



SAFETY DATA SHEET

SECTION 1.0	PRODUCT AND COMPANY IDENTIFICATION
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Product Identifier	UNIAROM® Toluene AV
Synonyms	toluol; phenyl methane; methyl benzene; benzene, methyl- See section 16 for complete information.
Recommended use (identified)	This product is intended for use as a refinery feedstock, fuel or for use in engineered processes. Use in other applications may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective equipment.
Recommended restrictions	None known
Manufacturer/Importer/Supplier/Distributor Information	UNISOURCE-ENERGY, LLC 40 Shuman Blvd, Suite 290 Naperville, IL 60563
E-mail	orders@unisource-energy.com
Telephone number	Phone: 630-470-6030 Fax: 630-470-6031
Emergency telephone number	UNISOURCE-ENERGY, LLC 1-800-444-5510 CHEMTREC 1-800-424-9300

SECTION 2.0	HAZARD(S) IDENTIFICATION
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Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2B
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects



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Environmental Hazards	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
	Hazardous to the aquatic environment, acute hazard	Category 2

OSHA defined hazards Not Classified

GHS label elements



Signal word Danger

Hazard statement Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. May cause damage to organs (Central nervous system) through prolonged or repeated exposure. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.

Precautionary statement

Prevention 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 discharges. Do not breathe gas/fumes/vapor/spray. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. When using, do not eat, drink or smoke. Wash thoroughly after handling.

Response In case of fire: Use foam, carbon dioxide, dry powder or water fog for extinction. If swallowed Immediately call a poison center/doctor. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. 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. Take off contaminated clothing and wash before reuse. Get medical advice/attention if you feel unwell. If exposed or concerned: Call a poison center/doctor.



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Storage Store container tightly closed in well-ventilated place. Keep cool. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known

SECTION 3.0	COMPOSITION/INFORMATION ON INGREDIENTS
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Substance/mixture

Chemical name	CAS Number	%
Toluene	108-88-3	>99

SECTION 4.0	FIRST AID MEASURES
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Description of necessary first aid measures

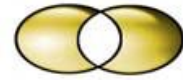
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention
Skin contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Ingestion	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Never give anything by



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	mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately
Most important symptoms, acute and delayed	Irritation. Drowsiness and dizziness. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

SECTION 5.0	FIRE-FIGHTING MEASURES
Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂)
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire-fighting equipment/instructions	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapors may form explosive air mixtures even at room temperature. Prevent buildup of vapors or gases to explosive concentrations. Some of these materials, if



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spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.

Specific methods

Use water spray to cool unopened containers.

SECTION 6.0	ACCIDENTAL RELEASE MEASURES
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Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and cleaning up

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Extinguish all flames in the vicinity. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Small Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Cover with plastic sheet to prevent spreading. Collect spillage. Following product recovery, flush area with water. Prevent product from entering drains. Do not allow material to contaminate ground water system. Clean surface thoroughly to remove residual contamination. Wipe up with absorbent material (e.g. cloth, fleece).

Never return spills in original containers for re-use. Prevent entry into waterways, sewers, basements or confined areas. Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Should not



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be released into the environment. Do not allow material to contaminate ground water system. Prevent product from entering drains.

Environmental precautions

If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 1-800-424-8802. For highway or railways spills, contact Chemtrec at 1-800-424-9300.

SECTION 7.0

HANDLING AND STORAGE

Precautions for safe handling

Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Wear personal protective equipment. Do not breathe gas/fumes/vapor/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.



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Conditions for safe storage, including any incompatibilities

Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

SECTION 8.0	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Occupational exposure limits

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Toluene (CAS 108-88-3)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Components

Components	Type	Value
Toluene (CAS 108-88-3)	STEL	560 mg/m ³
		150 ppm
	TWA	375 mg/m ³
		100p ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Toluene (CAS 1-8-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

* - For sampling details, please see the source document.



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Exposure guidelines

US - California OELs: Skin designation

Toluene (CAS 108-88-3) Can be absorbed through the skin

US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3) Skin designation applies

Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

Individual Protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin protection

Hand protection

Avoid exposure - obtain special instructions before use. Wear protective gloves. Protective gloves.

Other

Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.

Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.

Thermal hazards

Not available

General hygiene considerations

Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.



