

# Material Safety Data Sheet



**tri-SODIUM ORTHOPHOSPHATE  
(DODECAHYDRATE) AR**

VERSION : 05  
REVISION DATE : 14/06/2025  
EFFECTIVE DATE : 16/06/2025

Product Code : 25950

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## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name** : tri-SODIUM ORTHOPHOSPHATE  
(DODECAHYDRATE) AR  
**Product code** : 25950  
**Identification of the product** : tri-SODIUM ORTHOPHOSPHATE  
(DODECAHYDRATE) AR  
**CAS No** : 10101-89-0  
**EC No.** : 231-509-8  
**Synonyms** : Sodium phosphate tribasic dodecahydrate, Trisodium  
phosphate dodecahydrate

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

**Identified uses** : Laboratory chemicals, Manufacture of substances

### 1.3. Details of the supplier of the safety data sheet

**Company identification** MOLYCHEM INDIA LLP  
Office: Maker Tower 'E', 41-A2, 4th Floor, Above Maker  
Arcade, Cuffe Parade, Mumbai 400 005 (INDIA)  
Tel: +91 22 4066 8111, 2205 7772 .  
Email : [info@molychem.net](mailto:info@molychem.net)  
Works: Plot No. B/9, Badlapur M.I.D.C.,  
OPP.Shobhavat Textile Co., Kulgaon, Badlapur (E),  
Dist.-Thane-421 503.

### 1.4. Emergency telephone number

Emergency number : +91 22 4066 8111 (10:00am - 6:00 pm)

## 2. Hazards identification

### 2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2 H315  
Serious eye damage/eye irritation, Category 2 H319  
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract  
irritation H335

Full text of H- and EUH-statements: see section 16

### Adverse physicochemical, human health and environmental effects

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No additional information available

## 2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H315 - Causes skin irritation.

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation.

Precautionary statements (CLP)

: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray

P264 - Wash hands and forearms thoroughly after handling

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P302+P352 - IF ON SKIN: Wash with plenty of 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

No additional information available

## 3. Composition/information on ingredients

### 3.1. Substances

Name : tri-SODIUM ORTHOPHOSPHATE  
(DODECAHYDRATE) AR

CAS-No : 10101-89-0

### 3.2. Mixtures

Not applicable

## 4. First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

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First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.

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.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects : Causes severe skin burns and eye damage.

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

Treat symptomatically.

## 5. Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Stop release.

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## 6.2. Environmental precautions

Avoid release to the environment.

## 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

## 6.4. Reference to other sections

No additional information available

## 7. Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe dust/fume/gas/mist/vapours/spray.  
Hygiene measures : Wash hands, forearms and face thoroughly after handling.  
Wash contaminated clothing before reuse.

### 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.  
Storage away from : Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## 8. Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

Ensure good ventilation of the work station.

#### 8.2.2. Personal protection equipment

Eye protection : Chemical goggles or safety glasses  
Hand protection : Wear protective gloves  
Skin protection : Wear suitable protective clothing  
Respiratory protection : [In case of inadequate ventilation] wear respiratory

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8.2.3 **Environmental exposure controls**  
Avoid release to the environment  
Thermal hazards : protection.  
: No additional information available

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state : Solid  
Appearance : crystals or crystalline powder.  
Molecular mass : 380.12 g/mol  
Colour : Colourless or white  
Odour : Odourless.  
Odour threshold : Not available  
pH : 11.8 – 12  
Melting point : 75 °C  
Freezing point : Not available  
Boiling point : Not available  
Flash point : Not applicable  
Auto-ignition temperature : Not applicable  
Decomposition temperature : > 75 °C  
Flammability : Not available  
Vapour pressure : Not available  
Relative vapour density at 20 °C : Not applicable  
Relative density : Not available  
Density : 1.62 g/cm<sup>3</sup>  
Solubility : Water: 190 g/l at 20°C - Soluble  
Partition coefficient n-octanol/water (Log Kow) : Not available  
Viscosity, kinematic : Not applicable  
Explosive limits : Not applicable

### 9.2. Other information

No additional information available

## 10. Stability and reactivity

### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

### 10.2. Chemical stability

Stable under normal conditions.

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## 10.3. Possibility of hazardous reactions

No additional information available

## 10.4. Conditions to avoid

Direct sunlight.

## 10.5. Incompatible materials

No additional information available

## 10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

## 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 skin irritation.
Additional information	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## 12. Ecological information

### 12.1. Toxicity

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

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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

## 13. Disposal considerations

### 13.1. Waste treatment methods

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 nonhazardous waste.

## 14. Transport information

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

### 14.1. UN number

UN-No. (ADR) : Not regulated  
UN-No. (IMDG) : Not regulated  
UN-No. (IATA) : Not regulated  
UN-No. (ADN) : Not regulated  
UN-No. (RID) : Not regulated

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated  
Proper Shipping Name (IMDG) : Not regulated  
Proper Shipping Name (IATA) : Not regulated  
Proper Shipping Name (ADN) : Not regulated  
Proper Shipping Name (RID) : Not regulated

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : Not regulated

#### IMDG

Transport hazard class(es) (IMDG) : Not regulated

#### IATA

Transport hazard class(es) (IATA) : Not regulated

#### ADN

Transport hazard class(es) (ADN) : Not regulated

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## RID

Transport hazard class(es) (RID) : Not regulated

### 14.4. Packing group

Packing group (ADR) : Not regulated

Packing group (IMDG) : Not regulated

Packing group (IATA) : Not regulated

Packing group (ADN) : Not regulated

Packing group (RID) : Not regulated

### 14.5. Environmental hazards

Other information : No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

#### Inland waterway transport

Not regulated

#### Rail transport

Not regulated

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

Not applicable

## 15. Regulatory information

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

#### 15.1.1 EU-Regulations

Not listed on REACH Annex XVII

Not listed on REACH Annex XIV (Authorisation List)

Not listed on the REACH Candidate List

Not listed on the PIC list (Regulation EU 649/2012)

Not listed on the POP list (Regulation EU 2019/1021)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Not listed on the COUNCIL REGULATION (EC) of dual-use items.

Not listed on the Explosives Precursors list (EU)

Not listed on the Drug Precursors list (EU)

#### 15.1.2. National regulations

##### Germany

Water hazard class (WGK)

: WGK 1, Slightly hazardous to water  
(Classification according to AwSV; ID No.

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10740).

## Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed  
SZW-lijst van mutagene stoffen : The substance is not listed  
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 additional information available

## 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
COD	Chemical oxygen demand
COD	Chemical oxygen demand
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

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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
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
<b>Full text of H- and EUH-statements</b>	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

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.

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