



# 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](mailto: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.

# PENRAY DIRECT INJECTION FUEL SYSTEM CLEANER

## Safety Data Sheet

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

### 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).

# PENRAY DIRECT INJECTION FUEL SYSTEM CLEANER

## Safety Data Sheet

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

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 <sup>3</sup> ) | 200 mg/m <sup>3</sup> (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 <sup>3</sup> ) | 435 mg/m <sup>3</sup> |
| OSHA  | OSHA PEL (TWA) (ppm)                | 100 ppm               |

#### Cumene (98-82-8)

|       |                                     |                       |
|-------|-------------------------------------|-----------------------|
| ACGIH | ACGIH TWA (ppm)                     | 50 ppm                |
| OSHA  | OSHA PEL (TWA) (mg/m <sup>3</sup> ) | 245 mg/m <sup>3</sup> |
| OSHA  | OSHA PEL (TWA) (ppm)                | 50 ppm                |

#### Naphthalene (91-20-3)

|       |                 |        |
|-------|-----------------|--------|
| ACGIH | ACGIH TWA (ppm) | 10 ppm |
|-------|-----------------|--------|

# PENRAY DIRECT INJECTION FUEL SYSTEM CLEANER

## Safety Data Sheet

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

| Naphthalene (91-20-3) |                                     |                      |
|-----------------------|-------------------------------------|----------------------|
| OSHA                  | OSHA PEL (TWA) (mg/m <sup>3</sup> ) | 50 mg/m <sup>3</sup> |
| 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.

# PENRAY DIRECT INJECTION FUEL SYSTEM CLEANER

## Safety Data Sheet

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. 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 <sup>3</sup> /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 <sup>3</sup> /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 |

# PENRAY DIRECT INJECTION FUEL SYSTEM CLEANER

## Safety Data Sheet

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

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

| <b>Naphthalene (91-20-3)</b>             |  |
|--|--|
| 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.

### 12.3. Bioaccumulative potential

#### 2113

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 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.

# PENRAY DIRECT INJECTION FUEL SYSTEM CLEANER

## Safety Data Sheet

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

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 % |
|---------------------------------------|-------|

##### **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. |
|--------------------------|--|

##### **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 % |
|---------------------------------------|-------|

##### **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. |
|--------------------------|--|

|                                       |       |
|---------------------------------------|-------|
| SARA Section 313 - Emission Reporting | 1.0 % |
|---------------------------------------|-------|

##### **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. |
|--------------------------|--|

|                                       |       |
|---------------------------------------|-------|
| SARA Section 313 - Emission Reporting | 0.1 % |
|---------------------------------------|-------|

#### 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. |
|----------------------------|---|

### SECTION 16: Other information

Date of issue : 11/25/2015

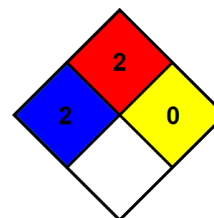
Revision date : 11/25/2015

Other information : None.

NFPA health hazard : 2

NFPA fire hazard : 2

NFPA reactivity : 0



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