

## ZEP FORMULA 166 5 GL

Version 2.0

Revision Date 11/12/2015

Print Date 11/06/2017

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP FORMULA 166 5 GL

Material number : 000000000000142935

**Manufacturer or supplier's details**

Company : Zep Inc.

Address : 1310 Seaboard Industrial Blvd., NW  
Atlanta, GA 30318

Telephone : 404-352-1680

**Emergency telephone numbers****For SDS Information** : Compliance Services 1-877-428-9937**For a Medical Emergency** : 877-541-2016 Toll Free - All Calls Recorded**For a Transportation  
Emergency** : CHEMTREC: 800-424-9300 - All Calls Recorded.  
In the District of Columbia 202-483-7616

## SECTION 2. HAZARDS IDENTIFICATION

**Emergency Overview**

Appearance	liquid
Colour	colourless, clear
Odour	hydrocarbon-like

**GHS Classification**

Flammable liquids : Category 3

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Skin irritation : Category 2

Serious eye damage : Category 1

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

**GHS Label element**

Hazard pictograms :



Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.  
H312 + H332 Harmful in contact with skin or if inhaled  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H351 Suspected of causing cancer.  
H361 Suspected of damaging fertility or the unborn child.

Precautionary statements : **Prevention:**

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P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
 P233 Keep container tightly closed.  
 P240 Ground/bond container and receiving equipment.  
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.  
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
 P264 Wash skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/ eye protection/ face protection.  
 P281 Use personal protective equipment as required.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
 P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
 P362 Take off contaminated clothing and wash before reuse.  
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.  
 P405 Store locked up.

**Disposal:**

Dispose of contents/container in accordance with local regulation.

**Potential Health Effects****Carcinogenicity:**

<b>IARC</b>	Group 2B: Possibly carcinogenic to humans	
	ethylbenzene	100-41-4
<b>ACGIH</b>	Confirmed animal carcinogen with unknown relevance to humans	
	ethylbenzene	100-41-4
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.	
<b>NTP</b>	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.	

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous components**

Chemical Name	CAS-No.	Concentration [%]
xylenes	1330-20-7	>= 50 - < 70
ethylbenzene	100-41-4	>= 10 - < 20
1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters	68515-40-2	>= 1 - < 5
toluene	108-88-3	>= 0.1 - < 1

**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do NOT induce vomiting.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet

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- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon dioxide (CO<sub>2</sub>)  
Carbon monoxide
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.  
For safety reasons in case of fire, cans should be stored separately in closed containments.  
Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
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**SECTION 7. HANDLING AND STORAGE**

- Advice on safe handling : Avoid formation of aerosol.  
Do not breathe vapours/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Take precautionary measures against static discharges.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Open drum carefully as content may be under pressure.  
To avoid spills during handling keep bottle on a metal tray.  
Dispose of rinse water in accordance with local and national regulations.
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- Conditions for safe storage : No smoking.  
 Keep container tightly closed in a dry and well-ventilated place.  
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
 Observe label precautions.  
 Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Keep away from oxidizing agents and strongly acid or alkaline materials.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
xylenes	1330-20-7	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
ethylbenzene	100-41-4	TWA	100 ppm	ACGIH
		STEL	125 ppm	ACGIH
		TWA	100 ppm 435 mg/m <sup>3</sup>	NIOSH REL
		ST	125 ppm 545 mg/m <sup>3</sup>	NIOSH REL
		TWA	100 ppm 435 mg/m <sup>3</sup>	OSHA Z-1
		TWA	100 ppm 435 mg/m <sup>3</sup>	OSHA P0
		STEL	125 ppm 545 mg/m <sup>3</sup>	OSHA P0

## Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
ETHYLBENZENE	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift at end of workweek	700 mg/g	ACGIH BEI
Remarks: Creatinine						
ETHYLBENZENE		Ethylbenzene	In end-exhaled air	Not critical		ACGIH BEI
METHYLBENZENE	108-88-3	Toluene	In blood	Prior to last shift of workweek	0.02 mg/l	ACGIH BEI
METHYLBENZENE		Toluene	Urine	End of shift (As soon as possible)	0.03 mg/l	ACGIH BEI

# SAFETY DATA SHEET



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				after exposure ceases)		
METHYLBENZENE		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g	ACGIH BEI
Remarks: Creatinine						

### Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Hand protection  
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : colourless, clear

Odour : hydrocarbon-like

Odour Threshold : No data available

pH : Not applicable

Boiling point : 138 °C

Flash point : 26.6 °C  
Method: TCC

Evaporation rate : 0.8

Upper explosion limit : 7 %(V)

