SAFETY DATA SHEET

A07311 ZEP POWER SOLV II 020301 20N20

Version 3.1  Revision Date 09/28/2017  Print Date 04/02/2019

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name: A07311 ZEP POWER SOLV II 020301 20N20
Material number: 000000000000020301
Manufacturer or supplier’s details
Company: Zep Inc.
Address: 350 Joe Frank Harris Parkway, SE
Emerson, GA 30137
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

Recommended use of the chemical and restrictions on use
Recommended use: Degreaser

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Aerosol containing a compressed gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>mild</td>
</tr>
</tbody>
</table>

GHS Classification

Gases under pressure: Compressed gas
Skin irritation: Category 2
Eye irritation: Category 2A
Carcinogenicity: Category 1B
Specific target organ toxicity - single exposure: Category 3 (Central nervous system)

GHS label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
Precautionary statements:

**Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
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/ protective clothing/ eye protection/ face protection.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 Pressurized container: Do not pierce or burn, even after use.

**Response:**
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

**Storage:**
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
P412 Do not expose to temperatures exceeding 50 °C/ 122 °F.

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

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance / Mixture:** Mixture

**Hazardous components**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>trichloroethylene</td>
<td>79-01-6</td>
<td>&gt;= 90 - &lt;= 100</td>
</tr>
<tr>
<td>carbon dioxide</td>
<td>124-38-9</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

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 : Remove person to fresh air. If signs/symptoms continue, get medical attention.

In case of skin contact : If skin irritation persists, call a physician. Wash off immediately with plenty of water for at least 15 minutes. 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 immediately with plenty of water for at least 15 minutes.

If swallowed : DO NOT induce vomiting unless directed to do so by a physician or poison control center. Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : Effects are immediate and delayed. Symptoms may include blistering, irritation, burns, and pain. Chronic effects are delayed and symptoms may not be observed during an exposure. Effects are dependent on exposure (dose, concentration, contact time). Causes serious eye damage. Suspected of causing cancer. Review section 2 of SDS to see all potential hazards.

Notes to physician : Treat symptomatically. Symptoms may be delayed.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Dry chemical
Water spray jet
Alcohol-resistant foam
Carbon dioxide (CO2)

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
Chlorine compounds

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Fire residues and contaminated fire extinguishing water must
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be disposed of in accordance with local regulations. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Prevent fire extinguishing water from contaminating surface water or the ground water system. For safety reasons in case of fire, cans should be stored separately in closed containments.

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.
- Refer to protective measures listed in sections 7 and 8.
- Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Evacuate personnel to safe areas.
- Remove all sources of ignition.

**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:**
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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**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.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Always replace cap after use.
- Dispose of rinse water in accordance with local and national regulations.
- Do not breathe vapours or spray mist.
- Take precautionary measures against static discharges.

**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.
- Observe label precautions.
- Keep in a dry, cool and well-ventilated place.
- Electrical installations / working materials must comply with the technological safety standards.
- No smoking.

**Materials to avoid:**
- Oxidizing agents
### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>trichloroethylene</td>
<td>79-01-6</td>
<td>TWA</td>
<td>10 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>25 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
<td>OSHA Z-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEIL</td>
<td>200 ppm</td>
<td>OSHA Z-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peak</td>
<td>300 ppm</td>
<td>OSHA Z-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>50 ppm</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>200 ppm</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>100 ppm</td>
<td>CAL PEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>300 ppm</td>
<td>CAL PEL</td>
</tr>
<tr>
<td>carbon dioxide</td>
<td>124-38-9</td>
<td>TWA</td>
<td>5,000 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>30,000 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5,000 ppm 9,000 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>30,000 ppm 54,000 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5,000 ppm 9,000 mg/m3</td>
<td>OSHA Z-1</td>
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<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>10,000 ppm 18,000 mg/m3</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>30,000 ppm 54,000 mg/m3</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>5,000 ppm 9,000 mg/m3</td>
<td>CAL PEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>30,000 ppm 54,000 mg/m3</td>
<td>CAL PEL</td>
</tr>
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</table>

#### Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRICHLOROETHENE</td>
<td>79-01-6</td>
<td>Trichloroacetic acid</td>
<td>Urine</td>
<td>End of shift at end of workweek</td>
<td>15 mg/l</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td>TRICHLOROETHENE</td>
<td></td>
<td>Trichloroethanol</td>
<td>In blood</td>
<td>End of shift at end of workweek</td>
<td>0.5 mg/l</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td>TRICHLOROETHENE</td>
<td></td>
<td>Trichloroethylene</td>
<td>In exhaled air</td>
<td>End of shift at</td>
<td></td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>
**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**
- **Material**: Protective gloves
- **Remarks**: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection**: Ensure that eyewash stations and safety showers are close to the workstation location. 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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**: Aerosol containing a compressed gas

**Colour**: colourless

**Odour**: mild

**Odour Threshold**: No data available

**pH**: Not applicable

**Melting point/freezing point**: Not applicable

**Boiling point**: 87.22 °C

**Flash point**: Not applicable

**Evaporation rate**: < 1

**Flammability (solid, gas)**: The product is not flammable.

**Upper explosion limit**: Not applicable

**Lower explosion limit**: Not applicable
Vapour pressure: Not applicable
Relative vapour density: No data available
Density: 1.46 g/cm³
Solubility(ies):
Water solubility: insoluble
Solubility in other solvents: not determined
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: not determined
Thermal decomposition: No data available
Viscosity:
Viscosity, kinematic: No data available
Heat of combustion: 6.98 kJ/g

SECTION 10. STABILITY AND REACTIVITY
Reactivity: Stable
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions:
Vapours may form explosive mixture with air.
No decomposition if stored and applied as directed.
Conditions to avoid:
Heat, flames and sparks.
Extremes of temperature and direct sunlight.
Incompatible materials:
Oxidizing agents
Light and/or alkaline metals
Hazardous decomposition products:
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
Phosgene
Hydrogen chloride gas

SECTION 11. TOXICOLOGICAL INFORMATION
Potential Health Effects
Aggravated Medical Condition: None known.
Symptoms of Overexposure:
Effects are immediate and delayed.
Symptoms may include blistering, irritation, burns, and pain.
Chronic effects are delayed and symptoms may not be
observed during an exposure. Effects are dependent on exposure (dose, concentration, contact time).

Carcinogenicity:
IARC            Group 1: Carcinogenic to humans
trichloroethylene  79-01-6
ACGIH            Suspected human carcinogen
trichloroethylene  79-01-6
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              Reasonably anticipated to be a human carcinogen
trichloroethylene  79-01-6

Acute toxicity
Product:

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

Components:
trichloroethylene:
Acute oral toxicity : LD50 Oral Rat: 4,920 mg/kg

Acute inhalation toxicity : LC50 Mouse: 8450 ppm
Exposure time: 4 h

Acute dermal toxicity : LD50 Dermal Rabbit: > 20,000 mg/kg

Skin corrosion/irritation
Product:
Remarks: May cause skin irritation in susceptible persons.

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

STOT - single exposure
No data available

STOT - repeated exposure
No data available

Aspiration toxicity
No data available

Further information

Product:
Remarks: No data available

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting,. Concentrations substantially above the TLV value may cause narcotic effects,. Solvents may degrease the skin.

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: trichloroethylene:
Partition coefficient: n-octanol/water
log Pow: 2.29

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.
Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

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

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.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA): ORM-D, CONSUMER COMMODITY

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

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: The following substance(s) is/are subject to a Significant New Use Rule:
trichloroethylene 79-01-6

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:
trichloroethylene 79-01-6

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

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>trichloroethylene</td>
<td>79-01-6</td>
<td>100</td>
<td>103</td>
</tr>
</tbody>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Gases under pressure
Skin corrosion or irritation
Serious eye damage or eye irritation
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

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:
trichloroethylene 79-01-6 96.83 %

California Prop. 65

WARNING: This product can expose you to chemicals including trichloroethylene, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

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:

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Special hazard.

HMIS III:

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>3*</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

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

OSHA - GHS Label Information:

Hazard pictograms: ![Pictograms]

Signal word: Danger

Hazard statements: Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. May cause cancer.

Precautionary statements:

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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/ protective clothing/ eye protection/ face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use.

**Response:** IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor 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. IF exposed or concerned: Get medical advice/ attention. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

**Storage:** Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50 °C/ 122 °F.

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

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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.