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SECTION 9.0	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance	Colorless liquid
Physical state	Liquid
Form	Liquid
Color	Colorless
Odor	Sweet, pungent
Odor threshold	Not available
pH	Not available
Melting point/freezing point	42 °F (5.56 °C)
Initial boiling point and boiling range	230.8 °F (110.44 °C)
Flash point	40.7 °F (4.8 °C) Closed Cup
Evaporation rate	2 (n-Butyl Acetate = 1)
Flammability (solid, gas)	Not available
Lower and upper explosive (flammable) limits	
Flammability limit – lower (%)	1.2 %
Flammability limit – upper (%)	7.1 %
Explosive limit - lower (%)	Not available
Explosive limit - upper (%)	Not available
Vapor pressure	Not available
Vapor density	3.14
Relative density	Not available
Solubility	
Solubility (water)	Very slightly soluble
Partition coefficient n-octanol/water	Not available
Auto-ignition temperature	996.5 °F (535.83 °C)
Decomposition temperature	Not available
Viscosity	Not available



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Other Information

Molecular formula	C7-H8
Molecular weight	92.14 g/mol.
Percent volatile	100 %

SECTION 10.0	STABILITY AND REACTIVITY
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Reactivity	Not available
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Incompatible materials	Strong oxidizing agents. Reducing agents. Acids. Alkalis.
Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11.0	TOXICOLOGICAL INFORMATION
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Information on likely routes of exposure

Ingestion	Harmful if swallowed. May be fatal if swallowed and enters airways.
Inhalation	May cause drowsiness or dizziness. May cause damage to organs (Central nervous system) through prolonged or repeated exposure.
Skin contact	Causes skin irritation
Eye contact	Causes eye irritation
Symptoms related to the physical, chemical and toxicological characteristics	Irritation. Drowsiness and dizziness. May cause damage to organs (Central nervous system) through prolonged or repeated exposure.



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Information on toxicological effects

Acute toxicity Harmful if swallowed - may enter lungs if swallowed or vomited.

Components	Species	Test Results
Toluene (CAS 108-88-3)		
Acute		
Dermal LC50	Rabbit	14.1 ml/kg
Inhalation LC50	Rat	8000 mg/l, 4 hours
Oral LD50	Rat	2.6 g/kg

Skin Corrosion/irritation Causes skin irritation

Serious eye/eye irritation damage Causes eye irritation

Respiratory or skin sensitization

Respiratory sensitization Not assigned

Skin sensitization Not assigned

Germ cell mutagenicity Not assigned

Carcinogenicity This material is not classified as a carcinogen by IARC, ACGIH, NTP or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Toluene (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2) Cancer

Reproductive toxicity May damage fertility or the unborn child.
Avoid contact during pregnancy/while nursing. Toluene: May adversely affect the developing fetus.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic Effects Toluene has been reported to decrease immunological responses and cause recordable hearing loss in laboratory animals. Contains organic solvents which in case of



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overexposure may depress the central nervous system causing dizziness and intoxication.

Further information

Abusive inhalation of toluene ("glue sniffing") has been reported to be associated with birth defects in the offspring of abusers.

SECTION 12.0	ECOLOGICAL INFORMATION
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Ecotoxicity

Components		Species	Test Results
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Pink salmon (<i>Oncorhynchus gorboscha</i>)	6.86 - 8.48 mg/l, 96 hours

Persistence and degradability No data available

Bioaccumulative potential No data available

Partition coefficient n-octanol / water (log Kow) 2.73

Mobility in soil Not available

Other adverse effects None known

SECTION 13.0	DISPOSAL CONSIDERATIONS
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Disposal instructions

Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.



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Local disposal regulations	Dispose of in accordance with local regulations
Hazardous disposal code	D001: Waste Flammable material with a flash point <140 °F U220: Waste Toluene
US RCRA Hazardous Waste U List: Reference	
Benzene (CAS 71-43-2)	U019
Toluene (CAS 108-88-3)	U220
Waste from residues / unused products	Dispose in accordance with all applicable regulations
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

SECTION 14.0

TRANSPORT INFORMATION

DOT

UN Number	UN1294
UN proper shipping name	Toluene
Transportation hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Special precautions for user	Not available
Special provisions	IB2, T4, TP1
Packaging exceptions	150
Packing non bulk	202
Packaging bulk	242

IATA

UN Number	UN1294
UN proper shipping name	Toluene
Transportation hazard class(es)	
Class	3



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Subsidiary risk -
Packing group II
Environmental hazards No
ERG Code 3L
Special precautions for user Not available

IMDG

UN Number UN1294
UN proper shipping name Toluene
Transportation hazard class(es)
Class 3
Subsidiary risk -
Packing group II
Environmental hazards
Marine pollutant No
EMS F-E, S-D
Special precautions for user Not available

