

Oil Red B4 Liquid

Material Safety Data Sheet

1. Product and company identification

Common name : Oil Red B4 Liquid
Supplier : Innospec Fuel Specialties LLC
 North American Headquarters
 8375 South Willow Street
 Littleton
 Colorado 80124
 USA
Information contact : 1-800-441-9547 / 1-303-792-5554
In case of emergency : **1-800-424-9300 (Chemtrec)**

2. Hazards identification

Physical state : Liquid.
OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview : Warning!
 CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
 CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
 BLOOD, KIDNEYS, LIVER, GASTROINTESTINAL TRACT, RESPIRATORY TRACT,
 SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
 FLAMMABLE LIQUID AND VAPOR.
 VAPOR MAY CAUSE FLASH FIRE.
 MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.
 CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING
 ORGANS: LUNGS, NERVOUS SYSTEM, REPRODUCTIVE SYSTEM.
 POSSIBLE CANCER HAZARD
 CONTAINS MATERIAL WHICH CAN CAUSE CANCER

Do not ingest. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure.

Routes of entry : Dermal contact.
Potential acute health effects
Eyes : Irritating to eyes.
Skin : Harmful in contact with skin. Irritating to skin.
Inhalation : Irritating to respiratory system.
Ingestion : Harmful if swallowed.
Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to the substance can produce target organs damage.

See toxicological information (section 11)

3 . Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
xylene	1330-20-7	14.99 - 30
ethylbenzene	100-41-4	4.99 - 9.99
2-naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-, ar-heptyl ar',ar''-me derivs. (C.I. Solvent Red 164) TSCA Accession# 35371	71819-51-7	65

4 . First aid measures

- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
- Skin contact** : Flush contaminated skin with plenty of water. Continue to rinse for at least 10 minutes. Get medical attention. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Inhalation** : Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

5 . Fire-fighting measures

- Flammability of the product** : Flammable.
- Products of combustion** : These products are carbon oxides (CO, CO₂).
- Extinguishing media**
- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Flammable liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilled material.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion-proof means to transfer material to a sealable, appropriate container for disposal. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7 . Handling and storage

- Handling** : Do not ingest. Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling.
- Storage** : Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

8 . Exposure controls/personal protection

Product name

Exposure limits

xylene

ACGIH TLV (United States, 1/2006). Notes: 1996 Adoption Substances for which there is a Biological Exposure Index or Indices Refers to Appendix A -- Carcinogens.

STEL: 651 mg/m³ 15 minute/minutes.

STEL: 150 ppm 15 minute/minutes.

TWA: 434 mg/m³ 8 hour/hours.

TWA: 100 ppm 8 hour/hours.

OSHA PEL (United States, 8/1997).

TWA: 435 mg/m³ 8 hour/hours.

TWA: 100 ppm 8 hour/hours.

OSHA PEL 1989 (United States, 3/1989).

STEL: 655 mg/m³ 15 minute/minutes.

STEL: 150 ppm 15 minute/minutes.

TWA: 435 mg/m³ 8 hour/hours.

TWA: 100 ppm 8 hour/hours.

ethylbenzene

ACGIH TLV (United States, 1/2006). Notes: Substances for which there is a Biological Exposure Index or Indices 2002 Adoption.

STEL: 125 ppm 15 minute/minutes.

TWA: 100 ppm 8 hour/hours.

NIOSH REL (United States, 12/2001).

STEL: 545 mg/m³ 15 minute/minutes.

STEL: 125 ppm 15 minute/minutes.

TWA: 435 mg/m³ 10 hour/hours.

TWA: 100 ppm 10 hour/hours.

OSHA PEL (United States, 8/1997).

TWA: 435 mg/m³ 8 hour/hours.

TWA: 100 ppm 8 hour/hours.

OSHA PEL 1989 (United States, 3/1989).

STEL: 545 mg/m³ 15 minute/minutes.

STEL: 125 ppm 15 minute/minutes.

TWA: 435 mg/m³ 8 hour/hours.

TWA: 100 ppm 8 hour/hours.

