

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
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	0.02 mg/l	Toluene	Blood	*
XYLENE (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

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

Exposure guidelines**US - California OELs: Skin designation**

TOLUENE (CAS 108-88-3)	Can be absorbed through the skin.
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US - Minnesota Haz Subs: Skin designation applies

TOLUENE (CAS 108-88-3)	Skin designation applies.
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Appropriate engineering controls

Provide eyewash station and safety shower. Use adequate ventilation to control airborne concentrations below the exposure limits/guidelines. If user operations generate a vapor, dust and/or mist, use process enclosure, appropriate local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
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Skin protection

Hand protection	Suitable chemical protective gloves should be worn when the potential exists for skin exposure. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Butyl rubber gloves are recommended.
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Other

	Wear appropriate chemical resistant clothing if applicable.
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Respiratory protection

	If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4.
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Thermal hazards

	Wear appropriate thermal protective clothing, when necessary.
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General hygiene considerations

	Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
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9. Physical and chemical properties**Appearance**

Physical state	Liquid.
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Form	Liquid.
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Color	Various.
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Odor	Not established.
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Odor threshold	Not available.
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pH	Not available.
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Melting point/freezing point	Not available.
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Initial boiling point and boiling range	163 - 174 °F (72.78 - 78.89 °C)
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Flash point	26.0 - 36.0 °F (-3.3 - 2.2 °C) Pensky-Martens Closed Cup
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Evaporation rate	> 1 (BuAc=1)
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Flammability (solid, gas)	Not applicable.
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Upper/lower flammability or explosive limits

Explosive limit - lower (%)	1 %
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Explosive limit - upper (%)	< 19 %
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Vapor pressure	Not available.
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Vapor density	> 1 (Air=1)
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Relative density	Not available.
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Solubility(ies)

Solubility (water)	0 %
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