

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard

Dissolvine GL-47-S

Version	Revision Date:	US / Z8	Date of last issue: 12/13/2023
1.14	01/17/2024		Date of first issue: 04/24/2015

SECTION 1. IDENTIFICATION

Product name : Dissolvine GL-47-S

Other means of identification : Glutamic acid, N,N-diacetic acid, tetrasodium salt, 47% aqueous solution

Manufacturer or supplier's details

Company name of supplier : Nouryon Functional Chemicals LLC

Address : 100 Matsonford Road, Building 1, Suite 500
Radnor PA 19087
US

Telephone : (800) 906-7979

Telefax : (312) 544-7167

E-mail address : sds_chelates@nouryon.com

Emergency telephone : 24 hours:+31 57 06 79211, CHEMTREC-USA:1-800-424-9300, CHEMTREC outside USA +1-703-527-3887, CANUTEC-CANADA:1-613-996-6666, 化学事故应急咨询电话 : 国家化学事故应急响应中心 +86 532 8388 9090<(>,<)>.: CHEMTREC (24-hr): (800) 424-9300 (Toll-free in the U.S., Canada and the U.S. Virgin Islands) CHEMTREC (24-hr): (703) 527-3887 (For calls originating elsewhere / collect calls are accepted)

Emergency telephone : 24 hours:+31 57 06 79211, CHEMTREC-USA:1-800-424-9300, CHEMTREC outside USA +1-703-527-3887, CANUTEC-CANADA:1-613-996-6666, 化学事故应急咨询电话: 国家化学事故应急响应中心 +86 532 8388 9090<(>,<)>

Recommended use of the chemical and restrictions on use

Recommended use : Chelating agent

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to Metals : Category 1

GHS label elements

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Hazard pictograms :



Signal Word : Warning

Hazard Statements : H290 May be corrosive to metals.

Precautionary Statements :

Prevention:
P234 Keep only in original container.

Response:
P390 Absorb spillage to prevent material damage.

Storage:
P406 Store in corrosive resistant container with a resistant inner liner.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.

If inhaled : If breathed in, move person into fresh air.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Rinse immediately with plenty of water.

In case of eye contact : Rinse with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

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If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards during fire fighting	:	Water spray may be ineffective unless used by experienced firefighters. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Fire will produce smoke containing hazardous combustion products (see section 10).
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 fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Only qualified personnel equipped with suitable protective equipment may intervene. Prevent unauthorized persons entering the zone.
Environmental precautions	:	Try to prevent the material from entering drains or water courses.
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.

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SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Store in closed dark containers made of anti-corrosive material.
Keep only in original container.
- Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Effective exhaust ventilation system

Personal protective equipment

- Respiratory protection : In the case of vapor or aerosol formation use a respirator with an approved filter.
- Eye protection : Tightly fitting safety goggles
- Skin and body protection : Protective suit
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Clear liquid
- Color : light yellow
- Odor : Slightly ammonia like

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Odor Threshold	:	not determined
pH	:	11 - 12 Concentration: 1 % In water
Melting point	:	Not applicable
Boiling point/boiling range	:	221 - 230 °F / 105 - 110 °C
Flash point	:	does not flash
Evaporation rate	:	similar to water
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Vapor pressure	:	similar to water
Relative vapor density	:	similar to water
Relative density	:	1.15 - 1.45
Bulk density	:	Not applicable
Solubility(ies)	:	
Water solubility	:	completely miscible
Solubility in other solvents	:	Description: Slightly soluble in:, Methanol, Ethanol
Partition coefficient: n-octanol/water	:	log Pow: < 0
Autoignition temperature	:	Not applicable
Decomposition temperature	:	No data available

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Viscosity		
Viscosity, dynamic	:	75 - 275 mPa.s (77 °F / 25 °C)
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Not classified as oxidizing.
Metal corrosion rate	:	Corrosive to metals

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable under normal conditions.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	None known.
Incompatible materials	:	Copper Aluminum Zinc Copper alloys Nickel
Hazardous decomposition products	:	No decomposition if stored and applied as directed.
Hazardous decomposition products	:	Carbon oxides nitrogen oxides (NOx)
Thermal decomposition	:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Product:

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

Based on available data, the classification criteria are not met.

Product:

Result	:	No skin irritation
Remarks	:	Information given is based on tests on the mixture itself.