Consult local authorities for acceptable exposure limits.

- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Personal protection

Eyes

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory

- : 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.

8 . Exposure controls/personal protection

- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9 . Physical and chemical properties

- Physical state** : Liquid.
- Flash point** : Closed cup: 30°C (86°F).
- Auto-ignition temperature** : The lowest known value is 431.85 to 459.85°C (809.3 to 859.7°F) (ethylbenzene).
- Flammable limits** : The greatest known range is Lower: 1% Upper: 7% (xylene)
- Color** : Red. (Dark.)
- Boiling/condensation point** : The lowest known value is 136.05°C (276.9°F) (ethylbenzene). Weighted average: 138.23°C (280.8°F)
- Melting/freezing point** : May start to solidify at -26.15°C (-15.1°F) based on data for: xylene. Weighted average: -41.3°C (-42.3°F)
- Critical temperature** : The lowest known value is 344°C (651.2°F) (ethylbenzene).
- Specific gravity** : 1 (Water = 1) (ASTM D 4052)
- Vapor pressure** : The highest known value is 0.7 to 0.9 kPa (5 to 6.6 mm Hg) (at 20°C) (xylene).
- Vapor density** : The highest known value is 3.7 (Air = 1) (xylene). Weighted average: 3.7 (Air = 1)
- Evaporation rate** : The highest known value is 0.84 (ethylbenzene) Weighted average: 0.79 compared with Butyl acetate.
- Dispersibility properties** : Not dispersible in cold water, hot water.
- Solubility** : Insoluble in cold water, hot water.

10 . Stability and reactivity

- Stability and reactivity** : The product is stable.
- Incompatibility with various substances** : Reactive or incompatible with the following materials: oxidizing materials.

11 . Toxicological information

Toxicity data

<u>Product/ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
xylene	LD50	4300 mg/kg	Oral	Rat
	LD50	2119 mg/kg	Oral	Mouse
	LD50	4300 mg/kg	Oral	Mammal
	LD50	4320 mg/kg	Dermal	Rabbit
	LDLo	50 mg/kg	Oral	human
	LC50	6700 ppm (4 hour/hours)	Inhalation	Rat
ethylbenzene	LD50	3500 mg/kg	Oral	Rat

- Chronic effects on humans** : **CARCINOGENIC EFFECTS:** Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [xylene]. Classified A3 (Proven for animals.) by ACGIH, 2B (Possible for humans.) by IARC [ethylbenzene]. Contains material which causes damage to the following organs: blood, kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea. Contains material which may cause damage to the following organs: lungs, the nervous system, the reproductive system.

- Other toxic effects on humans** : Hazardous in case of skin contact (irritant).

Specific effects

11 . Toxicological information

- Carcinogenic effects** : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.
- Mutagenic effects** : No known significant effects or critical hazards.
- Teratogenicity / Reproductive toxicity** : No known significant effects or critical hazards.
- Sensitization**
- Ingestion** : No known significant effects or critical hazards.
- Inhalation** : Irritating to respiratory system.
- Eyes** : Irritating to eyes.
- Skin** : Irritating to skin.

12 . Ecological information

Ecotoxicity data

<u>Product/ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
xylene	Oncorhynchus mykiss (LC50)	96 hour/hours	3.3 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	8.2 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	8.6 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	12 mg/l
	Lepomis macrochirus (LC50)	96 hour/hours	13.3 mg/l
	Pimephales promelas (LC50)	96 hour/hours	13.4 mg/l
ethylbenzene	Daphnia magna (EC50)	48 hour/hours	2.93 mg/l
	Daphnia magna (EC50)	48 hour/hours	2.97 mg/l
	Selenastrum capricornutum (EC50)	48 hour/hours	7.2 mg/l
	Oncorhynchus mykiss (LC50)	96 hour/hours	4.2 mg/l
	Pimephales promelas (LC50)	96 hour/hours	9.09 mg/l
	Poecilia reticulata (LC50)	96 hour/hours	9.6 mg/l

- Environmental precautions** : No known significant effects or critical hazards.
- Products of degradation** : These products are carbon oxides (CO, CO2) and water.
- Toxicity of the products of biodegradation** : The products of degradation are less toxic than the product itself.

