

# SAFETY DATA SHEET

## ZEP SUPER ECC CONTACT & CIRCUIT BOARD CLEANER 16N10\_12CT

Version 1.2

Revision Date 10/01/2023

Print Date 04/27/2025

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP SUPER ECC CONTACT & CIRCUIT BOARD  
CLEANER 16N10\_12CT

Material number : 000000000000352401

#### Manufacturer or supplier's details

Company : Zep Inc.

Address : 350 Joe Frank Harris Parkway, SE  
Emerson, GA 30137

Telephone : Compliance Services - 877-428-9937

#### Emergency telephone numbers

**For SDS Information** : Compliance Services - 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

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

### SECTION 2. HAZARDS IDENTIFICATION

#### Emergency Overview

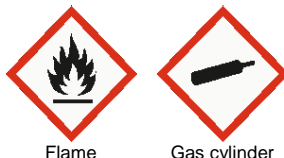
Appearance	Aerosol containing a liquefied gas
Colour	clear
Odour	solvent-like

#### GHS Classification

Flammable aerosols : Category 2  
Gases under pressure : Liquefied gas

#### GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H223 Flammable aerosol.  
H280 Contains gas under pressure; may explode if heated.

Precautionary statements : **Prevention:**  
P210 Keep away from heat, hot surfaces, sparks, open flames  
and other ignition sources. No smoking.  
P211 Do not spray on an open flame or other ignition source.

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P251 Pressurized container: Do not pierce or burn, even after use.

**Storage:**

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

**Disposal:**

P501 Dispose of contents/container in accordance with local regulation.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous components**

Chemical name	CAS-No.	Concentration [%]
norflurane	811-97-2	>= 70 - < 90
trans-dichloroethylene	156-60-5	>= 5 - < 10
ethanol	64-17-5	>= 1 - < 3

The exact percentages of disclosed substances are withheld as trade secrets.

### SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.  
If unconscious, place in recovery position and seek medical advice.
- 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 : Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.  
Rinse with plenty of water.
- If swallowed : Keep respiratory tract clear.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and : Effects may be delayed, symptoms may include minor eye or skin irritation.

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delayed

Overexposure may cause mild eye or skin irritation.

Notes to physician

: Treat symptomatically. Symptoms may be delayed.

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#### SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide (CO2)  
Foam  
Dry chemical  
Water spray jet

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon dioxide (CO2)  
Carbon monoxide  
Smoke  
Fluorine compounds  
Silicon oxides  
Chlorine compounds

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.  
Ensure adequate ventilation.  
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.

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Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Sweep up or vacuum up spillage and collect in suitable container for disposal.

#### SECTION 7. HANDLING AND STORAGE

Advice on safe handling : 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.  
Do not breathe vapours or spray mist.  
Take precautionary measures against static discharges.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.  
No smoking.  
Keep in a dry, cool and well-ventilated place.  
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
norflurane	811-97-2	TWA	1,000 ppm	US WEEL
trans-dichloroethylene	156-60-5	TWA	200 ppm 793 mg/m3	ACGIH
		TWA	200 ppm	ACGIH
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA P0
		STEL	1,000 ppm	ACGIH
		PEL	1,000 ppm	CAL PEL

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			1,900 mg/m3	
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**Engineering measures** : effective ventilation in all processing areas

#### Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

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

Eye protection : Access to clean water to rinse eyes must be available, options include: eye wash stations or showers, or eye wash bottles with pure water.  
Tightly fitting safety goggles

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 : Aerosol containing a liquefied gas

Colour : clear

Odour : solvent-like

Odour Threshold : No data available

pH : Not applicable

Melting point/freezing point : No data available

Boiling point : No data available

Flash point :  
Not applicable

Evaporation rate : n-Butyl Acetate = 1.0

Flammability (solid, gas, liquid) : Flammable aerosol.

