PENRAY TOTAL FUEL SYSTEM CLEANER

Safety Data Sheet

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

Date of issue: 04/30/2014 Revision date: 04/30/2014 Version: 1.0

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

1.1. Product identifier

Product name : PENRAY TOTAL FUEL SYSTEM CLEANER

Product code : 2216

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.
60090 Wheeling, IL
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
Serious eye damage 1
Carcinogenicity 2
Specific target organ toxicity - Single exposure 3
Aspiration hazard 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS02 GHS05 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Flammable liquid and vapor. Causes skin irritation. Causes serious eye damage. 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. 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. Wear protective gloves/eye protection/face protection. Wash hands thoroughly after handling. Avoid breathing gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. 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. Immediately call a poison center/doctor. 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. Keep cool. Store in a well-ventilated place. Keep container tightly closed. 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

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
KEROSENE, petroleum	(CAS No) 8008-20-6	30 - 60	Flam. Liq. 3 Skin Irrit. 2 STOT SE 3 Asp. Tox. 1
Isopropyl alcohol	(CAS No) 67-63-0	15 - 40	Flam. Liq. 2 Eye Irrit. 2A STOT SE 3
Solvent naphtha, petroleum, light aromatic	(CAS No) 64742-95-6	7 - 13	Asp. Tox. 1
Alkylphenol polyoxyalkyl alkylamine	Proprietary	7 - 13	Eye Dam. 1
Xylenes (o-, m-, p- isomers)	(CAS No) 1330-20-7	1 - 5	Flam. Liq. 3 Acute Tox. 4 (Dermal, Inhalation) Skin Irrit. 2
Benzene, 1,2,4-trimethyl-	(CAS No) 95-63-6	1 - 5	Flam. Liq. 3 Acute Tox. 4 (Inhalation) Skin Irrit. 2 Eye Irrit. 2A STOT SE 3
1,3,5-Trimethylbenzene	(CAS No) 108-67-8	1 - 5	Flam. Liq. 3 Skin Irrit. 2 Eye Irrit. 2A STOT SE 3 Asp. Tox. 1
n-Propylbenzene	(CAS No) 103-65-1	1 - 5	Flam. Liq. 3 STOT SE 3 Asp. Tox. 1
Cumene	(CAS No) 98-82-8	0.1 - 1	Flam. Liq. 3 Acute Tox. 4 (Oral) Carc. 2
Naphthalene	(CAS No) 91-20-3	0.1 - 1	Acute Tox. 4 (Oral, Dermal) Carc. 2
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 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 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 : 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 : 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 : Products of combustion may include, and are not limited to: oxides of carbon.

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).

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 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.

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)		
USA ACGIH	ACGIH TWA (mg/m³)	200 mg/m³

Isopropyl alcohol (67-63-0)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	400 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	980 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	400 ppm

Solvent naphtha, petroleum, light aromatic (64742-95-6)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL (TWA)	Not applicable.

Alkylphenol polyoxyalkyl alkylamine (Proprietary)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL (TWA)	Not applicable.

Xylenes (o-, m-, p- isomers) (1330-20-7)		
USA ACGIH	ACGIH TWA (ppm)	100 ppm
USA ACGIH	ACGIH STEL (ppm)	150 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	435 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm

Benzene, 1,2,4-trimethyl- (95-63-6)		
USA ACGIH	ACGIH TWA (ppm)	25 ppm

1,3,5-Trimethylbenzene (108-67-8)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL (TWA)	Not applicable.

n-Propylbenzene (103-65-1)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL (TWA)	Not applicable.

Cumene (98-82-8)		
USA ACGIH	ACGIH TWA (ppm)	50 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	245 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm

Naphthalene (91-20-3)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH STEL (ppm)	15 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	50 mg/m³
USA 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 approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) 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.

Colour : No data available.

Odour : Petroleum odor.

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 : ~ 26 °C (~ 78 °F)

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 : 0.811 - 0.823

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. May form flammable/explosive vapour-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. Open flame.

