

Safety Data Sheet

BEROL 226 SA

Version 1.4

Revision Date: 08/23/2024

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : BEROL 226 SA

Supplier or Repackaging Details

Company : Univar Solutions USA

Address : 3075 Highland Pkwy Suite 200
Downers Grove, IL 60515
United States of America (USA)

Manufactured By : Akzo Nobel Surface Chemistry LLC

Emergency telephone number:
Transport North America: CHEMTREC (1-800-424-9300)
CHEMTREC INTERNATIONAL Tel # 703-527-3887

Additional Information: : Responsible Party: Product Compliance Department
E-mail: SDSNA@univarsolutions.com
SDS Requests: 1-855-429-2661
Website: www.univarsolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Serious eye damage : Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H318 Causes serious eye damage.

Precautionary statements : **Prevention:**
P280 Wear eye protection/ face protection.
Response:
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.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical name	Weight percent
Quaternary Amine	Proprietary Quaternary Amine	30 - 50
Not Assigned	Proprietary Ethoxylated Alcohol	30 - 50

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56-81-5	Glycerine	10 - 20
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Any Concentration shown as a range is due to batch variation.

Special Notes: : *HMIRA Registration Number 9992/ NoF Date 05/02/2016

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 : Take off contaminated clothing and shoes immediately.
If on skin, rinse well with water.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
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.
Take victim immediately to hospital.
- If swallowed : 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.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use an extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon oxides
Smoke
toxic fumes
Irritating fumes or substances may form.
- 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 : Wear self-contained breathing apparatus for firefighting if nec-

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for firefighters

essary.

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 protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
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.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
56-81-5	Glycerine	TWA (mist, respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (mist, total dust)	15 mg/m ³	OSHA Z-1
		TWA (Mist - total dust)	10 mg/m ³	OSHA P0
		TWA (Mist - respirable)	5 mg/m ³	OSHA P0

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		fraction)		
		PEL (Mist - total fraction)	10 mg/m3	CAL PEL
		PEL (Mist - respirable fraction)	5 mg/m3	CAL PEL

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Remarks : 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 : liquid

Colour : clear, tan

Odour : No data available

Odour Threshold : No data available

pH : 5 - 8 @ 1 % @ 20 - 25 °C (68 - 77 °F)

Freezing Point (Melting point/range) : < -10 °C (< 14 °F)

Boiling Point (Boiling point/boiling range) : > 100 °C (> 212 °F)

Flash point : 100 - 199 °C (212 - 390 °F)
Method: Pensky-Martens closed cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

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Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: 1.027 @ 25 °C (77 °F) Reference substance: (water = 1)
Density	: 1.027 g/cm ³ @ 25 °C (77 °F)
Solubility(ies)	
Water solubility	: completely soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: > 150 °C
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: 80 mPa.s @ 20 °C (68 °F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: Halogenated compounds hydrogen chloride

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	: Acute toxicity estimate: 4,340 mg/kg
Acute dermal toxicity	: Acute toxicity estimate: 4,000 mg/kg

Components:

Quaternary Amine:

Acute oral toxicity	: LD50 (Rat): 2,170 mg/kg Assessment: The substance or mixture has no acute oral toxicity
	: LD50 (Rat): 2,213 mg/kg Assessment: The substance or mixture has no acute oral toxicity

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icity

Acute inhalation toxicity : LC0 (Rat): 12.05 mg/l
Exposure time: 7 h
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

LD50 (Rabbit): > 1,526 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

56-81-5:

Acute oral toxicity : LD50 (Rat, female): 27,200 mg/kg

Acute dermal toxicity : LD50 (Guinea pig, male and female): 45 mL/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation**Components:****Quaternary Amine:**

Species: Rabbit

Result: No skin irritation

56-81-5:

Species: Rabbit

Exposure time: 24 h

Result: Not irritating to skin

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

Result: Risk of serious damage to eyes.

Components:**Quaternary Amine:**

Species: Rabbit

Result: No eye irritation

Not Assigned:

Result: Irritation to eyes, reversing within 7 days

56-81-5:

Species: Rabbit

Result: Not irritating to eyes

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Respiratory or skin sensitisation

Components:

Quaternary Amine:

Result: No data available

Result: Does not cause respiratory sensitisation.

56-81-5:

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

Quaternary Amine:

Germ cell mutagenicity - Assessment : mutagenicity classification is not possible

56-81-5:

Genotoxicity in vitro : Test Type: DNA damage and/or repair
Species: rat hepatocytes
Result: negative

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Product:

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

Components:

Quaternary Amine:

Carcinogenicity - Assessment : Suspected human carcinogen

56-81-5:

Species: Rat, (male and female)
Application Route: Oral
Exposure time: 1 - 2 yrs
Dose: 0, 5, 10, 20 %diet
NOAEL: 20 % diet

Result: did not display carcinogenic properties

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

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.