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Lower explosion limit	: 1 %(V)
Vapour pressure	: 8.1 hPa
Relative vapour density	: 3.7
Density	: 0.897 g/cm <sup>3</sup>
Solubility(ies)	
Water solubility	: slightly soluble
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: not determined
Thermal decomposition	: No data available
Viscosity	
Viscosity, kinematic	: 11 mm <sup>2</sup> /s (20 °C)

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: Stable
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Acids Oxidizing agents
Hazardous decomposition products	: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

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**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity****Product:**

Acute inhalation toxicity	: Acute toxicity estimate : 13.07 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate : 1,618 mg/kg Method: Calculation method

**Skin corrosion/irritation**

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**Product:**

Remarks: Extremely corrosive and destructive to tissue.

**Serious eye damage/eye irritation**

**Product:**

Remarks: May cause irreversible eye damage.

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**xylenes:**

**ethylbenzene:**

**1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters:**

**toluene:**

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

**Further information**

**Product:**

Remarks: Solvents may degrease the skin.

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

**Product:**

Partition coefficient: n- : Remarks: No data available

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octanol/water

**Components:****xylenes :**

Partition coefficient: n-octanol/water	: Pow: 3.12
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**ethylbenzene :**

Partition coefficient: n-octanol/water	: Pow: 3.6
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**toluene :**

Partition coefficient: n-octanol/water	: Pow: 2.73
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**Mobility in soil**

No data available

**Other adverse effects**

No data available

**Product:**

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
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Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
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Additional ecological information	: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life.
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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues	: Dispose of in accordance with local regulations.
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Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.
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**SECTION 14. TRANSPORT INFORMATION**

Transportation Regulation: 49 CFR (USA): UN1993, Flammable liquids, n.o.s., (XYLENE), 3, III
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Transportation Regulation: IMDG (Vessel): UN1993, FLAMMABLE LIQUID, N.O.S., (XYLENE), 3, III
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Transportation Regulation: IATA (Cargo Air):
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UN1993, Flammable liquid, n.o.s., (XYLENE), 3, III

Transportation Regulation: IATA (Passenger Air):  
UN1993, Flammable liquid, n.o.s., (XYLENE), 3, III

Transportation Regulation: TDG (Canada):  
UN1993, FLAMMABLE LIQUID, N.O.S., (XYLENE), 3, III

### SECTION 15. REGULATORY INFORMATION

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
xylenes	1330-20-7	100	147

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard  
Chronic Health Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:  
ethylbenzene 100-41-4 16.147 %

**California Prop 65** WARNING! This product contains a chemical known to the State of California to cause cancer.  
ethylbenzene 100-41-4  
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.  
toluene 108-88-3

#### The components of this product are reported in the following inventories:

**TSCA** On TSCA Inventory  
**DSL** All components of this product are on the Canadian DSL  
**AICS** On the inventory, or in compliance with the inventory  
**NZIoC** Not in compliance with the inventory  
**PICCS** On the inventory, or in compliance with the inventory  
**IECSC** On the inventory, or in compliance with the inventory

#### Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

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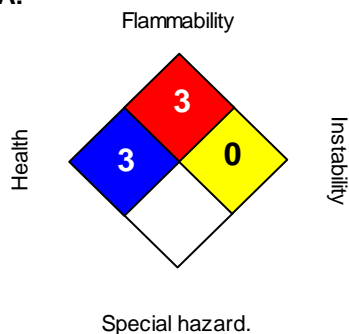
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## SECTION 16. OTHER INFORMATION

## Further information

## NFPA:



## HMIS III:

HEALTH	<b>3*</b>
FLAMMABILITY	<b>3</b>
PHYSICAL HAZARD	<b>0</b>

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

## OSHA GHS Label Information:

Hazard pictograms



Signal word

: **Danger:**

Hazard statements

: Flammable liquid and vapour. Harmful in contact with skin or if inhaled Causes skin irritation. Causes serious eye damage. Suspected of causing cancer. Suspected of damaging fertility or the unborn child.

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. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection. Use personal protective equipment as required.  
**Response:** IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position 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. Immediately call a POISON CENTER or doctor/physician. IF exposed or concerned: Get medical advice/attention. If skin irritation occurs: 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 for extinction.  
**Storage:** Store in a well-ventilated place. Keep cool. Store locked up.  
**Disposal:** Dispose of contents/container in accordance with local regulation.

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to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®, Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®, Rexodan®, Mykal™, and a number of private labeled brands.