

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Material number : H81235

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	viscous
Colour	colourless, light yellow
Odour	like soap

GHS Classification

Skin irritation : Category 2

Serious eye damage : Category 1

Carcinogenicity : Category 2

Specific target organ toxicity - repeated exposure (Oral) : Category 2

GHS label elements

Hazard pictograms :



Health hazard

Corrosion

Signal word : Danger

Hazard statements : H315 Causes skin irritation.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
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.
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.
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 [%]
Alcohols, C9-11, ethoxylated	68439-46-3	>= 20 - < 30
Amides, coco, N,N-bis(hydroxyethyl)	68603-42-9	>= 10 - < 20
D-Glucopyranose, oligomers, decyl octyl glycosides	68515-73-1	>= 1 - < 3
2,2'-iminodiethanol	111-42-2	>= 1 - < 3
propane-1,2-diol	57-55-6	>= 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.
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.
Move to fresh air.

In case of skin contact : Wash off with soap and water.

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

	<p>If skin irritation persists, call a physician. Wash off immediately with plenty of water for at least 15 minutes. If on clothes, remove clothes.</p>
In case of eye contact	<p>: Small amounts splashed into eyes can cause irreversible tissue damage and blindness. Rinse immediately with plenty of water 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.</p>
If swallowed	<p>: Clean mouth with water and drink afterwards plenty of water. 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.</p>
Most important symptoms and effects, both acute and delayed	<p>: 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. Symptoms may differ depending on organs and systems affected. These effects generally are reflected in reduced function or change, which may include cramping, swelling, respiratory issues, and general pain. Effects are dependent on exposure (dose, concentration, contact time). Causes skin irritation. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure if swallowed. Suspected of causing cancer. Review section 2 of SDS to see all potential hazards.</p>
Notes to physician	<p>: Treat symptomatically. Symptoms may be delayed.</p>

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	<p>: Dry chemical Water Carbon dioxide (CO2) Foam</p>
Unsuitable extinguishing media	<p>: High volume water jet</p>
Specific hazards during firefighting	<p>: Do not allow run-off from fire fighting to enter drains or water courses.</p>
Hazardous combustion	<p>: Carbon dioxide (CO2)</p>

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

products	Carbon monoxide Nitrogen oxides (NOx) Smoke
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.
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.
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). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	: Do not breathe vapours or spray mist. 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. Container may be opened only under exhaust ventilation hood. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	: Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Materials to avoid	: Oxidizing agents Strong acids

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

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'-iminodiethanol	111-42-2	TWA (Inhalable fraction and vapor)	1 mg/m3	ACGIH
		TWA	3 ppm 15 mg/m3	NIOSH REL
		TWA	3 ppm 15 mg/m3	OSHA P0
		PEL	0.46 ppm 2 mg/m3	CAL PEL
propane-1,2-diol	57-55-6	TWA	10 mg/m3	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

Remarks

: Protective gloves

: 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

: viscous

Colour

: colourless, light yellow

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

Odour	: like soap
Odour Threshold	: No data available
pH	: 8.5 - 9.5
Melting point/freezing point	: No data available
Boiling point	: 104.4 °C
Flash point	: Not applicable
Evaporation rate	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: 80 hPa
Relative vapour density	: No data available
Density	: 1.021 g/cm ³
Solubility(ies)	
Water solubility	: soluble
Solubility in other solvents	: Not applicable
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: not determined
Thermal decomposition	: No data available
Viscosity	
Viscosity, kinematic	: 77.3 mm ² /s (20 °C)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.
Conditions to avoid	: No data available
Incompatible materials	: Oxidizing agents Acids
Hazardous decomposition products	: Carbon oxides Nitrogen oxides (NO _x)

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

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.
Symptoms may differ depending on organs and systems affected. These effects generally are reflected in reduced function or change, which may include cramping, swelling, respiratory issues, and general pain.
Effects are dependent on exposure (dose, concentration, contact time).
Causes skin irritation.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure if swallowed.
Suspected of causing cancer.
Review section 2 of SDS to see all potential hazards.
Treat symptomatically. Symptoms may be delayed.

Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans	
	Amides, coco, N,N-bis(hydroxyethyl)	68603-42-9
	2,2'-iminodiethanol	111-42-2
ACGIH	Confirmed animal carcinogen with unknown relevance to humans	
	2,2'-iminodiethanol	111-42-2
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 : 4,588 mg/kg
Method: Calculation method

Components:

Alcohols, C9-11, ethoxylated:

Acute oral toxicity : LD50 Oral Rat: 1,400 mg/kg

Skin corrosion/irritation

Product:

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

Remarks: Irritating to skin.

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

Components:

Amides, coco, N,N-bis(hydroxyethyl):

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

Product:

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

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

Components:

Amides, coco, N,N-bis(hydroxyethyl) :

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

2,2'-iminodiethanol :

Partition coefficient: n-octanol/water : Pow: 1.43

propane-1,2-diol :

Partition coefficient: n-octanol/water : log Pow: -1.07

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:

Amides, coco, N,N-bis(hydroxyethyl) :

Additional ecological information : No data available

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.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IMDG (Vessel):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IATA (Cargo Air):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IATA (Passenger Air):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: TDG (Canada):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

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)
2,2'-iminodiethanol	111-42-2	100	*

*: 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 : 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.

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

SARA 313

: The following components are subject to reporting levels established by SARA Title III, Section 313:

2,2'-iminodiethanol	111-42-2	1.7979 %
---------------------	----------	----------

California Prop. 65



WARNING: This product can expose you to chemicals including Amides, coco, N,N-bis(hydroxyethyl), 2,2'-iminodiethanol, which is/are known to the State of California to cause cancer, and methanol, which is/are known to the State of California to cause 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:

DSL	This product contains one or several components that are not on the Canadian DSL nor NDSL.
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

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

Further information

NFPA:

HEALTH	3
FLAMMABILITY	1
INSTABILITY	0
SPECIAL HAZARD.	

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

HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL HAZARD	0

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

OSHA - GHS Label Information:

Hazard pictograms



Health hazard

Corrosion

Signal word

Hazard statements

Precautionary statements

: **Danger:**
Causes skin irritation. Causes serious eye damage. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure if swallowed.

: **Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.

: **Response:** IF ON SKIN: Wash with plenty of soap and water. 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. IF exposed or concerned: Get medical advice/ attention. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.

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

SAFETY DATA SHEET

ZEP AVIATION NAV-II EXTERIOR AIRFCRAFT CLEANER 5GL

Version 2.1

Revision Date 10/01/2023

Print Date 04/28/2025

Version:	2.1
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.