13 . Disposal considerations

- Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.





Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

14 . Transport information

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	UN1307	Xylenes solution	3	III		<p>Limited quantity Yes.</p> <p>Packaging instruction Passenger aircraft Quantity limitation: 60 L Cargo aircraft Quantity limitation: 220 L</p> <p>Special provisions B1, IB3, T2, TP1</p>
TDG Classification	UN1307	XYLENES solution	3	III		<p>Explosive Limit and Limited Quantity Index 5</p> <p>Passenger Carrying Road or Rail Index 60</p>
IMDG Class	UN1307	XYLENES solution	3	III		<p>Emergency schedules (EmS) F-E, S-D</p>
IATA-DGR Class	UN1307	Xylenes solution	3	III		<p>Passenger and Cargo Aircraft Quantity limitation: 60 L Packaging instructions: 309 Cargo Aircraft Only Quantity limitation: 220 L Packaging instructions: 310 Limited Quantities - Passenger Aircraft Quantity limitation: 10 L Packaging instructions: Y309</p>

PG* : Packing group

Reportable quantity

: CERCLA: Hazardous substances.: xylene: 100 lbs. (45.36 kg); ethylbenzene: 1000 lbs. (453.6 kg); o-toluidine: 100 lbs. (45.36 kg); aniline: 5000 lbs. (2268 kg);

Flash point

: Closed cup: 30°C (86°F).

Subsidiary class

: -

15 . Regulatory information

United States

- HCS Classification** : Flammable liquid
Irritating material
Carcinogen
Target organ effects
- U.S. Federal regulations** : TSCA 8(b) inventory: 2-naphthalenol, 1-[[4-(phenylazo)phenyl]azo]-, ar-heptyl ar',ar"-me derivs.
(C.I. Solvent Red 164) TSCA Accession# 35371; xylene; ethylbenzene; o-toluidine; aniline
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: xylene; ethylbenzene
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: xylene:
Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard;
ethylbenzene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: ethylbenzene
Clean Water Act (CWA) 311: xylene; ethylbenzene; aniline
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
Not applicable

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	xylene	1330-20-7	14.99 - 30
	ethylbenzene	100-41-4	4.99 - 9.99
Supplier notification	xylene	1330-20-7	14.99 - 30
	ethylbenzene	100-41-4	4.99 - 9.99
State regulations	WARNING: This product contains a chemical known to the State of California to cause cancer.		

<u>Ingredient name</u>	<u>Cancer</u>	<u>Reproductive</u>	<u>No significant risk level</u>	<u>Maximum acceptable dosage level</u>
ethylbenzene	Yes.	No.	No.	No.
o-toluidine	Yes.	No.	Yes.	No.
aniline	Yes.	No.	Yes.	No.

Canada

- WHMIS (Canada)** : Class B-2: Flammable liquid
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

EU regulations

- Hazard symbol/symbols** : 

- Risk phrases** : R10- Flammable.
R20/21- Harmful by inhalation and in contact with skin.
R38- Irritating to skin.

- Safety phrases** : S36/37- Wear suitable protective clothing and gloves.

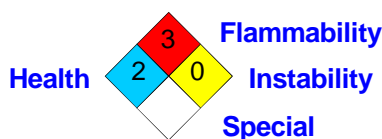
16 . Other information

Label requirements : CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
BLOOD, KIDNEYS, LIVER, GASTROINTESTINAL TRACT, RESPIRATORY TRACT,
SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
FLAMMABLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED.
CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING
ORGANS: LUNGS, NERVOUS SYSTEM, REPRODUCTIVE SYSTEM.
POSSIBLE CANCER HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE CANCER

**Hazardous Material
Information System (U.S.A.)** :

Health	*	2
Fire hazard		3
Reactivity		0

**National Fire Protection
Association (U.S.A.)** :



Date of issue : February 27, 2008

Date of previous issue : No previous validation

Version : 1.02

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.