A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Material number : ECZUOVGR192

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 : CHEMTREC: 800-424-9300 - All Calls Recorded.

Emergency 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 | grey, white |
| Odour | characteristic |

GHS Classification

Gases under pressure : Liquefied gas Skin corrosion : Category 1 Serious eye damage : Category 1

GHS label elements

Hazard pictograms :



Gas cylinder

Signal word : Danger

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

H314 Causes severe skin burns and eye damage.

Precautionary statements : **Prevention:**

P260 Do not breathe dust or mist.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ protective clothing/ eye

protection/ face protection.

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

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

use.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a

POISON CENTER/doctor.

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/doctor.

P363 Wash contaminated clothing before reuse.

Storage:

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

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 [%] |
|---------------------------|-----------|-------------------|
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | >= 10 - < 30 |
| sodium hydroxide | 1310-73-2 | >= 1 - < 5 |
| butane | 106-97-8 | >= 1 - < 5 |
| 2-aminoethanol | 141-43-5 | >= 1 - < 5 |
| propane | 74-98-6 | >= 1 - < 5 |

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

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.

Get medical attention immediately.

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.

Consult a physician after significant exposure.

In case of skin contact Immediate medical treatment is necessary as untreated

wounds from corrosion of the skin heal slowly and with

difficulty.

A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

Wash off immediately with plenty of water for at least 15

minutes.

Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.

In case of eye contact : Small amounts splashed into eyes can cause irreversible

tissue damage and blindness.

Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes.

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.

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

delayed

: Effects are dependent on exposure (dose, concentration,

contact time).

Effects are immediate and delayed.

Symptoms may include blistering, irritation, burns, and pain.

Causes severe skin burns and eye damage.

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 : Water spray jet

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

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

Nitrogen oxides (NOx)

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

A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

be disposed of in accordance with local regulations.

Standard procedure for chemical fires.

Special protective equipment

for firefighters

Wear self-contained breathing apparatus for firefighting if

necessary.

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.

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.

Always replace cap after use.

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun

exposure and temperatures over 50 $^{\circ}$ 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.

Materials to avoid : Do not store near acids.

Oxidizing agents

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---------------------------|-----------|---|--|-----------|
| 2-(2-butoxyethoxy)ethanol | 112-34-5 | TWA (Inhalable fraction and vapor) | 10 ppm | ACGIH |
| sodium hydroxide | 1310-73-2 | С | 2 mg/m3 | ACGIH |
| | | С | 2 mg/m3 | NIOSH REL |
| | | TWA | 2 mg/m3 | OSHA Z-1 |
| | | С | 2 mg/m3 | OSHA P0 |
| | | С | 2 mg/m3 | CAL PEL |
| butane | 106-97-8 | TWA | 800 ppm 1,900 mg/m3 | NIOSH REL |
| | | TWA | 800 ppm 1,900 mg/m3 | OSHA P0 |
| | | PEL | 800 ppm 1,900 mg/m3 | CAL PEL |
| | | STEL | 1,000 ppm | ACGIH |
| 2-aminoethanol | 141-43-5 | TWA | 3 ppm | ACGIH |
| | | STEL | 6 ppm | ACGIH |
| | | TWA | 3 ppm 8 mg/m3 | NIOSH REL |
| | | ST | 6 ppm 15 mg/m3 | NIOSH REL |
| | | TWA | 3 ppm 6 mg/m3 | OSHA Z-1 |
| | | STEL | 6 ppm 15 mg/m3 | OSHA P0 |
| | | TWA | 3 ppm 8 mg/m3 | OSHA P0 |
| | | PEL | 3 ppm 8 mg/m3 | CAL PEL |
| | | STEL | 6 ppm 15 mg/m3 | CAL PEL |
| propane | 74-98-6 | TWA | 1,000 ppm 1,800 mg/m3 | NIOSH REL |
| | | TWA | 1,000 ppm 1,800 mg/m3 | OSHA Z-1 |
| | | TWA | 1,000 ppm 1,800 mg/m3 | OSHA P0 |
| | | PEL | 1,000 ppm 1,800 mg/m3 | CAL PEL |

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.

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

Hand protection

Material : Protective gloves

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

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 : Aerosol containing a liquefied gas

Colour : grey, white
Odour : characteristic
Odour Threshold : No data available

pH : 13.0 - 14.0

Melting point/freezing point : No data available

Boiling point : 100 °C

Flash point

No data available

Evaporation rate : No data available

Flammability (solid, gas,

liquid)

: The product is not flammable.

Upper explosion limit : No data available
Lower explosion limit : No data available
Vapour pressure : not determined
Relative vapour density : No data available

Density : 1.43 g/cm3

Solubility(ies)

Water solubility : soluble

Partition coefficient: n-

octanol/water

: No data available

A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

Auto-ignition temperature : not determined

Thermal decomposition : No data available

Viscosity

Viscosity, kinematic : No data available

Heat of combustion : 7.38 kJ/g

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 : Extremes of temperature and direct sunlight.

