

ZEP BLOW OFF 1 DZ

Version 2.0

Revision Date 03/08/2018

Print Date 04/02/2019

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP BLOW OFF 1 DZ

Material number : 00000000000486201

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** : 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**

Recommended use : Forced air duster

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance	Liquefied gas
Colour	No data available
Odour	No data available

GHS Classification

Gases under pressure : Compressed gas

GHS label elements

Hazard pictograms :



Signal word : Warning

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

Precautionary statements : **Storage:**
P410 + P403 Protect from sunlight. Store in a well-ventilated place.**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

ZEP BLOW OFF 1 DZ

Version 2.0

Revision Date 03/08/2018

Print Date 04/02/2019

Hazardous components

Chemical name	CAS-No.	Concentration [%]
norflurane	811-97-2	>= 90 - <= 100

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

SECTION 4. FIRST AID MEASURES

- General advice : Do not leave the victim unattended.
Show this safety data sheet to the doctor in attendance.
Move out of dangerous area.
- If inhaled : Move to fresh air.
If symptoms persist, call a physician.
Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : Take off all contaminated clothing immediately. Flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician.
- In case of eye contact : Protect unharmed eye.
If eye irritation persists, consult a specialist.
Remove contact lenses.
Keep eye wide open while rinsing.
Rinse immediately with plenty of water for at least 15 minutes.
- If swallowed : If symptoms persist, call a physician.
Keep respiratory tract clear.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Immediate effects
Symptoms may include blistering, irritation, burns, and pain.
Rapid evaporation of the liquid may cause frostbite.
- Notes to physician : Treat frost-bitten areas as needed.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Foam
Dry chemical
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : Water spray jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

ZEP BLOW OFF 1 DZ

Version 2.0

Revision Date 03/08/2018

Print Date 04/02/2019

Hazardous combustion products	:	None
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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	:	Keep people away from and upwind of spill/leak. Refer to protective measures listed in sections 7 and 8. Ventilate the area. 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	:	Do not let product enter drains. Do not allow contact with soil, surface or ground water. 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	:	Sweep up or vacuum up spillage and collect in suitable container for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

SECTION 7. HANDLING AND STORAGE

Technical measures	:	THERMAL HAZARD – The liquids from dispensed refrigerant-based propellant cleaners are very cold. Direct contact with liquid can cause frostbite. If there is risk of contact to eye or skin, wear safety glasses with side shields wear or protective clothing / gloves.
Advice on safe handling	:	Do not smoke. Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep away from children. Keep away from fire, sparks and heated surfaces. Always replace cap after use.

ZEP BLOW OFF 1 DZ

Version 2.0

Revision Date 03/08/2018

Print Date 04/02/2019

Do not breathe vapours or spray mist.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Avoid exposure - obtain special instructions before use.

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

Materials to avoid : Strong oxidizing agents

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

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

: Safety glasses with side-shields

Skin and body protection

: Protective suit

Hygiene measures

: When using do not smoke.
When using do not eat or drink.
Wash hands before breaks and at the end of workday.
Regular cleaning of equipment, work area and clothing.

ZEP BLOW OFF 1 DZ

Version 2.0

Revision Date 03/08/2018

Print Date 04/02/2019

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquefied gas
Colour	: No data available
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 75 - 85 hPa
Relative density	: No data available
Density	: 1.206 g/cm ³
Solubility(ies)	
Water solubility	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: not determined
Thermal decomposition	: No data available
Viscosity	
Viscosity, kinematic	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Vapours may form explosive mixture with air. Stable under recommended storage conditions. No hazards to be specially mentioned.
Conditions to avoid	: Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: No hazardous decomposition products are known.

ZEP BLOW OFF 1 DZ

Version 2.0

Revision Date 03/08/2018

Print Date 04/02/2019

SECTION 11. TOXICOLOGICAL INFORMATION**Potential Health Effects**

Aggravated Medical Condition : None known.
Symptoms of Overexposure : Immediate effects
Symptoms may include blistering, irritation, burns, and pain.

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 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 inhalation toxicity : LC50 Cat: 4,413.4453 mg/l
Exposure time: 6 h

LC50 Mouse: 8,025.6401 mg/l
Exposure time: 2 h

LC50 Rat: 5,183.373 mg/l
Exposure time: 6 h

Components:**norflurane:**

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

Skin corrosion/irritation**Product:**

Remarks: Rapid evaporation of the liquid may cause frostbite.

Serious eye damage/eye irritation**Product:**

ZEP BLOW OFF 1 DZ

Version 2.0

Revision Date 03/08/2018

Print Date 04/02/2019

Remarks: Rapid evaporation of the liquid may cause frostbite.

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

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

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection of

ZEP BLOW OFF 1 DZ

Version 2.0

Revision Date 03/08/2018

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Remarks	Stratospheric Ozone - CAA Section 602 Class I Substances 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

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

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

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
UN3159, 1,1,1,2-Tetrafluoroethane, 2.2, - Limited quantity

Transportation Regulation: IMDG (Vessel):
UN3159, 1,1,1,2-TETRAFLUOROETHANE, 2.2, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN3159, 1,1,1,2-Tetrafluoroethane, 2.2, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN3159, 1,1,1,2-Tetrafluoroethane, 2.2, - Limited quantity

Transportation Regulation: TDG (Canada):
UN3159, 1,1,1,2-TETRAFLUOROETHANE, 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.

ZEP BLOW OFF 1 DZ

Version 2.0

Revision Date 03/08/2018

Print Date 04/02/2019

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**

This material does not contain any components with a CERCLA RQ.

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

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:

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

ZEP BLOW OFF 1 DZ

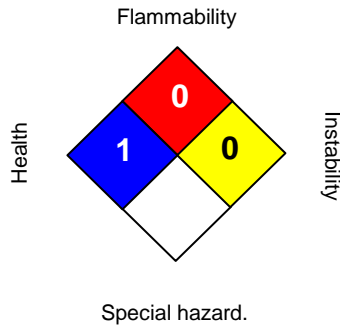
Version 2.0

Revision Date 03/08/2018

Print Date 04/02/2019

Further information

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	2

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

OSHA - GHS Label Information:

Hazard pictograms :



Signal word : **Warning:**
 Hazard statements : Contains gas under pressure; may explode if heated.
 Precautionary statements :

Storage: Protect from sunlight. Store in a well-ventilated place.

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