



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY\*

**Product name:** AUTOMATE™ BRONZE 1 XS LIQUID DYE

**Issue Date:** 05/08/2015

**Print Date:** 05/11/2015

THE DOW CHEMICAL COMPANY\* encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## 1. IDENTIFICATION

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**Product name:** AUTOMATE™ BRONZE 1 XS LIQUID DYE

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Colorant for petroleum products

### COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY\*  
Agent for Rohm and Haas Chemicals LLC  
100 INDEPENDENCE MALL WEST  
PHILADELPHIA PA 19106-2399  
UNITED STATES

**Customer Information Number:**

215-592-3000  
SDSQuestion@dow.com

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 1 800 424 9300

**Local Emergency Contact:** 800-424-9300

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## 2. HAZARDS IDENTIFICATION

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### Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Flammable liquids - Category 3

Skin irritation - Category 2

Eye irritation - Category 2A

Carcinogenicity - Category 2

Reproductive toxicity - Category 2

Specific target organ toxicity - single exposure - Category 3

Specific target organ toxicity - repeated exposure - Category 2

Specific target organ toxicity - repeated exposure - Category 2 - Oral

Aspiration hazard - Category 1

**Label elements**

**Hazard pictograms**



Signal word: **DANGER!**

### Hazards

Flammable liquid and vapour.

May be fatal if swallowed and enters airways.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

Suspected of causing cancer.

Suspected of damaging fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure.

May cause damage to organs (female reproductive organs) through prolonged or repeated exposure if swallowed.

### Precautionary statements

#### 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 discharge.

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### Response

IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/ attention.

Do NOT induce vomiting.

If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

#### Storage

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.  
Store locked up.

**Disposal**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

no data available

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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**Chemical nature:** Solution of organic compounds

This product is a mixture.

Component	CASRN	Concentration
Xylene	1330-20-7	>= 42.0 - <= 45.0 %
2-Naphthalenol,1-((4-(phenylazo)phenyl)azo)- ,ar-heptyl ar',ar' Methyl derivatives	92257-31-3	>= 27.0 - <= 30.0 %
C.I. Solvent Yellow 175	See below*	>= 18.0 - <= 21.0 %
Ethylbenzene	100-41-4	>= 8.0 - <= 10.0 %

*Note*

C.I. Solvent Yellow CAS Numbers: 29190-28-1, 65087-00-5, 68310-04-3

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**4. FIRST AID MEASURES**

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**Description of first aid measures**

**Inhalation:** Move to fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult, give oxygen. Get prompt medical attention.

**Skin contact:** Wash affected skin areas thoroughly with soap and water. Remove and wash contaminated clothing before re-use. See a physician. Do not take clothing home to be laundered.

**Eye contact:** IMMEDIATELY flush eyes with a large amount of water for at least 15 minutes. Get prompt medical attention.

**Ingestion:** Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. IMMEDIATELY see a physician. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. Careful gastric lavage may be indicated.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** Exposure to xylene can affect the CNS, pulmonary, cardiovascular, and gastrointestinal systems. Liver enzymes, EKG, serum electrolytes, and a chest X-ray should be done in cases of massive exposure.

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## 5. FIREFIGHTING MEASURES

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**Suitable extinguishing media:** Use the following extinguishing media when fighting fires involving this material: polar solvent (alcohol) foam Carbon dioxide (CO<sub>2</sub>) Dry chemical Water spray

**Unsuitable extinguishing media:** no data available

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** no data available

**Unusual Fire and Explosion Hazards:** Vapors can travel to a source of ignition and flash back. Heated material can form flammable or explosive vapors with air. Closed containers may rupture via pressure build-up when exposed to fire or extreme heat. Combustion generates toxic fumes of the following: Carbon oxides Nitrogen oxides (NO<sub>x</sub>)

**Advice for firefighters**

**Fire Fighting Procedures:** Move containers promptly out of fire zone. If removal is impossible, cool containers with water spray. Remain upwind. Avoid breathing smoke. Contain run-off.

