

Monosodium Phosphate Dihydrate Tech Grade

Version number: 1.0

SECTION 1: Identification

1.1 Product identifier

Identification of the substance	monosodium dihydrogen phosphate dihydrate
Trade name	<u>Monosodium Phosphate Dihydrate Tech Grade</u>
CAS number	13472-35-0

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

Relevant identified uses	Chemicals for various applications
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1.3 Details of the supplier of the safety data sheet

Valudor Products, LLC 179 Calle Magdalena Suite 100 Encinitas, California CA 92024 United States	Telephone: +1 (760) 635 8500 e-mail: info@valudor.com Website: www.valudor.com
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1.4 Emergency telephone number

Emergency information	800-535-5053 (Infotrac)
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As above or nearest toxicological information centre.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

This substance does not meet the criteria for classification.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Not required.

2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	monosodium dihydrogen phosphate dihydrate
Identifiers	
CAS No	13472-35-0
Molecular formula	H ₂ Na O ₄ P * 2 H ₂ O
Molar mass	156 g/mol

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air.

In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower.

Following eye contact

Irrigate copiously with clean, fresh water, holding the eyelids apart.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Following ingestion

Rinse mouth. Do not induce vomiting.

Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

None.

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SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Non-combustible, Coordinate firefighting measures to the fire surroundings.

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products

phosphorus oxides (P_xO_y), gas/ vapor, toxic, irritant vapors / gases

5.3 Advice for firefighters

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Coordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

chemical protection suit, wear self-contained breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ventilate affected area.

Control of dust.

Avoid breathing dust.

Avoid contact with skin and eyes.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Take up mechanically.

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Advice on how to clean up a spill

Take up mechanically.
Collect spillage.

Other information relating to spills and releases

Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Specific notes/details

None.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Remove contaminated clothing and protective equipment before entering eating areas.
Do not breathe dust.
Avoid contact with skin and eyes.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

humidity

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Consideration of other advice

Keep away from food, drink and animal feedingstuffs.
Store in a dry place. Store in a closed container.
Keep cool.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.

Storage temperature recommended storage temperature: 15 - 25 °C

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

No constituent of the product currently has a known exposure limit.

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
NBR: acrylonitrile-butadiene rubber	≥ 0,11 mm	>480 minutes (permeation: level 6)

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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Body protection

Protective clothing for use against solid particulates.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state

solid

Color

white

Odor

odorless

Odor threshold

not determined

Other safety parameters

pH (value)

4.5 (in aqueous solution: 15.6 g/l)

Melting point/freezing point

225 °C
(decomposes)

Boiling point or initial boiling point and boiling range

not determined

Flash point

not applicable

Evaporation rate

not determined

Flammability (solid, gas)

non-combustible

Explosive limits

not determined

Explosion limits of dust clouds

not applicable

Vapor pressure

not determined

Density

not determined

Relative density

~2 (water = 1)

Relative vapour density

information on this property is not available

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Solubility(ies)

Water solubility <math>< 520 \text{ g/l}</math> at 20 °C
(EU method A.6)

Partition coefficient

n-octanol/water (log KOW) not relevant
(inorganic)

Auto-ignition temperature not determined

Decomposition temperature 225 °C

Viscosity not relevant
(solid)

Explosive properties none

Oxidizing properties none

Information for relevant hazard classes according to GHS hazard classes acc. to GHS (physical hazards):
not relevant

9.2 Other information there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

Decomposes on heating.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat (>170°C).

Humidity.

10.5 Incompatible materials

There is no additional information.

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10.6 Hazardous decomposition products

Phosphorus oxides (P_xO_y).

Sodium oxide.

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgment (weight of evidence determination).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

This substance does not meet the criteria for classification.

Acute toxicity

Shall not be classified as acutely toxic (oral).

Shall not be classified as acutely toxic (dermal).

Shall not be classified as acutely toxic (inhalation).

May be harmful if swallowed.

May be harmful in contact with skin.

Exposure route	Endpoint	Value	Species	Method	Source	Notes
oral	LD0	>2,000 mg/kg	rat, female	OECD Guideline 420	ECHA	anhydrous
dermal	LD0	>2,000 mg/kg	rat	OECD Guideline 402	ECHA	read-across

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

(ECHA, OECD Guideline 404)

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

(ECHA)

Respiratory or skin sensitization

Skin sensitization

Shall not be classified as a skin sensitizer.

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Respiratory sensitization

Skin sensitization

Shall not be classified as a skin sensitizer.

(ECHA, OECD Guideline 429)

Respiratory sensitization

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

(ECHA)

Carcinogenicity

IARC Monographs

not listed

National Toxicology Program (United States)

not listed

OSHA Carcinogens

Not listed.

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Other information

There is no additional information.

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

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

End-point	Exposure time	Value	Species	Method	Source	Notes
LC50	96 h	>100 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	ECHA	potassium
EC50	48 h	>100 mg/l	daphnia magna	OECD Guideline 202	ECHA	phosphate
ErC50	72 h	>100 mg/l	algae (Desmod-esmus sub-spicatus)	OECD Guideline 201	ECHA	phosphate

Aquatic toxicity (chronic)

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

End-point	Exposure time	Value	Species	Method	Source	Notes
EC50	3 h	>1,000 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA	Dipotassium hydrogenorthophosphate
NOEC	72 h	>100 mg/l	algae (Desmod-esmus sub-spicatus)	OECD Guideline 201	ECHA	phosphate
NOEC	3 h	1,000 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA	Dipotassium hydrogenorthophosphate

12.2 Persistence and degradability

Biodegradation

The study does not need to be conducted because the substance is inorganic.

Persistence

The study does not need to be conducted because the substance is inorganic.

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12.3 Bioaccumulative potential

n-octanol/water (log KOW)

not relevant

(inorganic)

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Other adverse effects

Data are not available.

Remarks

None.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packages

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number

not assigned

14.2 UN proper shipping name

-

14.3 Transport hazard class(es)

-

14.4 Packing group

-

14.5 Environmental hazards

-

14.6 Special precautions for user

-

14.7 Transport in bulk according to IMO instruments

-

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14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) Additional information

Not subject to transport regulations.

SECTION 15: Regulatory information

15.1 **Safety, health and environmental regulations specific for the product in question**

National regulations (United States)

Toxic Substance Control Act (TSCA) Substance is listed (ACTIVE)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

Not listed

Specific Toxic Chemical Listings (EPCRA Section 313)

Not listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Not listed

Clean Air Act

Not listed

Right to Know Hazardous Substance List

Toxic or Hazardous Substance List (MA-TURA)

Not listed

Hazardous Substances List (MN-ERTK)

Not listed

Hazardous Substance List (NJ-RTK)

Not listed

Hazardous Substance List (Chapter 323) (PA-RTK)

Not listed

Hazardous Substance List (RI-RTK)

Not listed

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California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Not listed

Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

Not listed

SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2023-12-21

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC	International Agency for Research on Cancer
IARC Monographs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
NOEC	No Observed Effect Concentration
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and very Bioaccumulative

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Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Responsible for the safety data sheet

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Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.