

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : TEMPO
Product code : 117

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Dish machine detergent
Restrictions on use : For professional use only

1.4. Supplier's details

Christeyns North America, LLC
311 Staton Road
Greenville, NC 27834
USA
T 252-756-8616 / 800.869.6171
info@christeyns.us - www.christeyns.com

1.5. Emergency phone number

Emergency number : VELOCITY EHS (800) 255-3924 (24 HOURS)
(For use only in the event of emergencies involving a spill, leak, fire, exposure, or accident involving chemicals)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Corrosive to metals, Category 1	H290	May be corrosive to metals.
Skin corrosion/irritation, Category 1	H314	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS US) : P234 - Keep only in original packaging.
P260 - Do not breathe fumes, mists, vapors, or spray.
P264 - Wash hands, forearms and face thoroughly after handling.

TEMPO

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P280 - Wear protective gloves, protective clothing, eye protection, and face protection.
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 water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a poison center or doctor.
P363 - Take off immediately all contaminated clothing and wash it before reuse.
P390 - Absorb spillage to prevent material-damage.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Sodium hydroxide	CAS-No.: 1310-73-2	15 - 40
Sodium silicate	CAS-No.: 1344-09-8	3 - 7
Tetrasodium ethylenediamine tetraacetate	CAS-No.: 64-02-8	1 - 5

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Treat symptomatically. Get medical attention immediately.

First-aid measures after skin contact : Remove contaminated clothing and wash before reuse. Rinse skin with plenty of water for at least 15 minutes. If exposed to small amounts, get medical attention if symptoms occur or irritation persists. If exposed to large amounts, get medical attention immediately.

First-aid measures after eye contact : Rinse immediately with water for 15 minutes, occasionally lifting upper and lower eyelids. Remove contact lenses, if present, and easy to do. Continue rinsing. Get medical attention immediately.

First-aid measures after ingestion : Rinse mouth with water if the person is conscious. Do not induce vomiting unless directed by medical personnel. Get medical attention immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/injuries after skin contact : Burning pain and severe corrosive skin damage.

Symptoms/injuries after eye contact : Liquid and vapor corrosive to eyes; will cause permanent damage if not rinsed promptly.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

No additional information available

TEMPO

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Do not use a water jet as this can spread the fire and may cause the splattering of corrosive liquid.

5.2. Specific hazards arising from the chemical

Fire hazard : Contact with metals can release hydrogen gas. Decomposition products may include carbon oxides.

Hazardous decomposition products in case of fire : Corrosive and/or toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. In case of fire, do not breathe fumes. Move containers from the fire area if you can do so without risk. Prevent firefighting water from entering the environment.

Protection during firefighting : Wear a self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : For spills or leaks, contact a supervisor and/or emergency responder. Avoid contact with spilled material and keep unnecessary personnel away.

For emergency responders

Protective equipment : See Section 8 for recommended personal protective equipment. Ventilate the area and restrict access to the spill or leak zone. Have emergency procedures in place for treating exposures or incidents. Only trained and authorized personnel equipped with proper protective equipment should perform cleanup.

Environmental precautions : Avoid release onto the ground, into storm sewers, or bodies of water.

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Contain spillage, soak up with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and collect all waste in suitable, labeled, and closed containers. Dispose according to local legislation (See Section 13).

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety practices. Use only with adequate ventilation. Avoid contact with skin, eyes, and clothing. Use appropriate personal protection equipment (PPE). Wash thoroughly after handling.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions : Store upright in a tightly closed, suitably labeled container. Store in a dry, cool, well-ventilated area with appropriate designated containment measures. Keep out of reach of children. Have readily available spill kits with appropriate absorbent materials. Protect from sunlight. Store in original labeled containers.

TEMPO

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Incompatible products : Keep away from strong acids, strong bases, flammables/combustibles, oxidizers, and reactive metals (aluminum, zinc, magnesium, iron filings).

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Sodium hydroxide (1310-73-2)	
USA - ACGIH® - Threshold Limit Values	
Local name	Sodium hydroxide
ACGIH® TLV® C	2 mg/m³
Remark (ACGIH®)	TLV® Basis: Eye, Skin & URT irr
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Sodium hydroxide
OSHA PEL TWA	2 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - NIOSH - Occupational Exposure Limits	
Local name	Sodium hydroxide
NIOSH REL (Ceiling)	2 mg/m³
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

8.2. Appropriate engineering controls

Appropriate engineering controls : Maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable guidelines, use only with adequate ventilation. Eye wash facilities and emergency showers must be available when handling this product.

8.3. Individual protection measures, such as personal protective equipment

Materials for protective clothing:
Wear suitable protective clothing. Long sleeved protective clothing.
Hand protection:
Chemical resistant PVC gloves
Eye protection:
Safety glasses with face shield

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Liquid
Color : Red
Odor : None
Odor threshold : No data available
pH : 13 – 14

TEMPO

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 11.249 lb/gal
Solubility	: No data available
Log Pow	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

Sodium hydroxide

Particle characteristics	No data available
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Sodium silicate

Particle characteristics	No data available
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Tetrasodium ethylenediamine tetraacetate

Particle characteristics	No data available
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9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

Corrosive product. Reacts with materials of opposite pH; may release heat or hydrogen gas. Contact with metals (e.g. aluminum, zinc, tin) may release hydrogen gas.