**Special protective equipment for firefighters:** Wear self-contained breathing apparatus and protective suit.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Evacuate personnel to safe areas. Eliminate all ignition sources including those beyond the immediate spill area. Ventilate the area. Avoid breathing vapor. Floor may be slippery; use care to avoid falling. Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** Handle and open container with care. The pressure in sealed containers can increase under the influence of heat.

**Conditions for safe storage:** Avoid temperature extremes during storage; ambient temperature preferred. Store away from excessive heat (e.g. steampipes, radiators), from sources of ignition and

from reactive materials. Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Store in a cool, dry, well ventilated place. Ground all metal containers during storage and handling. Keep container closed when not in use. Store out of direct sunlight in a cool place. Avoid all ignition sources.

**Other data:** Vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required. Ground all containers when transferring material. Wash after handling and shower at end of work period. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all MSDS and label warnings even after container is emptied. Residual vapors in empty containers may explode on ignition. DO NOT cut, drill, grind or weld on or near container. Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations. Dispose empty container in a sanitary landfill or by incineration as allowed by state and local authorities.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Xylene	ACGIH	TWA	BEI
	ACGIH	STEL	BEI
	OSHA Z-1	TWA	435 mg/m3 100 ppm
	ACGIH	TWA	100 ppm
	ACGIH	STEL	150 ppm
2-Naphthalenol,1-((4-(phenylazo)phenyl)azo)-,ar-heptyl ar',ar' Methyl derivatives	Rohm and Haas	TWA	0.14 mg/m3 0.008 ppm
	Rohm and Haas	TWA	Absorbed via skin
	Rohm and Haas	STEL	0.42 mg/m3 0.02 ppm
	Rohm and Haas	STEL	Absorbed via skin
	Rohm and Haas	TWA	25 ppm
Ethylbenzene	Rohm and Haas	STEL	75 ppm
	ACGIH	TWA	20 ppm
	ACGIH	TWA	BEI
	OSHA Z-1	TWA	435 mg/m3 100 ppm

### Exposure controls

**Engineering controls:** Use explosion-proof local exhaust ventilation with a minimum capture velocity of 100 ft/min (0.5 m/sec) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

**Protective measures:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### Individual protection measures

**Eye/face protection:** Use chemical splash goggles (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

#### Skin protection

**Hand protection:** Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation.

(Gloves of other chemically resistant materials may not provide adequate protection): VITON Synthetic Rubber (registered Trademark of Dupont Dow Elastomers) Silver Shield (Trademark of Siebe North, Inc.) Polyvinyl alcohol Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

**Other protection:** Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

**Respiratory protection:** A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Up to 1000 ppm organic vapor: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full facepiece, airline respirator in the pressure demand mode. Above 1000 ppm organic vapor or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-facepiece, airline respirator in the pressure demand mode with emergency escape provision. Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	
Physical state	liquid
Color	dark red
Odor	Aromatic odor
Odor Threshold	no data available
pH	Not Applicable
Melting point/range	-35.00 °C ( -31.00 °F) Xylene
Freezing point	no data available
Boiling point (760 mmHg)	137.00 - 144.00 °C ( 278.60 - 291.20 °F) Xylene
Flash point	28 °C ( 82 °F) SETAFLASH CLOSED CUP
Evaporation Rate (Butyl Acetate = 1)	<1.00 Xylene
Flammability (solid, gas)	Not Applicable
Lower explosion limit	1.00 % vol Xylene
Upper explosion limit	7.00 % vol Xylene
Vapor Pressure	5.0000000 - 6.6000000 mmHg at 20.00 °C (68.00 °F) Xylene
Relative Vapor Density (air = 1)	3.6000 Xylene
Relative Density (water = 1)	0.9600
Water solubility	insoluble
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	466.00 - 530.00 °C (870.80 - 986.00 °F) Xylene
Decomposition temperature	no data available
Dynamic Viscosity	20.000 - 100.000 mPa.s
Kinematic Viscosity	no data available

<b>Explosive properties</b>	no data available
<b>Oxidizing properties</b>	no data available
<b>Molecular weight</b>	no data available
<b>Percent volatility</b>	52.00 - 54.00 % approximately

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** no data available

**Chemical stability:** no data available

**Possibility of hazardous reactions:** This material is considered stable. However, avoid contact with ignition sources (e.g. sparks, open flame, heated surfaces).  
Product will not undergo polymerization.

