ESSENTIAL CHEMISTRY. INNOVATIVE SOLUTIONS.

SAFETY DATA SHEET

Print Date: March 19, 2025

Section 1: Product & Company Information

Product Identifier: **Trisodium Phosphate Dodecahydrate**

Other Means of Identification
Product Number: 132005
104035

Recommended Use and Restrictions on Use
Recommended Use: Used in softening water, tanning leather, manufacturing paper, clarifying sugar, in detergent mixtures, photographic developers, food additives, buffers, emulsifiers, dietary supplements, boiler water compounds, and industrial cleaners.
Restrictions on Use: None Known

Manufacturer / Importer / Supplier / Distributor Information
Company Name: CORECHEM Inc.
Address: 4320 Greenway Drive
Knoxville, TN 37918
USA

Information Telephone Number: 1-865-524-4239
Fax Number: 1-865-524-3375
Website: www.corecheminc.com
Contact Person: Regulatory Manager
E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 *(monitored 24 hours/day)*

Section 2: Hazards Identification

GHS Hazard Classification(s)
In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)
Not classified.

Health Hazard(s)
Corrosion/Irritation, Skin - 2
(Corrosion) Damage/Irritation, Eye - 2A
Specific Target Organ Toxicity (STOT)-Respiratory Irritation, Single exposure - 3

Environmental Hazard(s)
Not classified.

Label Elements
Signal Word
WARNING

Hazard Symbol(s)

Hazard Statement(s)
H315: Causes skin Irritation.
H319: Causes serious eye Irritation.
H335: May cause respiratory Irritation.

Precautionary Statements

General

Not applicable.

Prevention

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position 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.
P321: Specific treatment (see supplemental first aid instructions on this label).
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.

Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity [2]	Common Name/Synonym(s)	CAS # [3]	Weight %	Impurity or Stabilizing Additive
Trisodium Phosphate Dodecahydrate	None Known	10101-89-0	100	None

1. Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
3. "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

After First Aid, get appropriate in plant, paramedic, or community medical support.

Inhalation

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Get medical aid.

Skin Contact

Immediately flush skin with plenty of soap and water for at least 15 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately. Do not allow victim to rub or keep eyes closed.

Ingestion

If victim is conscious and alert, give 2-4 cupsful of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Most important symptoms/effects, acute and delayed

Symptoms

No data available.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically. Symptoms may be delayed.

Section 5: Fire-Fighting Measures

General Fire Hazards

Product Itself is noncombustible.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Use media appropriate to surrounding fire since this product is noncombustible.

Unsuitable Extinguishing Media

No data available.

Specific Hazards Arising from the Chemical

In a fire situation at high temperatures, phosphates can emit highly toxic phosphorus oxide fumes.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Do not release runoff from fire control methods to sewers or waterways.

Special Protective Equipment for Fire-Fighters

Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus with a full facepiece operated in pressure demand or positive pressure mode.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Cleanup personnel should wear the necessary personal protective equipment to prevent skin or eye contact and dust inhalation.

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. dust. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Methods and Materials for Containment and Clean-Up

Small Spills: Vacuum or sweep up material and place in a suitable disposal container.

Large spills: Containment: Dike with inert absorbent material, as needed, to contain and limit the spill area. Sweep, vacuum, or scoop up the spilled solid, avoiding dust generation, into a suitable disposal container. (with a secure lid) Do not release into sewers or waterways.

Cleanup: Flush residues to drain with plenty of water.

Notification Procedures

Notify authorities if any exposure to the public or environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained.

Environmental Precautions

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Section 7: Handling and Storage

Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for Safe Storage, including any Incompatibilities

Keep container tightly closed. Keep container in a cool, well-ventilated area away from incompatible materials & products.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Chemical Name	Value	Type

Trisodium Phosphate Dodecahydrate	5 mg/m^3	WEEL

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

Use adequate mechanical ventilation equipment. Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. The level of protection and types of controls will vary depending upon potential exposure conditions.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face -protection regulations (29 CFR 1910.133) Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of or in conjunction with contact lenses.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear chemically protective gloves, boots, aprons and gauntlets to prevent prolonged or repeated skin contact.

