



PENRAY DIRECT INJECTION FUEL SYSTEM CLEANER

Safety Data Sheet

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

Date of issue: 11/25/2015

Revision date: 11/25/2015

Version: 1.0

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

1.1. Product identifier

Product name : PENRAY DIRECT INJECTION FUEL SYSTEM CLEANER
Product code : 2113

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

Use of the substance/mixture : Fuel system cleaner

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 Liquid 3
Skin irritation 2
Eye irritation 2A
Carcinogenicity 2
Reproductive toxicity 2
Aspiration hazard 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Flammable liquid and vapor. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child. May be fatal if swallowed and enters airways.

Precautionary statements (GHS-US) : Keep away from heat/sparks/open flames/hot surfaces.– No smoking. 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. 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. Wash hands thoroughly after handling. If exposed or concerned: Get medical advice/attention. If on skin (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. Store in a well-ventilated place. Keep cool. 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)

Not applicable.

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

Name	Product identifier	%
Kerosene, petroleum	(CAS No) 8008-20-6	60 - 100
Solvent naphtha, petroleum, light aromatic	(CAS No) 64742-95-6	5 - 13
Polyolefin alkyl phenol alkyl amine	Trade secret	1 - 5
Pseudocumene	(CAS No) 95-63-6	1 - 5
2-Ethylhexanol	(CAS No) 104-76-7	0.1 - 1.5
Xylenes (o-, m-, p- isomers)	(CAS No) 1330-20-7	0.1 - 1
Cumene	(CAS No) 98-82-8	0.1 - 1
Naphthalene	(CAS No) 91-20-3	0.1 - 1

* The specific chemical identity and/or 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 for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.
- First-aid measures after ingestion : Do NOT induce vomiting. 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 respiratory tract irritation. May cause drowsiness, dizziness and central nervous system depression.
- 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 : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- 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 : Flammable liquid and vapor. Products of combustion may include, and are not limited to: oxides of carbon, oxides of nitrogen, aldehydes, hydrocarbons.

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.

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).

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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. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. Use only non-sparking tools. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Benzene is subject to the standard 29CFR 1910.1028 which may contain specific requirements for handling including protective equipment, regulated areas, monitoring and medical surveillance. The employer should review the standard and assure compliance with applicable requirements.

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 out of the reach of children. Keep container tightly closed and in a well-ventilated place. Store locked up. Keep cool. Keep away from heat, sparks, and flame.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Kerosene, petroleum (8008-20-6)

ACGIH	ACGIH TWA (mg/m ³)	200 mg/m ³ (application restricted to conditions in which there are negligible aerosol exposures-total hydrocarbon vapor)
OSHA	Not applicable	

Solvent naphtha, petroleum, light aromatic (64742-95-6)

ACGIH	Not applicable	
OSHA	Not applicable	

Polyolefin alkyl phenol alkyl amine (Trade secret)

ACGIH	Not applicable	
OSHA	Not applicable	

Pseudocumene (95-63-6)

ACGIH	Not applicable	
OSHA	Not applicable	

2-Ethylhexanol (104-76-7)

ACGIH	Not applicable	
OSHA	Not applicable	

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH	ACGIH TWA (ppm)	100 ppm
ACGIH	ACGIH STEL (ppm)	150 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	435 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	100 ppm

Cumene (98-82-8)

ACGIH	ACGIH TWA (ppm)	50 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	245 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	50 ppm

Naphthalene (91-20-3)

ACGIH	ACGIH TWA (ppm)	10 ppm
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Naphthalene (91-20-3)		
OSHA	OSHA PEL (TWA) (mg/m ³)	50 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	10 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	: Wear eye protection.
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	: Liquid
Appearance	: Clear
Color	: Amber
Odor	: Petroleum odor
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 38 °C (100 °F) (Solvent naphtha, petroleum, light aromatic)
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Flammable
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapor pressure	: No data available
Relative density	: 0.8296 - 0.8396
Relative vapor density at 20 °C	: No data available
Solubility	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 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. May form flammable/explosive vapor-air mixture.

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10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials. Open flame.

10.5. Incompatible materials

Strong oxidizing agents. Strong reducing agents.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified.