**Conditions to avoid:** no data available

**Incompatible materials:** Avoid contact with acids, alkalies and strong oxidizing agents.

**Hazardous decomposition products:** There are no known hazardous decomposition products for this material.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

Product test data not available.

#### Acute dermal toxicity

Product test data not available.

#### Acute inhalation toxicity

Product test data not available.

### Skin corrosion/irritation

Product test data not available.

### Serious eye damage/eye irritation

Product test data not available.

### Sensitization

Product test data not available.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Product test data not available.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Product test data not available.

**Carcinogenicity**

This product contains ethylbenzene. A study conducted by the National Toxicology Program states that lifetime inhalation exposure of rats and mice to high concentrations of ethylbenzene (750 ppm) resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. Incidences of testicular adenoma were increased along with increased incidences of thyroid effects in rats at 750 ppm; pituitary effects were observed in female mice at 250 ppm. These effects were not observed in animals exposed to lower concentrations of ethylbenzene (75 ppm). The study does not address the relevance of these results to humans. Metabolic studies on some Azo-dyes have detected reduction of azo bonds to aromatic amines. It is prudent to assume that the product could metabolize to o-aminoazotoluene or o-toluidine, which have been identified as animal carcinogens.

**Teratogenicity**

Product test data not available.

**Reproductive toxicity**

Product test data not available.

**Mutagenicity**

Product test data not available.

**Aspiration Hazard**

Product test data not available.

**Additional information**

No toxicity data are available for this material.

The information shown in SECTION 3, Hazards Identification, is based on to present in this material.

**COMPONENTS INFLUENCING TOXICOLOGY:****Xylene****Acute oral toxicity**

LD50, Rat, 4,300 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, > 2,000 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, vapour, 27.5 mg/l

**Skin corrosion/irritation**

Prolonged contact may cause skin irritation with local redness.

Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

Vapor may cause skin irritation.

May cause drying and flaking of the skin.



**Serious eye damage/eye irritation**

May cause slight eye irritation.

May cause slight temporary corneal injury.

Vapor may cause eye irritation experienced as mild discomfort and redness.

**Sensitization**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

May cause respiratory irritation.

Route of Exposure: Inhalation

Target Organs: Respiratory system

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

In animals, effects have been reported on the following organs:

Liver

kidney

Blood

Xylene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations; such effects have not been reported in humans.

**Teratogenicity**

Exaggerated doses of xylene given orally to pregnant mice resulted in an increase in cleft palate, a common developmental abnormality in mice. In animal inhalation studies, xylene caused toxicity to the fetus but did not cause birth defects. Available data are inadequate for evaluation of maternal toxicity.

**Reproductive toxicity**

In animal studies, did not interfere with reproduction.

**Mutagenicity**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Aspiration Hazard**

May be fatal if swallowed and enters airways.

**2-Naphthalenol,1-((4-(phenylazo)phenyl)azo)-,ar-heptyl ar',ar' Methyl derivatives****Acute oral toxicity**

LD50, Rat, > 5,000 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, > 5,000 mg/kg

**Acute inhalation toxicity**

The LC50 has not been determined.

**Skin corrosion/irritation**

Brief contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**

Essentially nonirritating to eyes.  
Corneal injury is unlikely.

**Sensitization**

For skin sensitization:  
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

In animals, effects have been reported on the following organs:  
Ovaries.  
Blood.  
Liver.

**Teratogenicity**

Did not cause birth defects in laboratory animals.

**Reproductive toxicity**

A reproductive screening study in rats with solvent-stripped C.I. Solvent Red 164 produced adverse effects on reproduction [ovarian atrophy, reduced litter size and reduced pup weight with no apparent abnormal morphology of the surviving pups] at 20 and 80 mg/kg/day. The relevance of these findings for humans is uncertain, but may be predictive of the potential to cause harm.