Respiratory Protection

Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given worker conditions, level of airborne contamination, and presence of enough oxygen. For emergency or non-routine operations (Cleaning spills, reactor vessels, or storage tanks) wear an SCBA. Warning! Air- purifying respirators do not protect workers in oxygen deficient atmospheres. If respirators are used, OSHA requires a written respiratory program that includes at least: Medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Hygiene Measures

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9: Physical and Chemical Properties

Appearance:

Physical State:	Solid/Crystals
Color:	White/ off White
Odor:	Odorless
Odor Threshold:	No data available.
pH:	13
Melting Point/Freezing Point:	73.3 to 76.7 °C / 167 °F
Initial Boiling Point and Boiling Range:	100 °C / 212 °F
Flash Point:	Not Flammable.
Evaporation Rate (butyl acetate=1)**:**	No data available.
Flammability (solid, gas):	No data available.
Upper/Lower Limit on Flammability or Explosive Limits	
Flammability Limit – Upper:	Not applicable.
Flammability Limit – Lower:	Not applicable.
Explosive Limit – Upper:	Not applicable.
Explosive Limit – Lower:	Not applicable.
Vapor Pressure:	17.535 mm of Hg @ 20 °C
Vapor Density (air =1)**:**	0.62
Relative Density (water=1)**:**	1.62
Solubility(ies):	
Solubility in water:	Soluable
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.

Auto-Ignition Temperature: Not applicable.
Decomposition Temperature: 167 °F
Viscosity: No data available.

Other Information:
Molecular Weight: No Data Available
Formula: No data available.

Section 10: Stability and Reactivity

Reactivity
No dangerous reaction known under conditions of normal use.

Chemical Stability
Stable at room temperature in closed containers under normal storage and handling conditions.

Possibility of Hazardous Reactions
Thermal oxidative decomposition if trisodium phosphate can produce highly toxic fumes of phosphorus oxides, and sodium oxides.

Conditions to Avoid
Never heat to decomposition.

Incompatible Materials
This strong caustic material reacts violently with water and strong acids to generate heat.

Hazardous Decomposition Products
Thermal decomposition will produce toxic fumes of phosphorous oxide and sodium oxide.

Section 11: Toxicological Information

Information on routes of exposure
Ingestion: Causes digestive tract irritation. May be harmful or fatal if swallowed.
Inhalation: Inhalation of mist or vapors cause irritation to the respiratory system.
Skin Contact: Direct contact causes skin irritation.
Eye Contact: Direct contact causes eye irritation, redness and stinging.

Information on Toxicological Effects
Acute Toxicity (List all possible routes of exposure)
Oral
Trisodium Phosphate: LD50 (Rat): >2000 mg/kg

Dermal
No data Available

Inhalation
No data Available

Repeated Dose Toxicity
No data Available

Intravenous
Trisodium Phosphate: LDLo (Rabbit) 1580 mg/kg

Skin Corrosion/Irritation
No information available

Serious Eye Damage/Eye Irritation
No information available

Respiratory/Skin Sensitization
No information available.

Carcinogenicity
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
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.
US. National Toxicology Program (NTP) Report on Carcinogens

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.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

None known.

Specific Target Organ Toxicity – Single Exposure

None known.

Specific Target Organ Toxicity – Repeated Exposure

None known.

Aspiration Hazard

Not classified.

Other Effects

None known.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

Trisodium Phosphate: (Golden Orfe, Leuciscus Idus) 2400 mg/l/ 48 hr.

Aquatic Invertebrates

Trisodium Phosphate: TLm (Daphnia Magna) 126 ppm/ 96 hr.

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

Expected to be readily biodegradable.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

The product is water soluble and may spread in water systems.

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions

Scrap materials can be used for neutralizing acid wastes or buried in an approved landfill. If regulations permit, you may flush small amounts to drain with large excess of water. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, State and local regulations.

Chemical waste generators must determine at the time of disposal, whether a discarded chemical is classified as a hazardous waste. Chemical additions, processing or otherwise altering this material may make waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. The transportation, storage, treatment and disposal of this waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

Section 14: Transportation Information

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard:	No
Sudden Release of Pressure:	No
Reactive:	No
Acute (Immediate) Health Hazard:	Yes
Chronic (Delayed) Health Hazard:	No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

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

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 3

Chronic Health Hazard: /
Flammability: 0
Physical Hazard: 0
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating
Health Hazard: 3
Fire Hazard: 0
Reactivity Hazard: 0
Special: N/A
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL – Immediately Dangerous to Life and Health
Kg – Kilogram
l – Liter
lb – Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml – milliliter
N/A – Not Applicable
N/D – Not Determined
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
STEL – Short-term Exposure Limit
TWA - Time weighted average
ACGIH - American Conference of Industrial Hygienists
AIHA – American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS – Chemical Abstracts Service
DOT – US Department of Transportation
EPA – US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OSHA – US Occupational Health and Safety Administration
SARA – US EPA Superfund Amendments and Reauthorization Act
TSCA – US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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