

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : PENRAY STARTING FLUID-HIGH ETHER CONTENT
Product code : 5315

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Starting Fluid.

1.3. Details of the supplier of the safety data sheet

The Penray Companies, Inc.
440 Denniston Ct.
Wheeling, IL 60090
T (800) 373-6729
rotto@penray.com

1.4. Emergency telephone number

Emergency number : (800) 373-6729
CHEMTREC (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable Aerosol 1
Gases Under Pressure - Compressed Gas
Skin irritation 2
Carcinogenicity 2
Reproductive toxicity 2 (developmental)
Specific target organ toxicity - Single exposure 3
Aspiration hazard 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS02

GHS04

GHS07

GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes skin irritation. Suspected of damaging the unborn child. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.

Precautionary statements (GHS-US) :

Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Wash hands thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

51 % of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Heptane, branched, cyclic and linear	(CAS No) 426260-76-6	40 - 70	Flam. Liq. 2 Skin Irrit. 2 STOT SE 3 Asp. Tox. 1
Ethyl ether	(CAS No) 60-29-7	30 - 60	Flam. Liq. 1 Acute Tox. 4 (Oral) STOT SE 3
Carbon dioxide	(CAS No) 124-38-9	3 - 7	Compressed gas
Ethyl alcohol	(CAS No) 64-17-5	1 - 5	Flam. Liq. 2 Eye Irrit. 2A
n-Heptane	(CAS No) 142-82-5	0.5 - 2.5	Flam. Liq. 2 Skin Irrit. 2 STOT SE 3
Ethyl chloride	(CAS No) 75-00-3	0.1 - 1	Flam. Gas 1 Liquefied gas Carc. 2
Toluene	(CAS No) 108-88-3	0.1 - 1	Flam. Liq. 2 Acute Tox. 4 (Oral) Skin Irrit. 2 Repr. 2 STOT SE 3 STOT RE 2 Asp. Tox. 1

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.
- First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause drowsiness, dizziness and central nervous system depression. May cause respiratory tract irritation.
- Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
- Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Powder, water spray, foam, carbon dioxide.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Extremely flammable aerosol. Products of combustion may include, and are not limited to: oxides of carbon.
- Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Use water spray to keep fire-exposed containers cool.

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from sources of ignition. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid contact with skin and eyes. Do not swallow. Avoid breathing gas/mist/vapors/spray. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep locked up and out of reach of children. Do not expose to temperatures exceeding 50°C/ 122°F. Store away from direct sunlight or other heat sources. Store in a well-ventilated place.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Heptane, branched, cyclic and linear (426260-76-6)

USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL (TWA)	Not applicable.

Ethyl ether (60-29-7)

USA ACGIH	ACGIH TWA (ppm)	400 ppm
USA ACGIH	ACGIH STEL (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1200 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	400 ppm

Carbon dioxide (124-38-9)

USA ACGIH	ACGIH TWA (ppm)	5000 ppm
USA ACGIH	ACGIH STEL (ppm)	30000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	9000 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	5000 ppm

Ethyl alcohol (64-17-5)

USA ACGIH	ACGIH STEL (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1900 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

n-Heptane (142-82-5)

USA ACGIH	ACGIH TWA (ppm)	400 ppm
USA ACGIH	ACGIH STEL (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	2000 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	500 ppm

Ethyl chloride (75-00-3)

USA ACGIH	ACGIH TWA (ppm)	100 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	2600 mg/m ³

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Ethyl chloride (75-00-3)		
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