10.5. Incompatible materials

Strong oxidizing 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

2216	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 20 mg/l/4h

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

Isopropyl alcohol (67-63-0)	
LD50 oral rat	4396 mg/kg
LD50 dermal rat	12800 mg/kg
LD50 dermal rabbit	12870 mg/kg
LC50 inhalation rat (mg/l)	72.6 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 (ppm)	3400 ppm/4h
LC50 inhalation rat (mg/l)	> 5.2 mg/l/4h

Xylenes (o-, m-, p- isomers) (1330-20-7)	
LD50 oral rat	4300 mg/kg
LD50 dermal rabbit	> 1700 mg/kg
LC50 inhalation rat (ppm)	5000 ppm/4h
LC50 inhalation rat (mg/l)	47635 mg/l/4h

Benzene, 1,2,4-trimethyl- (95-63-6)	
LD50 oral rat	3400 mg/kg
LD50 dermal rabbit	> 3160 mg/kg
LC50 inhalation rat (mg/l)	18 g/m³/4h

1,3,5-Trimethylbenzene (108-67-8)	
LC50 inhalation rat (mg/l)	24 g/m³/4 h

n-Propylbenzene (103-65-1)	
LD50 oral rat	6040 mg/kg
LC50 inhalation rat (ppm)	65000 ppm/2h

Cumene (98-82-8)	
LD50 oral rat	1400 mg/kg
LD50 dermal rabbit	> 3160 mg/kg
LC50 inhalation rat (mg/m³)	39000 mg/m³/4 h

Naphthalene (91-20-3)	
LD50 oral rat	490 mg/kg
LD50 dermal rabbit	> 20 g/kg

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.

Isopropyl alcohol (67-63-0)	
IARC group	3

Xylenes (o-, m-, p- isomers) (1330-20-7)	
IARC group	3

Cumene (98-82-8)	
IARC group	2B
National Toxicity Program (NTP) Status	1

Naphthalene (91-20-3)	
IARC group	2B
National Toxicity Program (NTP) Status	1, 3

Reproductive toxicity : Based on available data, the classification criteria are not met.
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 : 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.

12.2. Persistence and degradability

2216	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

2216	
Bioaccumulative potential	Not established.

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

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

UN-No. : UN1993

14.2. UN proper shipping name

Proper Shipping Name : Flammable liquids, n.o.s. (Petroleum, Isopropanol)

Department of Transportation Hazard Classes : 3

Hazard labels :

Packing group (DOT) : III

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

KERESENE, petroleum (8008-20-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Isopropyl alcohol (67-63-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
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 %

Solvent naphtha, petroleum, light aromatic (64742-95-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

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

Benzene, 1,2,4-trimethyl- (95-63-6)	
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 %

1,3,5-Trimethylbenzene (108-67-8)	
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.

n-Propylbenzene (103-65-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Cumene (98-82-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
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)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
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

2216	
State or local regulations	This product contains chemicals known to the State of California to cause cancer.

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.

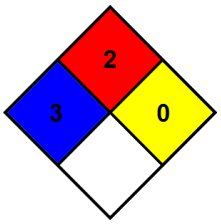
Date of issue : 04/30/2014

Other information : None.

NFPA health hazard : 3

NFPA fire hazard : 2

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

PENRAY TOTAL INTAKE SYSTEM CLEANER

Safety Data Sheet

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

Date of issue: 06/11/2014 Revision date: 06/11/2014 Version: 1.0

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

1.1. Product identifier

Product name : PENRAY TOTAL INTAKE SYSTEM CLEANER

Product code : 2512

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

Use of the substance/mixture : Intake 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 Aerosol 1
Gases Under Pressure - Compressed Gas
Acute toxicity 4 (Oral)
Acute toxicity 3 (Dermal)
Skin corrosion 1B
Serious eye damage 1
Reproductive toxicity 1B
Specific target organ toxicity - Single exposure 3
Specific target organ toxicity - Repeated exposure 2
Aspiration hazard 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS02 GHS04 GHS05 GHS06 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Harmful if swallowed. Toxic in contact with skin. Causes severe skin burns and eye damage. May damage fertility or the unborn child. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. 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. Do not eat, drink or smoke when using this product. 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. Use only outdoors or in a well-ventilated area. Do not breathe gas/mist/vapors/spray. If exposed or concerned: Get medical advice/attention. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a poison center/doctor. 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 inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor. Do not expose to temperatures exceeding 50 ºC/122 ºF. Protect from sunlight. 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