2113	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 20 mg/l/4h

Kerosene, petroleum (8008-20-6)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 5.28 mg/l/4h

Solvent naphtha, petroleum, light aromatic (64742-95-6)	
LD50 oral rat	8400 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	3400 ppm/4h

Pseudocumene (95-63-6)	
LD50 oral rat	3280 mg/kg
LD50 dermal rabbit	> 3160 mg/kg
LC50 inhalation rat	18 g/m ³ /4h

2-Ethylhexanol (104-76-7)	
LD50 oral rat	3730 mg/kg
LD50 dermal rabbit	1980 mg/kg

Xylenes (o-, m-, p- isomers) (1330-20-7)	
LD50 oral rat	3500 mg/kg
LD50 dermal rabbit	> 4350 mg/kg
LC50 inhalation rat	29.08 mg/l/4h

Cumene (98-82-8)	
LD50 oral rat	1400 mg/kg
LD50 dermal rabbit	12300 µl/kg
LC50 inhalation rat	> 3577 ppm/6h

Naphthalene (91-20-3)	
LD50 oral rat	490 mg/kg
LD50 dermal rabbit	> 20 g/kg
LC50 inhalation rat	>340 mg/m ³ /1h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : 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.

Xylenes (o-, m-, p- isomers) (1330-20-7)	
IARC group	3 - Not classifiable

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Cumene (98-82-8)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	1 - Evidence of Carcinogenicity, 3 - Reasonably anticipated to be Human Carcinogen

Naphthalene (91-20-3)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	1 - Evidence of Carcinogenicity, 3 - Reasonably anticipated to be Human Carcinogen

Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
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 respiratory tract irritation. May cause drowsiness, dizziness and central nervous system depression.
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	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
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

2113

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

2113

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

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 : Handle empty containers with care because residual vapors are flammable.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

UN-No.(DOT)	: UN1993
Proper Shipping Name (DOT)	: Flammable liquids, n.o.s.(Petroleum, psudocumene)
Transport hazard class(es) (DOT)	: 3
Hazard labels (DOT)	:



Packing group (DOT) : III

Additional information

Other information : No supplementary information available.

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

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Pseudocumene (95-63-6)

Subject to reporting requirements of United States SARA Section 313

SARA Section 313 - Emission Reporting	1.0 %
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2-Ethylhexanol (104-76-7)

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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Xylenes (o-, m-, p- isomers) (1330-20-7)

Subject to reporting requirements of United States SARA Section 313

SARA Section 313 - Emission Reporting	1.0 %
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Cumene (98-82-8)

Subject to reporting requirements of United States SARA Section 313

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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SARA Section 313 - Emission Reporting	1.0 %
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Naphthalene (91-20-3)

Subject to reporting requirements of United States SARA Section 313

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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SARA Section 313 - Emission Reporting	0.1 %
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15.2. US State regulations

2113

State or local regulations	This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
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SECTION 16: Other information

Date of issue : 11/25/2015

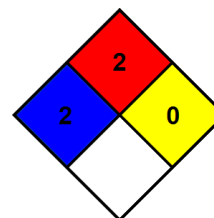
Revision date : 11/25/2015

Other information : None.

NFPA health hazard : 2

NFPA fire hazard : 2

NFPA reactivity : 0



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PENRAY BACK OF VALVE CLEANER

Safety Data Sheet

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

Date of issue: 06/24/2016

Revision date: 06/24/2016

Version: 1.0

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

1.1. Product identifier

Product name : PENRAY BACK OF VALVE CLEANER
Product code : 2612EA

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

Use of the substance/mixture : Back of valve cleaner

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

Flam. Liq. 2
Skin Irrit. 2
Eye Dam. 1
Carc. 2
Repr. 2
STOT RE 2
Asp. Tox. 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Highly flammable liquid and vapour. Causes skin irritation. Causes serious eye damage. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways.

Precautionary statements (GHS-US) :

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. If exposed or concerned: Get medical advice/attention. If on skin (or hair): Take off contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

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2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS US)

Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

Name	Product identifier	%
Distillates, petroleum, hydrotreated light naphthenic	(CAS No) 64742-53-6	30 - 60
Diethylene glycol monobutyl ether	(CAS No) 112-34-5	10 - 30
Solvent naphtha, petroleum, light aromatic	(CAS No) 64742-95-6	5 - 15
Alkylphenol polyoxyalkyl alkylamine	Trade Secret	5 - 15
Toluene	(CAS No) 108-88-3	7 - 13