OSHA

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

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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.

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.

Reproductive toxicity

Components:

56-81-5:

Effects on fertility

: Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Dose: 0, 2000 mg/kg bw
General Toxicity - Parent: NOAEL: 2,000 mg/kg body weight
General Toxicity F1: NOAEL: 2,000 mg/kg body weight
Fertility: NOAEL: 2,000 mg/kg body weight
Result: No reproductive effects.

Effects on foetal development

: Species: Rat
Application Route: Oral
Dose: 0, 13.1, 60.8, 282, 1310 milligram per kilogram
Duration of Single Treatment: 10 d
General Toxicity Maternal: NOAEL: 1,310 mg/kg body weight
Teratogenicity: NOAEL: 1,310 mg/kg body weight
Developmental Toxicity: NOAEL: 1,310 mg/kg body weight
Result: No teratogenic effects

Teratogenicity - Assessment

: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

Components:

Quaternary Amine:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

Quaternary Amine:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Components:

Quaternary Amine:

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No aspiration toxicity classification

Further information**Product:**

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Acute aquatic toxicity- Assessment : Toxic to aquatic life.

Chronic aquatic toxicity- Assessment : Toxic to aquatic life with long lasting effects.

Components:**Quaternary Amine:**Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 4,128 mg/l
Exposure time: 96 hToxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 240.2 mg/l
Exposure time: 48 hNOEC (Daphnia magna (Water flea)): 0.51 mg/l
Exposure time: 21 dToxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 10 mg/l
Exposure time: 72 h

Acute aquatic toxicity- Assessment : This product has no known ecotoxicological effects.

Chronic aquatic toxicity- Assessment : Harmful to aquatic life with long lasting effects.

Not Assigned:

Acute aquatic toxicity- Assessment : Toxic to aquatic life.

Persistence and degradability**Components:****Quaternary Amine:**

Biodegradability : Remarks: No data available

56-81-5:**Bioaccumulative potential****Components:****Quaternary Amine:**

Partition coefficient: n- : log Pow: -1.5

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octanol/water

Mobility in soil

No data available

Other adverse effects**Product:**

Ozone-Depletion Potential : 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.
Toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Univar Solutions ChemCare: 1-800-637-7922

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**DOT (Department of Transportation):**

UN3082, Environmentally hazardous substances, liquid, n.o.s., (QUATERNARY ALKYLAMINE ETHOXYLATE), 9, III, Marine Pollutant (QUATERNARY ALKYLAMINE ETHOXYLATE)

IATA (International Air Transport Association):

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (QUATERNARY ALKYLAMINE ETHOXYLATE), 9, III

IMDG (International Maritime Dangerous Goods):

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (QUATERNARY ALKYLAMINE ETHOXYLATE), 9, III, Marine Pollutant (QUATERNARY ALKYLAMINE ETHOXYLATE), Flash Point: 100 - 199 °C (212 - 390 °F)

Special Notes: : This material is shipped as a Class 9, Packing Group III (Marine Pollutant) when each package meets or exceeds 119 gallons (450 liters), otherwise it may be shipped as not regu-

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lated. (49 CFR §171.4(c)(1))

SECTION 15. REGULATORY INFORMATION

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 : Acute Health Hazard

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.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

56-81-5 Glycerine

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

56-81-5	Glycerine	10 - 20 %
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Pennsylvania Right To Know

Quaternary Amine	Proprietary Quaternary Amine	30 - 50 %
Not Assigned	Proprietary Ethoxylated Alcohol	30 - 50 %
56-81-5	Glycerine	10 - 20 %

New Jersey Right To Know

Quaternary Amine	Proprietary Quaternary Amine	30 - 50 %
	Proprietary Ethoxylated Alcohol	30 - 50 %
56-81-5	Glycerine	10 - 20 %

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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

AICS : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

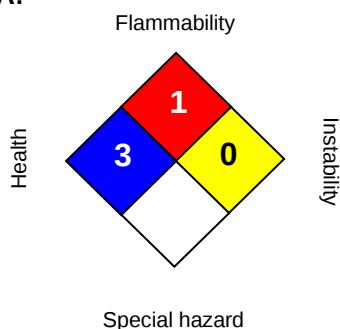
KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	0

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

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Univar Solutions Product Compliance Department (1-855-429-2661) SDSNA@univarsolutions.com.

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Legacy SDS: : 100000022338

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Material number:

16120215, 168053, 87581, 16103334, 16103333

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		