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Butane	(CAS No) 106-97-8	15 - 40	Flam. Gas 1 Liquefied gas
Propane	(CAS No) 74-98-6	15 - 40	Flam. Gas 1 Liquefied gas
Toluene	(CAS No) 108-88-3	7 - 13	Flam. Liq. 2 Skin Irrit. 2 Repr. 2 STOT SE 3 STOT RE 2 Asp. Tox. 1
Acetonitrile	(CAS No) 75-05-8	3 - 7	Flam. Liq. 2 Acute Tox. 4 (Oral, Inhalation) Acute Tox. 3 (Dermal) Eye Irrit. 2A
1-Methyl-2-pyrrolidone	(CAS No) 872-50-4	3 - 7	Flam. Liq. 4 Skin Irrit. 2 Eye Irrit. 2A Repr. 1B STOT SE 3
Isopropyl alcohol	(CAS No) 67-63-0	3 - 7	Flam. Liq. 2 Eye Irrit. 2A STOT SE 3
Morpholine	(CAS No) 110-91-8	3 - 7	Flam. Liq. 3 Acute Tox. 4 (Oral, Inhalation) Acute Tox. 3 (Dermal) Skin Corr. 1B
2-Methoxyethanol	(CAS No) 109-86-4	< 0.1	Flam. Liq. 3 Acute Tox. 4 (Oral, Dermal, Inhalation) Repr. 1B
Benzene	(CAS No) 71-43-2	< 0.1	Flam. Liq. 2 Acute Tox. 4 (Oral) Skin Irrit. 2 Eye Irrit. 2A Muta. 1B Carc. 1A STOT RE 1 Asp. Tox. 1
Ethylbenzene	(CAS No) 100-41-4	< 0.1	Flam. Liq. 2 Acute Tox. 4 (Inhalation) Skin Irrit. 2 Carc. 2 Asp. Tox. 1
Cumene	(CAS No) 98-82-8	< 0.1	Flam. Liq. 3 Acute Tox. 4 (Oral) Carc. 2

* 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 immediate medical advice/attention.

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. Get immediate medical advice/attention.

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 unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth. Get immediate medical advice/attention.

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

Symptoms/injuries after inhalation : Irritating to respiratory system. May cause drowsiness, dizziness and central nervous system depression. Intentional misuse of product by inhalation can result in asphyxiation or death.

Symptoms/injuries after skin contact : Toxic in contact with skin. Causes severe skin burns. Redness. Pain. Blisters.

Symptoms/injuries after eye contact : Causes serious eye damage. May cause serious chemical burns. Redness, pain, tearing.

Symptoms/injuries after ingestion : Harmful if swallowed. 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 : None known.

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.

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. Do not get in eyes, on skin, or on clothing. Do not swallow. Do not breathe gas, fumes, vapour or 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 ot 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

Butane (106-97-8)		
USA ACGIH	ACGIH STEL (ppm)	1000 ppm

Propane (74-98-6)		
USA ACGIH	ACGIH TWA (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	1800 mg/m³
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

Acetonitrile (75-05-8)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	70 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	40 ppm

1-Methyl-2-pyrrolidone (872-50-4)		
USA ACGIH	ACGIH TWA	Not applicable.
USA OSHA	OSHA PEL (TWA)	Not applicable.

Isopropyl alcohol (67-63-0)		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	400 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	980 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	400 ppm

Morpholine (110-91-8)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	70 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	20 ppm

2-Methoxyethanol (109-86-4)		
USA ACGIH	ACGIH TWA (ppm)	0.1 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	80 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	25 ppm

Benzene (71-43-2)		
USA ACGIH	ACGIH TWA (ppm)	0.5 ppm
USA ACGIH	ACGIH STEL (ppm)	2.5 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	1 ppm
USA OSHA	OSHA PEL (STEL) (ppm)	5 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	25 ppm

Ethylbenzene (100-41-4)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	435 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm

Cumene (98-82-8)		
USA ACGIH	ACGIH TWA (ppm)	50 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	245 mg/m³

Cumene (98-82-8)		
USA OSHA	OSHA PEL (TWA) (ppm)	50 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 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.
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	:	0.94 - 1.04
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.

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.

10.5. Incompatible materials

Strong oxidizing 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 : Harmful if swallowed. Toxic in contact with skin.