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:

Result	:	No eye irritation
Remarks	:	Information given is based on tests on the mixture itself.

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.

Respiratory sensitization

Not classified due to lack of data.

Germ cell mutagenicity

Not classified due to lack of data.

Carcinogenicity

Not classified due to lack of data.

IARC No ingredient 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.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified due to lack of data.

STOT-single exposure

Not classified due to lack of data.

STOT-repeated exposure

Not classified due to lack of data.

Aspiration toxicity

Not classified due to lack of data.

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Further information

Product:

Remarks : No further data available.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Persistence and degradability

Product:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Mobility in soil

Product:

Mobility : Remarks: Adsorption to the solid soil particles is not expected.

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 : None known.

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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 contents/container in accordance with local regulation. |
| Contaminated packaging | : | Empty remaining contents.
Dispose of as unused product. |

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- | | | |
|---------------------------|---|--|
| UN number | : | UN 3267 |
| Proper shipping name | : | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(Glutamic acid, N,N-diacetic acid, tetrasodium salt, Sodium hydroxide) |
| Class | : | 8 |
| Packing group | : | III |
| Labels | : | 8 |
| Environmentally hazardous | : | no |

IATA-DGR

- | | | |
|--|---|--|
| UN/ID No. | : | UN 3267 |
| Proper shipping name | : | Corrosive liquid, basic, organic, n.o.s.
(Glutamic acid, N,N-diacetic acid, tetrasodium salt, Sodium hydroxide) |
| Class | : | 8 |
| Packing group | : | III |
| Labels | : | Corrosives |
| Packing instruction (cargo aircraft) | : | 856 |
| Packing instruction (passenger aircraft) | : | 852 |

IMDG-Code

- | | | |
|----------------------|---|--|
| UN number | : | UN 3267 |
| Proper shipping name | : | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(Glutamic acid, N,N-diacetic acid, tetrasodium salt, Sodium hydroxide) |
| Class | : | 8 |
| Packing group | : | III |
| Labels | : | 8 |
| EmS Code | : | F-A, S-B |

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Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Reportable Quantity : This product does not contain an environmentally hazardous substance per 49 CFR 172.101, Appendix A.

Special precautions for user

Remarks : DOT 49 CFR Exception 173.154(d): A Class 8 material corrosive to aluminum or steel only is not subject to the Hazardous Materials Regulations (49 CFR Parts 171-180) if: (1) it is transported by highway or rail in a bulk packaging constructed of material that will not react dangerously with or be degraded by the corrosive material; (2) it does not meet the definition of any other hazardous class; and, (3) it does not meet the definition of a hazardous substance, a hazardous waste, or a marine pollutant, as defined in 171.8

The transport classification(s) provided herein are for informational purposes only. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Corrosive to Metals

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 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).

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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 subject to disclosure and listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Sodium hydroxide	1310-73-2	>= 0.1 - < 1 %
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The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Sodium hydroxide	1310-73-2	>= 0.1 - < 1 %
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This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	51981-21-6
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California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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

TCSI	: On the inventory, or in compliance with the inventory
AIIC	: All components are listed on the inventory, regulatory obligations/restrictions apply
DSL	: All components of this product are on the Canadian DSL
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: 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
NZloC	: On the inventory, or in compliance with the inventory

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

TSCA : All substances listed as active on the TSCA inventory

TSCA list

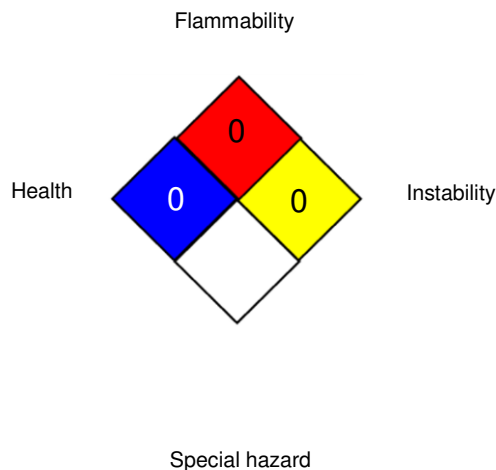
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:

HEALTH	/	0
FLAMMABILITY		0
PHYSICAL HAZARD		4

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport

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Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 01/17/2024

This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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