* The specific chemical identity and 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 breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.
- First-aid measures after ingestion : If swallowed, do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries after inhalation : 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 : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
- 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 : Carbon dioxide. Dry chemical. Foam. Water spray.
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour. Products of combustion may include, and are not limited to: oxides of carbon and oxides of nitrogen.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

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). Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

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6.2. Methods and material for containment and cleaning up

- For containment : Eliminate all ignition sources if safe to do so. Use explosion-proof equipment. Use only non-sparking tools. 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

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : No open flames. No smoking. Use only non-sparking tools. Provide good ventilation in process area to prevent formation of vapour. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Benzene is subject to the standard 29 CFR 1910.1028 which may contain specific requirements for handling including protective equipment, regulated areas, monitoring and medical surveillance. The employer should review the standard and assure compliance with applicable requirements.
- Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Keep out of the reach of children. Keep container tightly closed. Keep only in the original container in a cool well ventilated place. Keep out of direct sunlight. Keep in fireproof place.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Distillates, petroleum, hydrotreated light naphthenic (64742-53-6)		
ACGIH	Not applicable	
OSHA	Not applicable	
Diethylene glycol monobutyl ether (112-34-5)		
ACGIH	ACGIH TWA (ppm)	10 ppm (inhalable fraction and vapor)
OSHA	Not applicable	
Solvent naphtha, petroleum, light aromatic (64742-95-6)		
ACGIH	Not applicable	
OSHA	Not applicable	
Alkylphenol polyoxyalkyl alkylamine (Trade Secret)		
ACGIH	Not applicable	
OSHA	Not applicable	
Toluene (108-88-3)		
ACGIH	ACGIH TWA (ppm)	20 ppm
OSHA	OSHA PEL (TWA) (ppm)	200 ppm
OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm

8.2. Exposure controls

- Hand protection : Wear chemically resistant protective gloves.
- Eye protection : Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield).
- Skin and body protection : Wear suitable protective clothing.

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Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. 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.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Colour	: Straw yellow
Odor	: Odourless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 228 °F (Toluene)
Flash point	: 39 °F (Toluene)
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Flammable
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapor pressure	: No data available
Relative density	: 0.9028
Relative vapor density at 20 °C	: No data available
Solubility	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 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

Highly flammable liquid and vapour. May form flammable/explosive vapor-air mixture.

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. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizing agents. Strong reducing agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified.
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PENRAY BACK OF VALVE CLEANER

Safety Data Sheet

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

2612	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	> 20 mg/l/4h
Diethylene glycol monobutyl ether (112-34-5)	
LD50 oral rat	5660 mg/kg
LD50 dermal rabbit	2700 mg/kg
Solvent naphtha, petroleum, light aromatic (64742-95-6)	
LD50 oral rat	8400 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	3400 ppm/4h
Toluene (108-88-3)	
LD50 oral rat	2600 mg/kg
LD50 dermal rabbit	12000 mg/kg
LC50 inhalation rat	12.5 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
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.

Toluene (108-88-3)	
IARC group	3 - Not classifiable
Xylenes (o-, m-, p- isomers) (1330-20-7)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.
Symptoms/injuries after inhalation	: 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	: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
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.
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12.2. Persistence and degradability

2612	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

2612	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on the global warming	: No known effects from this product.
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PENRAY BACK OF VALVE CLEANER

Safety Data Sheet

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

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 : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

Department of Transportation (DOT)

- In accordance with DOT
- UN-No.(DOT) : UN1993
- Proper Shipping Name (DOT) : Flammable liquids, n.o.s. (Toluene; Solvent naphtha, petroleum, light aromatic)
- Class (DOT) : 3
- Hazard labels (DOT) :



- Packing group (DOT) : II

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

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Diethylene glycol monobutyl ether (112-34-5)

EPA TSCA Regulatory Flag

T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA
Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule

Toluene (108-88-3)

Subject to reporting requirements of United States SARA Section 313

SARA Section 313 - Emission Reporting 1.0 %

15.2. US State regulations

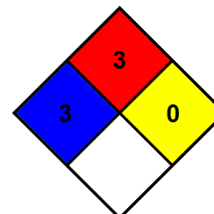
2612

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

SECTION 16: Other information

- Date of issue : 06/24/2016
- Revision date : 06/24/2016
- Other information : None.

- NFPA health hazard : 3
- NFPA fire hazard : 3
- NFPA reactivity : 0



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