2512	
LD50 oral rat	1556 mg/kg
LD50 dermal rabbit	850 mg/kg
LC50 inhalation rat (mg/l)	> 5 mg/l/4h

Butane (106-97-8)	
LC50 inhalation rat (mg/l)	658 mg/l/4h

Propane (74-98-6)	
LC50 inhalation rat (mg/l)	658 mg/l/4h

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

Acetonitrile (75-05-8)	
LD50 dermal rabbit	395 - 988 mg/kg
LC50 inhalation rat (ppm)	7551 ppm/8h

1-Methyl-2-pyrrolidone (872-50-4)	
LD50 oral rat	3598 mg/kg
LD50 dermal rabbit	8 g/kg
LC50 inhalation rat (mg/l)	> 5.1 mg/l/4h

Isopropyl alcohol (67-63-0)	
LD50 oral rat	4396 mg/kg
LD50 dermal rat	12800 mg/kg
LD50 dermal rabbit	12870 mg/kg
LC50 inhalation rat (ppm)	72.6 mg/L/4h

Morpholine (110-91-8)	
LD50 oral rat	1050 mg/kg
LD50 dermal rabbit	310 mg/kg
LC50 inhalation rat (ppm)	8000 ppm/8h

2-Methoxyethanol (109-86-4)	
LD50 oral rat	2370 mg/kg
LD50 dermal rat	2000 mg/kg
LD50 dermal rabbit	1280 mg/kg

Benzene (71-43-2)	
LD50 oral rat	930 mg/kg
LD50 dermal rabbit	> 9.4 mL/kg
LC50 inhalation rat (ppm)	13050 - 14380 ppm/4h

Ethylbenzene (100-41-4)	
LD50 oral rat	3500 mg/kg

Ethylbenzene (100-41-4)	
LD50 dermal rabbit	15354 mg/kg
LC50 inhalation rat (mg/l)	17.2 mg/l/4h

Cumene (98-82-8)	
LD50 oral rat	1400 mg/kg
LD50 dermal rabbit	> 3160 mg/kg
LC50 inhalation rat (mg/l)	39000 mg/m^3/4 h

Skin corrosion/irritation : Causes severe skin burns.

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 : Based on available data, the classification criteria are not met.

Toluene (108-88-3)	
IARC group	3 - Not classifiable

Isopropyl alcohol (67-63-0)	
IARC group	3 - Not classifiable

Morpholine (110-91-8)	
IARC group	3 - Not classifiable

Benzene (71-43-2)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	1 - Evidence of Carcinogenicity, 2 - Known Human Carcinogens
	In OSHA Specifically Regulated Carcinogen list

Ethylbenzene (100-41-4)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicity Program (NTP) Status	1 - Evidence of Carcinogenicity

Cumene (98-82-8)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicity Program (NTP) Status	1 - Evidence of Carcinogenicity

Reproductive toxicity : May damage fertility or the unborn child.

Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.

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 : Irritating to respiratory system. May cause drowsiness, dizziness and central nervous system depression. Intentional misuse of product by inhalation can result in asphyxiation or death.

Symptoms/injuries after skin contact : Toxic in contact with skin. Causes severe skin burns. Redness. Pain. Blisters.

Symptoms/injuries after eye contact : Causes serious eye damage. May cause serious chemical burns. Redness, pain, tearing.

Symptoms/injuries after ingestion : Harmful if swallowed. 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

2512	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

2512	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

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 : 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, containing substances in Class 6.1, packing group III and in Class 8, packing group II

Department of Transportation Hazard Classes : 2.1 (6.1, 8)

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

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

Toluene (108-88-3)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 %

Acetonitrile (75-05-8)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
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 %

1-Methyl-2-pyrrolidone (872-50-4)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
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 %

Isopropyl alcohol (67-63-0)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
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 %

2-Methoxyethanol (109-86-4)
Listed on SARA Section 313 (Specific toxic chemical listings)

2-Methoxyethanol (109-86-4)	
EPA TSCA Regulatory Flag	S - S - indicates a substance that is identified in a proposed or final Significant New Uses Rule.
SARA Section 313 - Emission Reporting	1.0 %

Benzene (71-43-2)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	0.1 %

Ethylbenzene (100-41-4)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	0.1 %

Cumene (98-82-8)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
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 %

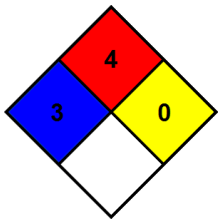
15.2. US State regulations

2512	
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

Indication of changes : None.
Date of issue : 06/11/2014
Other information : None.

NFPA health hazard : 3
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