Special Provision:	(LTD QTY)	(LTD QTY)	(LTD QTY)
Toxic-Inhalation Hazard:			No Data Available

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0068476-86-8	Petroleum gases, liquefied, sweetened	14% - 23%	SARA312,TSCA,OSHA
0064742-52-5	MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) HEAVY NAPHTHENIC	8% - 18%	SARA312,VOC,TSCA,ACGIH,OSHA
0064742-47-8	Isoparaffinic Petroleum Distillate	3% - 7%	SARA312,VOC,TSCA,ACGIH,OSHA
0000079-20-9	METHYL ACETATE	2% - 4%	SARA312,TSCA,ACGIH,OSHA
0008009-03-8	PETROLATUM	1.1% - 2%	SARA312,TSCA
0001317-33-5	MOLYBDENUM (IV) SULFIDE	0.1% - 0.2%	SARA312,TSCA,ACGIH,OSHA
0000111-42-2	DIETHANOLAMINE	Trace	SARA313, CERCLA, HAPS, SARA312, VOC, TSCA, ACGIH, California Proposition 65 Cancer
0064742-55-8	MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED (MILD) LIGHT PARAFFINIC	Trace	SARA312, VOC,TSCA, ACGIH, OSHA
0064742-65-0	MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-DEWAXED HEAVY PARAFFINIC	Trace	SARA312, TSCA, ACGIH, OSHA
0064741-89-5	MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-REFINED (MILD) LIGHT PARAFFINIC 1	Trace	SARA312, TSCA, OSHA

SECTION 16) OTHER INFORMATION

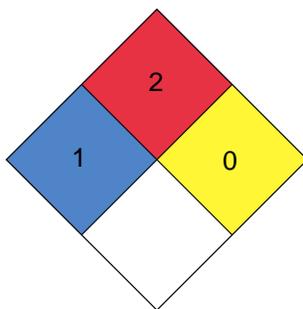
Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS

Health	/ 1
FLAMMABILITY	2
Physical Hazard	0
Personal Protection	B

NFPA



(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

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