

tri-SODIUM ORTHOPHOSPHATE DODECAHYDRATE AR

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Reference number: 05960
Issue date: 14-12-2022 Revision date: 14-12-2022 Supersedes version of: 11-06-2019 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

| | |
|--------------------|--|
| Product form | : Substance |
| Trade name | : tri-SODIUM ORTHOPHOSPHATE DODECAHYDRATE AR |
| EC-No. | : 231-509-8 |
| CAS-No. | : 10101-89-0 |
| Product code | : 05960 |
| Formula | : Na ₃ O ₄ P·12H ₂ O |
| Chemical structure | : $\text{Na}^+ \text{ } \overset{\text{O}}{\parallel} \text{ } \text{O}^--\text{P}-\text{O}^- \text{ } \text{Na}^+ \cdot 12\text{H}_2\text{O}$ O^- Na^+ |
| Synonyms | : Sodium phosphate tribasic dodecahydrate, Trisodium phosphate dodecahydrate |

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

| | |
|----------------------------------|---|
| Industrial/Professional use spec | : Industrial For professional use only |
| Use of the substance/mixture | : Laboratory chemicals Manufacture of substances |

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai
INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1 H314
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes severe skin burns and eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



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| | |
|--------------------------------|---|
| | GHS05 |
| Signal word (CLP) | : Danger |
| Hazard statements (CLP) | : H314 - Causes severe skin burns and eye damage. |
| Precautionary statements (CLP) | : P280 - Wear protective clothing, eye protection, face protection, protective gloves. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

| | |
|----------------|---|
| Substance type | : Mono-constituent |
| Name | : tri-SODIUM ORTHOPHOSPHATE DODECAHYDRATE |
| CAS-No. | : 10101-89-0 |
| EC-No. | : 231-509-8 |

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|---|
| First-aid measures general | : Call a physician immediately. |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. |
| First-aid measures after skin contact | : Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor. Call a physician immediately. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Call a physician immediately. |
| First-aid measures after ingestion | : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Do not induce vomiting. Call a physician immediately. |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-------------------------------------|--|
| Symptoms/effects | : Causes severe skin burns and eye damage. |
| Symptoms/effects after skin contact | : Burns. |
| Symptoms/effects after eye contact | : Serious damage to eyes. |
| Symptoms/effects after ingestion | : Burns. |

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂). Water spray. Dry powder. Foam. |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Stop release.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Clear up rapidly by scoop or vacuum.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry place. Protect from moisture. Store locked up. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

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8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

8.2.2.2. Skin protection

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|-----------------------|
| Physical state | : Solid |
| Appearance | : Crystalline powder. |
| Molecular mass | : 380.12 g/mol |
| Colour | : White. |
| Odour | : Odourless. |
| Odour threshold | : No data available |
| pH | : 11.8 – 12 |
| pH solution concentration | : 1 % |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : 75 °C |
| Freezing point | : Not applicable |
| Boiling point | : No data available |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |

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| | |
|---|------------------------------------|
| Decomposition temperature | : > 75 °C |
| Flammability (solid, gas) | : Non flammable. |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Density | : 1.62 g/cm ³ |
| Solubility | : Water: 190 g/l at 20°C - Soluble |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Viscosity, kinematic | : Not applicable |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : Not applicable |

9.2. Other information

Bulk density : 950 kg/m³ ca.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

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 |
| Skin corrosion/irritation | : Causes severe skin burns. pH: 11.8 – 12 |
| Serious eye damage/irritation | : Assumed to cause serious eye damage pH: 11.8 – 12 |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

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| | |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |
|----------------------|----------------|

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Ecology - general | : Before neutralisation, the product may represent a danger to aquatic organisms. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|---|
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Product/Packaging disposal recommendations | : Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste. |

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1 UN number

| | |
|---------------|-----------|
| UN-No. (ADR) | : UN 3262 |
| UN-No. (IMDG) | : UN 3262 |
| UN-No. (IATA) | : UN 3262 |
| UN-No. (ADN) | : UN 3262 |
| UN-No. (RID) | : UN 3262 |

14.2. UN proper shipping name

| | |
|--------------------------------------|--|
| Proper Shipping Name (ADR) | : CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. |
| Proper Shipping Name (IMDG) | : CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. |
| Proper Shipping Name (IATA) | : Corrosive solid, basic, inorganic, n.o.s. |
| Proper Shipping Name (ADN) | : CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. |
| Proper Shipping Name (RID) | : CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. |
| Transport document description (ADR) | : UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (TRI-SODIUM ORTHOPHOSPHATE DODECAHYDRATE), 8, III, (E) |

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| | |
|---------------------------------------|---|
| Transport document description (IMDG) | : UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., 8, III |
| Transport document description (IATA) | : UN 3262 Corrosive solid, basic, inorganic, n.o.s. (TRI-SODIUM ORTHOPHOSPHATE DODECAHYDRATE), 8, III |
| Transport document description (ADN) | : UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., 8, III |
| Transport document description (RID) | : UN 3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S., 8, III |