**Mutagenicity**

In vitro genetic toxicity studies were positive.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

**C.I. Solvent Yellow 175**

**Acute oral toxicity**

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

LD50, Rat, > 5,000 mg/kg

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

The LC50 has not been determined.

**Skin corrosion/irritation**

Brief contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**

May cause slight eye irritation.

**Sensitization**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

No relevant data found.

**Teratogenicity**

No relevant data found.

**Reproductive toxicity**

No relevant data found.

**Mutagenicity**

In vitro genetic toxicity studies were negative.

In vivo tests did not show mutagenic effects.

**Ethylbenzene****Acute oral toxicity**

LD50, Rat, 3,500 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, 15,500 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, vapour, 17.2 mg/l/4000 ppm

**Skin corrosion/irritation**

Brief contact may cause moderate skin irritation with local redness.

Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

May cause drying and flaking of the skin.

**Serious eye damage/eye irritation**

May cause moderate eye irritation.

Vapor may cause lacrimation (tears).

**Sensitization**

Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

In animals, effects have been reported on the following organs:

May cause hearing loss based on animal data.

Kidney.

Liver.

Lung.

Although one early inhalation study on ethylbenzene reported an adverse effect on the testes, recent, more comprehensive studies have not shown this effect.

**Teratogenicity**

Has caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in lab animals at doses nontoxic to the mother.

**Reproductive toxicity**

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

**Mutagenicity**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Aspiration Hazard**

Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia. May be fatal if swallowed and enters airways.

**Carcinogenicity****Component**

Ethylbenzene

**List**

IARC

ACGIH

**Classification**

Group 2B: Possibly carcinogenic to humans

A3: Confirmed animal carcinogen with unknown relevance to humans.

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**12. ECOLOGICAL INFORMATION**

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*Ecotoxicological information appears in this section when such data is available.*

**General Information**

There is no data available for this product.

**Toxicity****Xylene****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 2.6 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

IC50, Daphnia magna (Water flea), 24 Hour, 1 - 4.7 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (algae), Static, 73 Hour, Growth rate, 4.36 mg/l, OECD Test Guideline 201 or Equivalent

NOEC, Pseudokirchneriella subcapitata (green algae), 73 Hour, Growth rate, 0.44 mg/l, OECD Test Guideline 201 or Equivalent

**Chronic toxicity to fish**

NOEC, Oncorhynchus mykiss (rainbow trout), flow-through, 56 d, mortality, > 1.3 mg/l

**2-Naphthalenol,1-((4-(phenylazo)phenyl)azo)-,ar-heptyl ar',ar' Methyl derivatives****Acute toxicity to fish**

Toxicity to aquatic species occurs at concentrations above material's water solubility.

**C.I. Solvent Yellow 175****Acute toxicity to fish**

No relevant data found.

**Ethylbenzene****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 4.2 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), Static, 1 d, 2.2 mg/l

**Acute toxicity to algae/aquatic plants**

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth inhibition (cell density reduction), 3.6 - 4.6 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, Bacteria, 16 Hour, > 12 mg/l

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), 2 d, survival, 0.047 mg/cm<sup>2</sup>

**Persistence and degradability****Xylene**

**Biodegradability:** Material is expected to be readily biodegradable.

10-day Window: Pass

**Biodegradation:** > 60 %

**Exposure time:** 10 d

**Method:** OECD Test Guideline 301F or Equivalent

**Theoretical Oxygen Demand:** 3.17 mg/mg

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	37.000 %
10 d	58.000 %
20 d	72.000 %

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)  
**Sensitizer:** OH radicals  
**Atmospheric half-life:** 19.7 Hour  
**Method:** Estimated.