Incompatible materials : Acids

This product contains sodium hydroxide or potassium hydroxide that may corrode some soft metals and may react

with tin, zinc, aluminum to form hydrogen gas.

Hazardous decomposition

products

: Carbon oxides

Carbon monoxide, carbon dioxide and unburned

hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Aggravated Medical

: None known.

Condition

Symptoms of Overexposure

: Effects are dependent on exposure (dose, concentration,

contact time).

Effects are immediate and delayed.

Symptoms may include blistering, irritation, burns, and pain.

Causes severe skin burns and eye damage.

Review section 2 of SDS to see all potential hazards. Treat symptomatically. Symptoms may be delayed.

Carcinogenicity:

IARC No component of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential

carcinogen by ACGIH.

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.

Acute toxicity

Product:

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

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 81.72 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute toxicity estimate: 81.72 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg

Method: Calculation method

Components:

sodium hydroxide:

Acute dermal toxicity : Acute toxicity estimate Rabbit: 1,350 mg/kg

2-aminoethanol:

Acute oral toxicity : LD50 Oral Mouse: 700 mg/kg

LD50 Oral Rat: 1,515 mg/kg

Acute inhalation toxicity : LC50 Mouse: > 1.21 mg/l

Skin corrosion/irritation

Product:

Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

sodium hydroxide:

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): 125 mg/l

Exposure time: 96 h Test Method: static test

LC50 (Oncorhynchus tshawytscha (chinook salmon)):

152 mg/l

Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): 40 mg/l

Exposure time: 48 h

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 34 - 47 mg/l

Exposure time: 48 h

EC50 (Crangon crangon (shrimp)): 33 - 100 mg/l

Exposure time: 48 h

A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

Persistence and degradability

No data available

Bioaccumulative potential

Product:

Partition coefficient: n-

: Remarks: No data available

octanol/water Components:

2-(2-butoxyethoxy)ethanol:

Partition coefficient: n-

: Pow: 1

octanol/water

butane:

Partition coefficient: n-

: Pow: 2.89

octanol/water 2-aminoethanol:

Partition coefficient: n-

: log Pow: -1.31

octanol/water

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

: No data available

Components:

sodium hydroxide:

Additional ecological

information

: Harmful to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer.

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.

A07240 ZEP OVEN & GRL ZUOVGR19 20N19 2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):

UN1950, Aerosols, non-flammable, corrosive, 2.2, (8), - Limited quantity

Transportation Regulation: IMDG (Vessel):

UN1950, AEROSOLS, NON-FLAMMABLE, 2.2, (8), - Limited quantity

Transportation Regulation: IATA (Cargo Air):

UN1950, Aerosols, non-flammable, containing substances in Class 8, Packing Group III, 2.2, (8), -

Limited quantity

Transportation Regulation: IATA (Passenger Air):

UN1950, Aerosols, non-flammable, containing substances in Class 8, Packing Group III, 2.2, (8), -

Limited quantity

Transportation Regulation: TDG (Canada):

UN1950, AEROSOLS, NON-FLAMMABLE, CORROSIVE, 2.2, (8), - 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) |
|------------------|-----------|--------------------|-----------------------------|
| sodium hydroxide | 1310-73-2 | 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 : Gases under pressure

Skin corrosion or irritation

Serious eye damage or eye irritation

A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

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:

2-(2-butoxyethoxy)ethanol 112-34-5 14.4442 %

California Prop. 65



WARNING: This product can expose you to chemicals including 2,2'-iminodiethanol, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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

DSL This product contains the following components listed on the Canadian

NDSL. All other components are on the Canadian DSL.

TSCA 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

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

Further information

NFPA:

| HEALTH | 3 |
|-----------------|---|
| FLAMMABILITY | 2 |
| INSTABILITY | 0 |
| SPECIAL HAZARD. | |

0 = not significant, 1 = Slight,

HMIS III:

| HEALTH | 3 |
|-----------------|---|
| FLAMMABILITY | 2 |
| PHYSICAL HAZARD | 1 |

0 = not significant, 1 = Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

OSHA - GHS Label Information:

Hazard pictograms





Gas cylinder

Signal word

Hazard statements

Danger:

Contains gas under pressure; may explode if heated. Causes severe skin burns and

Precautionary statements

Prevention: Do not breathe dust or mist. Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection. Pressurized container: Do not pierce or burn, even after use.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. 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/doctor. Wash contaminated clothing before

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

^{2 =} Moderate, 3 = High

^{4 =} Extreme

SAFETY DATA SHEET A07240 ZEP OVEN & GRL ZUOVGR19 20N19_2CS

Version 2.5 Revision Date 10/01/2023 Print Date 04/28/2025

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

| Version: | 2.5 |
|----------------|------------|
| Revision Date: | 10/01/2023 |
| Print Date: | 04/28/2025 |

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations 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.