10.2. Chemical stability

Stable under recommended storage and handling conditions. Avoid contamination or exposure to extreme temperatures.

10.3. Possibility of hazardous reactions

Mixing with incompatible materials (acids/bases or oxidizers) may cause exothermic reactions or gas release.

10.4. Conditions to avoid

Avoid contact with incompatible materials, heat, and direct sunlight. Avoid mixing with other cleaning products.

10.5. Incompatible materials

Incompatible with strong acids/bases, oxidizing agents, metals (aluminum, zinc, tin), organic materials, hypochlorites, and ammonia.

10.6. Hazardous decomposition products

Thermal decomposition may release corrosive and/or toxic fumes. Contact with metals can release hydrogen gas.

TEMPO

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Sodium hydroxide (1310-73-2)

LD50 oral rat	140 – 340 mg/kg
LD50 dermal rabbit	1350 mg/kg Source: NCIS

Sodium silicate (1344-09-8)

LD50 oral rat	3400 mg/kg Source: SIDS
LD50 dermal rat	> 5000 mg/kg body weight Animal: rat, Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 2.06 mg/l air Animal: rat, Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)

Tetrasodium ethylenediamine tetraacetate (64-02-8)

LD50 oral rat	1700 – 1913 mg/kg Source: EU RAR
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Skin corrosion/irritation : Causes severe skin burns.
pH: 13 – 14

Serious eye damage/irritation : Causes serious eye damage.
pH: 13 – 14

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Sodium silicate (1344-09-8)

NOAEL (animal/female, F0/P)	> 159 mg/kg body weight Animal: rat, Animal sex: female
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STOT-single exposure : Not classified
STOT-repeated exposure : Not classified.

Tetrasodium ethylenediamine tetraacetate (64-02-8)

LOAEL (oral,rat,90 days)	60 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.015 mg/l air Animal: rat, Animal sex: female, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (oral,rat,90 days)	6 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

TEMPO

Viscosity, kinematic	No data available
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TEMPO

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Sodium hydroxide (1310-73-2)	
Viscosity, kinematic	1.878 mm ² /s
Sodium silicate (1344-09-8)	
Viscosity, kinematic	No data available
Tetrasodium ethylenediamine tetraacetate (64-02-8)	
Viscosity, kinematic	No data available
Symptoms/injuries after skin contact	: Burning pain and severe corrosive skin damage.
Symptoms/injuries after eye contact	: Liquid and vapor corrosive to eyes; will cause permanent damage if not rinsed promptly.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

Sodium hydroxide (1310-73-2)	
LC50 - Fish [1]	35 mg/l
EC50 - Crustacea [1]	40.4 mg/l Source: ECHA
Sodium silicate (1344-09-8)	
LC50 - Fish [1]	1108 mg/l Source: SIDS
EC50 - Crustacea [1]	1700 mg/l Source: SIDS
EC50 72h - Algae [1]	345 mg/l Source: SIDS
EC50 72h - Algae [2]	> 345.4 mg/l Test organisms (species): <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i>)
Tetrasodium ethylenediamine tetraacetate (64-02-8)	
LC50 - Fish [1]	41 mg/l Source: EPA
EC50 - Crustacea [1]	> 114 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 72h - Algae [1]	100 mg/l Source: IUCLID
LOEC (chronic)	50 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC chronic fish	≥ 25.7 mg/l Test organisms (species): Duration: '35 d'

12.2. Persistence and degradability

TEMPO	
Persistence and degradability	Not rapidly degradable
Sodium hydroxide (1310-73-2)	
Persistence and degradability	Not rapidly degradable
Sodium silicate (1344-09-8)	
Persistence and degradability	Not rapidly degradable

TEMPO

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Tetrasodium ethylenediamine tetraacetate (64-02-8)

Persistence and degradability	Not rapidly degradable
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12.3. Bioaccumulative potential

Sodium hydroxide (1310-73-2)

Log Pow	-3.88 Source: SRC
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Tetrasodium ethylenediamine tetraacetate (64-02-8)

Log Pow	-13.17 Source: ChemIDplus
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13 Disposal considerations

Regional legislation (waste)	: Avoid unauthorized disposal. Do not dump into any body of water. Comply with federal, state/provincial and local laws/regulations. Do not reuse empty containers.
Waste treatment methods	: Do not allow the product to contaminate any body of water. Refer to Section 8 for personal protection equipment.

SECTION 14 Transport information

In accordance with DOT

DOT

14.1. UN number

NA1760

14.2. Proper Shipping Name

Compounds, cleaning liquid (Sodium hydroxide)

Transport document description

NA1760 Compounds, cleaning liquid (Sodium hydroxide), 8, II

14.3. Transport hazard class(es)

8



14.4. Packing group

II

14.5. Environmental hazards

Dangerous for the environment: No

TEMPO

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT

No supplementary information available

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No. (DOT) : NA1760
DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Sodium hydroxide (1310-73-2)

CERCLA RQ	1000 lb
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15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Sodium hydroxide(1310-73-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 8/19/2026
Issue date : 2/18/2026

Full text of hazard classes and H-statements

H290	May be corrosive to metals
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TEMPO

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of hazard classes and H-statements	
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

Safety Data Sheet (SDS), USA ML

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.