**2-Naphthalenol,1-((4-(phenylazo)phenyl)azo)-,ar-heptyl ar',ar' Methyl derivatives**

**Biodegradability:** Expected to degrade slowly in the environment.

**C.I. Solvent Yellow 175**

**Biodegradability:** No relevant data found.

**Ethylbenzene**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 100 %

**Exposure time:** 6 d

**Method:** OECD Test Guideline 301E or Equivalent

**Theoretical Oxygen Demand:** 3.17 mg/mg Estimated.

**Chemical Oxygen Demand:** 2.62 mg/mg Dichromate

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	31.5 %
10 d	38.5 %
20 d	45.4 %

**Photodegradation**

**Sensitizer:** OH radicals

**Atmospheric half-life:** 55 Hour

**Method:** Estimated.

**Bioaccumulative potential****Xylene**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 3.12 Measured

**Bioconcentration factor (BCF):** 25.9 Rainbow trout (Salmo gairdneri) Measured

**2-Naphthalenol,1-((4-(phenylazo)phenyl)azo)-,ar-heptyl ar',ar' Methyl derivatives**

**Bioaccumulation:** Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

**Partition coefficient: n-octanol/water(log Pow):** 5.14 OECD Test Guideline 107 or Equivalent

**C.I. Solvent Yellow 175**

**Bioaccumulation:** No relevant data found.

**Ethylbenzene**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 3.15 Measured

**Bioconcentration factor (BCF):** 15 Fish. Measured

#### Mobility in soil

##### Xylene

Potential for mobility in soil is medium (Koc between 150 and 500).

**Partition coefficient(Koc):** 443 Estimated.

##### 2-Naphthalenol,1-((4-(phenylazo)phenyl)azo)-,ar-heptyl ar',ar' Methyl derivatives

No relevant data found.

##### C.I. Solvent Yellow 175

No relevant data found.

##### Ethylbenzene

Potential for mobility in soil is low (Koc between 500 and 2000).

**Partition coefficient(Koc):** 518 Estimated.

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## 13. DISPOSAL CONSIDERATIONS

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**Disposal methods:** (See 40 CFR 268)

Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.

**Contaminated packaging:** Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.

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## 14. TRANSPORT INFORMATION

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#### DOT

<b>Proper shipping name</b>	Flammable liquids, n.o.s.(Ethylbenzene, Xylene)
<b>UN number</b>	UN 1993
<b>Class</b>	3
<b>Packing group</b>	III
<b>Reportable Quantity</b>	Xylene, Ethylbenzene

#### Classification for SEA transport (IMO-IMDG):

<b>Proper shipping name</b>	FLAMMABLE LIQUID, N.O.S.(Ethylbenzene, Xylene)
<b>UN number</b>	UN 1993
<b>Class</b>	3
<b>Packing group</b>	III
<b>Marine pollutant</b>	No
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

#### Classification for AIR transport (IATA/ICAO):

Proper shipping name	Flammable liquid, n.o.s.(Ethylbenzene, Xylene)
UN number	UN 1993
Class	3
Packing group	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## 15. REGULATORY INFORMATION

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### OSHA Hazard Communication Standard

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Acute Health Hazard  
Chronic Health Hazard  
Fire Hazard

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

Components	CASRN
Xylene	1330-20-7
Ethylbenzene	100-41-4

### Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

Components	CASRN	RQ
Xylene	1330-20-7	100 lbs RQ
Ethylbenzene	100-41-4	1000 lbs RQ

### Pennsylvania

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

### California (Proposition 65)

This product contains trace levels of a component or components known to the state of California to cause birth defects or other reproductive harm:

Components	CASRN
Toluene	108-88-3

### California (Proposition 65)



This product contains trace levels of a component or components known to the state of California to cause cancer and birthdefects or other reproductive harm:

Components	CASRN
Benzene	71-43-2

**California (Proposition 65)**

This product contains a component or components known to the state of California to cause cancer:

Components	CASRN
Ethylbenzene	100-41-4

**United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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**16. OTHER INFORMATION**

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**Hazard Rating System****HMIS**

Health	Flammability	Physical Hazard
2*	3	0

\* = Chronic Effects (See Hazards Identification)

**Revision**

Identification Number: 101112721 / 1001 / Issue Date: 05/08/2015 / Version: 4.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

Absorbed via skin	Absorbed via skin
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
BEI	Biological Exposure Indices
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
Rohm and Haas	Rohm and Haas OEL's
STEL	Short term exposure limit
TWA	Time weighted average

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY\* urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to

change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.