

MATERIAL SAFETY DATA SHEET

TOLUENE

1 IDENTIFICATION OF THE PRODUCT AND THE COMPANY

1.1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION:

Chemical characterization:

CAS No. Description: 108-88-3 Toluene
Identification number(s)
EINECS Number: 203-625-9
Index Number: 601-021-00-3

1.2 IDENTIFICATION OF THE COMPANY:

RAR Resin & Chemical Industries JLT
11th Floor, Jumeirah Lake Towers, P.O. Box: 47381, Dubai UAE
Tel: +971 4 4356516 / +971 4 4356517 Email: info@rarresin.com
Fax: +971 4 4356518 Website: www.rarresin.com

2 HAZARDS IDENTIFICATION



Repr. Cat. 3
Xn Harmful
F Highly flammable

Information concerning particular hazards for human and environment:

R 11 Highly flammable.
R 38 Irritating to skin.
R 48/20 Harmful danger of serious damage to health by prolonged exposure through inhalation.
R 63 Possible risk of harm to the unborn child.
R 65 Harmful: may cause lung damage if swallowed.
R 67 Vapours may cause drowsiness and dizziness.

3 FIRST AID MEASURES

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

DISCLAIMER

This information contained in the data sheet is to the best of our knowledge correct and up to date. Under well-defined conditions. Its accuracy or suitability under the actual conditions of any independent use is not guaranteed and must be determined by the user. All advice given about this product is given in good faith. Since as we have no control over conditions of substrate, manufacturer and seller cannot accept any liability in connection with the use of the product relative to coverage, performance, injury, or damage, unless we specify in writing to do so. The information in this data sheet is subject to change without prior notice and it is the user responsibility to ensure it is current. For further information and advice please contact RAR RESIN Technical Service Department.

4 FIRE FIGHTING MEASURES

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

Protective equipment: No special measures required.

5 ACCIDENTAL RELEASE MEASURES

Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection: Do not allow to enter sewers/ surface or ground water.

Measures for cleaning/collecting: Dilute with plenty of water.

Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

6 HANDLING AND STORAGE

Handling:

Information for safe handling: No special requirement

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke. Protect against electrostatic charges.

Storage:

Requirements to be met by storerooms and receptacles: Store in a cool location. Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep container tightly sealed.

Store in cool, dry conditions in well-sealed receptacles.

7 EXPOSURE CONTROLS / PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

PEL (USA)	Short-term value: C 300; 500* ppm Long-term value: 200 ppm *10-min peak per 8-hr shift
REL (USA)	Short-term value: 560 mg/m ³ , 150 ppm
TLV (USA)	75 mg/m ³ , 20 ppm
WEL (Great Britain)	Short-term value: 384 mg/m ³ , 100 ppm Long-term value: 191 mg/m ³ , 50 ppm Sk

Additional information: The lists valid during the making were used as basis.

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin. Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

DISCLAIMER

This information contained in the data sheet is to the best of our knowledge correct and up to date. Under well-defined conditions. Its accuracy or suitability under the actual conditions of any independent use is not guaranteed and must be determined by the user. All advice given about this product is given in good faith. Since as we have no control over conditions of substrate, manufacturer and seller cannot accept any liability in connection with the use of the product relative to coverage, performance, injury, or damage, unless we specify in writing to do so. The information in this data sheet is subject to change without prior notice and it is the user responsibility to ensure it is current. For further information and advice please contact RAR RESIN Technical Service Department.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product / the substance / the preparation. Due to missing tests no recommendation to the glove material can be given for the product / the preparation / the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Tightly sealed goggles

8 PHYSICAL AND CHEMICAL PROPERTIES

General Information:

Form:	Fluid
Colour:	Colourless
Odour:	Aromatic

Change in condition

Melting point / Melting range:	-95°C
Boiling point / Boiling range:	110 - 111°C
Flash point:	4°C
Ignition temperature:	535°C
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

Explosion limits:

Lower:	1.2 Vol %
Upper:	7 Vol %
Vapour pressure at 20°C:	29 hPa
Density at 20°C:	0.87 g/cm ³
Solubility in / Miscibility with:	0.5 g/l
water at 20°C	
Viscosity:	
Dynamic at 20°C:	0.6 mPas

DISCLAIMER

This information contained in the data sheet is to the best of our knowledge correct and up to date. Under well-defined conditions. Its accuracy or suitability under the actual conditions of any independent use is not guaranteed and must be determined by the user. All advice given about this product is given in good faith. Since as we have no control over conditions of substrate, manufacturer and seller cannot accept any liability in connection with the use of the product relative to coverage, performance, injury, or damage, unless we specify in writing to do so. The information in this data sheet is subject to change without prior notice and it is the user responsibility to ensure it is current. For further information and advice please contact RAR RESIN Technical Service Department.

9 STABILITY AND REACTIBILITY

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Dangerous reactions No dangerous reactions known.
Dangerous decomposition products: No dangerous decomposition products known.

10 TOXICOLOGICAL INFORMATION

Acute toxicity:

LD/LC50 values relevant for classification:

Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rabbit)
Inhalative LC50/4 h		5320 mg/l (mouse)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes. on the eye: No irritating effect.
Sensitization: No sensitizing effects known.

11 ECOLOGICAL INFORMATION

General notes:

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

12 DISPOSAL CONSIDERATIONS

Product:

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

13 TRANSPORT INFORMATION

Land transport ADR/RID (cross-border)



ADR / RID class:	3 Flammable liquids
Danger code (Kemler)	33
UN-Number	1294
Packaging group	II
Hazard label	3
Description of goods	1294 TOLUENE

DISCLAIMER

This information contained in the data sheet is to the best of our knowledge correct and up to date. Under well-defined conditions. Its accuracy or suitability under the actual conditions of any independent use is not guaranteed and must be determined by the user. All advice given about this product is given in good faith. Since as we have no control over conditions of substrate, manufacturer and seller cannot accept any liability in connection with the use of the product relative to coverage, performance, injury, or damage, unless we specify in writing to do so. The information in this data sheet is subject to change without prior notice and it is the user responsibility to ensure it is current. For further information and advice please contact RAR RESIN Technical Service Department.

Maritime transport IMDG:



IMDG Class: 3
UN Number: 1294
Label: 3
Packaging group: II
EMS Number: F-E, S-D
Marine Pollutant: No
Proper shipping name: TOLUENE

Air transport ICAO-TI and IATA-DGR:



ICAO / IATA Class: 3
UN / ID Number: 1294
Label: 3
Packaging group: II
Proper shipping name: TOLUENE

14 REGULATORY INFORMATION

Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code letter and hazard designation of product:



*Repr. Cat. 3
Xn Harmful
F Highly flammable*

Risk phrases:

- 11 Highly flammable.
- 38 Irritating to skin.
- 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- 63 Possible risk of harm to the unborn child.
- 65 Harmful: may cause lung damage if swallowed.
- 67 Vapours may cause drowsiness and dizziness.

Safety phrases:

- 2 Keep out of the reach of children.
- 36/37 Wear suitable protective clothing and gloves.
- 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

15 OTHER INFORMATION

This information is based on our present present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.