Transport in bulk according to Annex II of MARPOL, 73/78 and the IBC code

This product is a liquid and when transported in bulk is covered under MARPOL 73/78 Annex II. This product is listed in the IBC Code.
 Ship type: 3
 Pollution category: Y

SECTION 15.0

REGULATORY INFORMATION

US Federal Regulations

This product is hazardous according to OSHA 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated



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US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2) Cancer
 Central nervous system
 Blood
 Aspiration
 Skin
 Eye
 Respiratory tract irritation
 Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

Toluene (CAS 108-88-3) Listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard – Yes
 Pressure Hazard – No
 Reactivity - No

SARA 302 Extremely hazardous substance

Not listed

SARA 302 Extremely hazardous substance

No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Toluene	108-88-3	>99

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Toluene (CAS 108-88-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not Regulated

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)

Hazardous substance
 Priority pollutant
 Toxic Pollutant



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Safe Drinking Water Act(SDWA)

0 mg/l

1 mg/l

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Toluene (CAS 108-88-3) 6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Toluene (CAS 108-88-3) 35 % weight/volume

DEA Exempt Chemical Mixtures Code Number

Toluene (CAS 108-88-3) 594

US State Regulations

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

US. Massachusetts RTK - Substance List

Benzene (CAS 71-43-2)

Toluene (CAS 108-88-3)

US. New Jersey Worker and Community Right-to-Know Act

Benzene (CAS 71-43-2)

Toluene (CAS 108-88-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Benzene (CAS 71-43-2)

Toluene (CAS 108-88-3)

US. Rhode Island RTK

Toluene (CAS 108-88-3)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Benzene (CAS 71-43-2)

Toluene (CAS 108-88-3)



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International Inventories

<u>Country(s) or region</u>	<u>Inventory Name</u>	<u>On inventory (yes/no)*</u>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

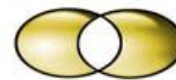
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16.0	OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION
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NFPA Ratings	Blue	Health	3
	Red	Flammability	3
	Yellow	Instability	0
	White	Special Hazard	

Abbreviations

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = European Road Transport; AAICS = Australia Inventory of Chemical Substances; ATE = Acute Toxicity Estimation; AU = Australia; BCF = Bioconcentration Factor; BOD = Biochemical Oxygen Demand; C – Celsius, CA = Canada, CAS = Chemical Abstracts Service; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; COC = Cleveland Open Cup; CN = China; CPR = Controlled Products Regulations; CWA = Clean Water Act; DEA – Drug Enforcement Administration; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List (Canada); ECC = European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances;



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ELINCS = European List of Notified Chemical Substances; ENCS = Japan Existing and New Chemical Substances; EPA = Environmental Protection Agency; EU = European Union; F = Fahrenheit; GHS = Globally Harmonized System of Classification and Labelling of Chemicals; HAPs = Hazardous Air Pollutants; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; IBC = Intermediate Bulk Container; ICAO = International Civil Aviation Organization; IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to Life and Health; IMDG = International Maritime Dangerous Goods; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; JP – Japan; , Kow = Octanol/water partition; LEL = Lower Explosive Limit; LOLI = List of Lists™ - ChemADVISOR's Regulatory Database; ; MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution; MAK = Maximum Concentration Value in the Workplace; MEL = Maximum Exposure Limits; NDSL = Non-Domestic Substances List (Canada); NE = Not Established; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; NZ – New Zealand; OSHA = Occupational Safety and Health Administration; PAH = Polycyclic Aromatic Hydrocarbon; PEL = Permissible Exposure Limit (OSHA); PH= Philippines; PICCS = Philippines Inventory of Chemicals and Chemical Substances; RCRA = Resource Conservation and Recovery; RID = European Rail Transport; RETCS = Registry of Toxic Effects of Chemical Substances®; RTK = Right To Know; SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); SCBA = Self-Contained Breathing Apparatus; SDWA = Safe Drinking Water Act; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value (ACGIH); TSCA = Toxic Substances Control Act Section 8(b) Inventory; TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; UN = United Nations; US = United States; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer

The information presented herein has been compiled from sources considered to be dependable and is accurate as of the date of preparation of this Safety Data Sheet. However, Seller does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license. All materials may present unknown hazards and should be used with caution. In addition, no responsibility can be assumed by the Seller for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the material. Seller assumes no responsibility for injury to Buyer or to third persons or any damage to any property. Buyer assumes all such risks.