Toluene (108-88-3)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm

8.2. Exposure controls

Appropriate engineering controls	: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear chemically resistant protective gloves.
Eye protection	: Safety glasses or goggles are recommended when using product.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: A NIOSH approved respirator is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Environmental exposure controls	: Maintain levels below Community environmental protection thresholds.
Other information	: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas/Pressurized Liquid.
Appearance	: Clear.
Colour	: Colourless.
Odour	: Solvent.
Odour threshold	: No data available.
pH	: No data available.
Relative evaporation rate (butylacetate=1)	: No data available.
Melting point	: No data available.
Freezing point	: No data available.
Boiling point	: No data available.
Flash point	: No data available.
Self ignition temperature	: No data available.
Decomposition temperature	: No data available.
Flammability (solid, gas)	: Flammable.
Vapour pressure	: No data available.
Relative vapour density at 20 °C	: No data available.
Relative density	: No data available.
Solubility	: No data available.
Log Pow	: No data available.
Log Kow	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Explosive properties	: No data available.
Oxidising properties	: No data available.
Explosive limits	: No data available.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Extremely flammable aerosol. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn.

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sources of ignition. Air contact. Direct sunlight. Moisture.

10.5. Incompatible materials

Acids. Chlorine. Oxidizers. Reducing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

5315	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5 mg/l/4h

Ethyl ether (60-29-7)	
LD50 oral rat	1215 mg/kg
LD50 dermal rabbit	>20 mL/kg

Ethyl alcohol (64-17-5)	
LD50 oral rat	7060 mg/kg
LC50 inhalation rat (mg/l)	124.7 mg/l/4h

n-Heptane (142-82-5)	
LD50 dermal rabbit	3000 mg/kg
LC50 inhalation rat (mg/l)	103 g/m ³ /4h

Ethyl chloride (75-00-3)	
LC50 inhalation rat (mg/l)	152 g/m ³ /2h

Toluene (108-88-3)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	12124 mg/kg
LD50 dermal rabbit	8390 mg/kg
LC50 inhalation rat (mg/l)	28.1 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.
Germ cell mutagenicity : Based on available data, the classification criteria are not met.
Carcinogenicity : Suspected of causing cancer.

Ethyl alcohol (64-17-5)	
IARC group	1 (in alcoholic beverages)

Ethyl chloride (75-00-3)	
IARC group	3
National Toxicity Program (NTP) Status	1

Toluene (108-88-3)	
IARC group	3

Reproductive toxicity : Suspected of damaging the unborn child.
Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met.
Aspiration hazard : May be fatal if swallowed and enters airways.
Symptoms/injuries after inhalation : May cause drowsiness, dizziness and central nervous system depression. May cause respiratory tract irritation.
Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

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Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Flammable vapours may accumulate in the container. Do not incinerate closed containers.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

UN-No. : UN1950

14.2. UN proper shipping name

Proper Shipping Name : Aerosols flammable

Department of Transportation Hazard Classes : 2.1

Hazard labels :



14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

Heptane, branched, cyclic and linear (426260-76-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ethyl ether (60-29-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
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Carbon dioxide (124-38-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ethyl alcohol (64-17-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

n-Heptane (142-82-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
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Ethyl chloride (75-00-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on SARA Section 313 (Specific toxic chemical listings)

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Ethyl chloride (75-00-3)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
SARA Section 313 - Emission Reporting	1.0 %

Toluene (108-88-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 %

15.2. US State regulations

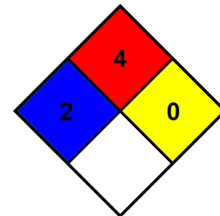
5315()	
State or local regulations	This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

IARC	International Agency for Research on Cancer.
	1 - Carcinogenic to humans; 2A - Probably carcinogenic to humans; 2B - Possibly carcinogenic to humans; 3 - Not classifiable; 4 - Probably not carcinogenic to humans.
NTP	National Toxicology Program.
	1 - Evidence of Carcinogenicity; 2 - Known Human Carcinogens; 3 - Reasonably anticipated to be Human Carcinogen; 4 - Substances delisted from report on Carcinogens; 5 - Twelfth Report - Items under consideration.

SECTION 16: Other information

Indication of changes : None.
 Date of issue : 05/28/2014
 Other information : None.
 NFPA health hazard : 2
 NFPA fire hazard : 4
 NFPA reactivity : 0



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product