14.3. Transport hazard class(es)

ADR

| | |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 8 |
| Danger labels (ADR) | : 8 |



IMDG

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 8 |
| Danger labels (IMDG) | : 8 |



IATA

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IATA) | : 8 |
| Danger labels (IATA) | : 8 |



ADN

| | |
|----------------------------------|-----|
| Transport hazard class(es) (ADN) | : 8 |
| Danger labels (ADN) | : 8 |



RID

| | |
|----------------------------------|-----|
| Transport hazard class(es) (RID) | : 8 |
| Danger labels (RID) | : 8 |



14.4. Packing group

| | |
|----------------------|-------|
| Packing group (ADR) | : III |
| Packing group (IMDG) | : III |
| Packing group (IATA) | : III |
| Packing group (ADN) | : III |
| Packing group (RID) | : III |

14.5. Environmental hazards

| | |
|-------------------------------|------|
| Dangerous for the environment | : No |
| Marine pollutant | : No |

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Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : C6
Special provisions (ADR) : 274
Limited quantities (ADR) : 5kg
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P002, IBC08, LP02, R001
Special packing provisions (ADR) : B3
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T1
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAV, L4BN
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP7
Hazard identification number (Kemler No.) : 80
Orange plates :



Tunnel restriction code (ADR) : E
EAC code : 2X

Transport by sea

Special provisions (IMDG) : 223, 274
Limited quantities (IMDG) : 5 kg
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P002, LP02
IBC packing instructions (IMDG) : IBC08
IBC special provisions (IMDG) : B3
Tank instructions (IMDG) : T1
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Stowage category (IMDG) : A
Segregation (IMDG) : SGG18, SG35
Properties and observations (IMDG) : Reacts violently with acids. Causes burns to skin, eyes and mucous membranes.
MFAG-No : 154

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y845
PCA limited quantity max net quantity (IATA) : 5kg
PCA packing instructions (IATA) : 860
PCA max net quantity (IATA) : 25kg
CAO packing instructions (IATA) : 864
CAO max net quantity (IATA) : 100kg
Special provisions (IATA) : A3, A803
ERG code (IATA) : 8L

Inland waterway transport

Classification code (ADN) : C6
Special provisions (ADN) : 274
Limited quantities (ADN) : 5 kg
Excepted quantities (ADN) : E1
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

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Rail transport

| | |
|---|---------------------------|
| Classification code (RID) | : C6 |
| Special provisions (RID) | : 274 |
| Limited quantities (RID) | : 5kg |
| Excepted quantities (RID) | : E1 |
| Packing instructions (RID) | : P002, IBC08, LP02, R001 |
| Special packing provisions (RID) | : B3 |
| Mixed packing provisions (RID) | : MP10 |
| Portable tank and bulk container instructions (RID) | : T1 |
| Portable tank and bulk container special provisions (RID) | : TP33 |
| Tank codes for RID tanks (RID) | : SGAV, L4BN |
| Transport category (RID) | : 3 |
| Special provisions for carriage – Bulk (RID) | : VC1, VC2, AP7 |
| Colis express (express parcels) (RID) | : CE11 |
| Hazard identification number (RID) | : 80 |

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

REACH Annex XIV (Authorisation List)

tri-SODIUM ORTHOPHOSPHATE DODECAHYDRATE AR is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

tri-SODIUM ORTHOPHOSPHATE DODECAHYDRATE AR is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

tri-SODIUM ORTHOPHOSPHATE DODECAHYDRATE AR is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

tri-SODIUM ORTHOPHOSPHATE DODECAHYDRATE AR is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

tri-SODIUM ORTHOPHOSPHATE DODECAHYDRATE is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

Germany

| | |
|--|--|
| Water hazard class (WGK) | : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 172). |
| Hazardous Incident Ordinance (12. BImSchV) | : Is not subject of the Hazardous Incident Ordinance (12. BImSchV) |

Netherlands

| | |
|---|-------------------------------|
| SZW-lijst van kankerverwekkende stoffen | : The substance is not listed |
| SZW-lijst van mutagene stoffen | : The substance is not listed |

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SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

| | |
|--------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| COD | Chemical oxygen demand (COD) |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| EN | European Standard |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |

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Abbreviations and acronyms:

| | |
|---------|--|
| VOC | Volatile Organic Compounds |
| CAS-No. | Chemical Abstract Service number |
| N.O.S. | Not Otherwise Specified |
| vPvB | Very Persistent and Very Bioaccumulative |
| ED | Endocrine disrupting properties |

Full text of H- and EUH-statements:

| | |
|--------------|--|
| H314 | Causes severe skin burns and eye damage. |
| Skin Corr. 1 | Skin corrosion/irritation, Category 1 |

Safety Data Sheet (SDS), EU

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.