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

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Density	: No data available
Solubility(ies)	
Water solubility	: negligible
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: not determined
Thermal decomposition	: No data available
Heat of combustion	: 7.73 kJ/g

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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. Vapours may form explosive mixture with air.
Conditions to avoid	: Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidizing agents Strong bases Alkaline earth metals Aluminium Zinc
Hazardous decomposition products	: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Nitrogen oxides (NOx)

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#### SECTION 11. TOXICOLOGICAL INFORMATION

##### Potential Health Effects

Aggravated Medical Condition	: None known.
Symptoms of Overexposure	: Effects may be delayed, symptoms may include minor eye or skin irritation. Overexposure may cause mild eye or skin irritation. Treat symptomatically. Symptoms may be delayed.

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#### Carcinogenicity:

##### IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

##### ACGIH

Confirmed animal carcinogen with unknown relevance to humans

##### OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

##### NTP

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.

64-17-5

#### Acute toxicity

##### Product:

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 25.23 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

##### Components:

##### **norflurane:**

Acute inhalation toxicity : LC50 Rat: 12,503.751 mg/l  
Exposure time: 4 h

##### **trans-dichloroethylene:**

Acute oral toxicity : LD50 Oral Rat: 1,235 mg/kg

Acute inhalation toxicity : LC50 Rat: 24100 ppm  
Exposure time: 4 h

Acute dermal toxicity : LD50 Dermal Rabbit: > 5,000 mg/kg

##### **ethanol:**

Acute oral toxicity : LD50 Oral Rat: 7,060 mg/kg

Acute inhalation toxicity : LC50 Rat: 124.7 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

#### Skin corrosion/irritation

##### Product:

Remarks: May cause skin irritation and/or dermatitis.

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#### Serious eye damage/eye irritation

**Product:**

Remarks: May irritate eyes.

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

No data available

#### Reproductive toxicity

No data available

#### STOT - single exposure

No data available

#### STOT - repeated exposure

No data available

#### Aspiration toxicity

No data available

#### Further information

**Product:**

Remarks: No data available

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## SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

No data available

#### Persistence and degradability

No data available

#### Bioaccumulative potential

**Product:**

Partition coefficient: n-octanol/water : Remarks: No data available

**Components:**

ethanol :



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Partition coefficient: n-octanol/water

: Remarks: No data available

#### 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

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).

Additional ecological information

: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

## SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues

: Dispose of in accordance with local regulations.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
The product should not be allowed to enter drains, water courses or the soil.

Contaminated packaging

: Empty remaining contents.  
Dispose of as unused product.  
Do not burn, or use a cutting torch on, the empty drum.  
Do not re-use empty containers.

## SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):

UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IMDG (Vessel):

UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Cargo Air):

UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

Transportation Regulation: IATA (Passenger Air):

UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

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Transportation Regulation: TDG (Canada):  
UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, - Limited quantity

The product as delivered to the customer conforms to packaging requirements for shipment by road under US Department of Transportation (DOT) regulations. Additional transportation classifications noted above are for reference only, and not a certification or warranty of the suitability of the packaging for shipment under these alternative transport regulations.

#### SECTION 15. REGULATORY INFORMATION

**TSCA list** : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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

##### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
trans-dichloroethylene	156-60-5	1000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

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

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

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
Gases under pressure

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

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

##### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

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**DSL  
TSCA**

All components of this product are on the Canadian DSL  
On TSCA Inventory

For information on the country notification status for other regions please contact the manufacturer's regulatory group.

#### Inventory Acronym and Validity Area Legend:

TSCA (USA), DSL (Canada), NDSL (Canada)

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA:

<b>HEALTH</b>	<b>0</b>
<b>FLAMMABILITY</b>	<b>3</b>
<b>INSTABILITY</b>	<b>0</b>
<b>SPECIAL HAZARD.</b>	

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

#### HMIS III:

<b>HEALTH</b>	<b>0</b>
<b>FLAMMABILITY</b>	<b>2</b>
<b>PHYSICAL HAZARD</b>	<b>3</b>

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

#### OSHA - GHS Label Information:

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Hazard pictograms



Flame

Gas cylinder

Signal word

: **Warning:**

Hazard statements

: Flammable aerosol. Contains gas under pressure; may explode if heated.

Precautionary statements

:

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source.  
Pressurized container: Do not pierce or burn, even after use.

**Storage:** Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

**Disposal:** Dispose of contents/container in accordance with local regulation.

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