

**Safety data sheet as per COMMISSION REGULATION (EU) No 453/2010
of 20 May 2010 amending Regulation (EC) No 1907/2006**

Product: Sodium hypophosphite



PRASOL

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

1.1 Product identifier

Trade name: Sodium hypophosphite

CAS No.: 7681-53-0

EC No.: 231-669-9

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

Relevant identified uses: Manufacture of fine chemicals, food additive, in electroless nickel plating

Uses identified against: not for uses other than those identified

1.3 Details of the supplier of the safety data sheet:

Manufacturer/Supplier:

Prasol Chemicals Ltd.,
Prasol House, Plot No.A-17/2/3,
T.T.C. Indl. Area, Khairne M.I.D.C.,
Navi Mumbai - 400 710
Maharashtra, India.
Tel: +91-22-27782555
Fax: +91-22-27782430

Further information obtainable from:

Mr. Dhaval Parikh

e-mail:sales@prasolchem.com; inquiry@prasolchem.com

1.4 Information in case of emergency:

Product safety department Tel: +91-22- 27782555; Fax: +91-22- 27782430

Other Comments (e.g. language(s) of the phone service): English

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008



GHS07

Skin Irrit. 2 H315 Causes skin irritation

Eye Irrit. 2 H319 Causes serious eye irritation

2.1.2 Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Irritant

R36/38: Irritating to eyes and skin

Information concerning particular hazards for human and environment: Not applicable

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS07

Signal word Warning

Hazard-determining components of labeling: Void

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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 on this label).

P362 Take off contaminated clothing and wash before reuse.

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P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

Results of PBT and vPvB assessment: Not applicable

SECTION 3: Composition/information on ingredients

Chemical characterization:

CAS No. Description
7681-53-0 Sodium hypophosphite

Identification number(s)

EC Number: 231-669-9

Additional information:

Molecular Formula: H₂NaO₂P

Molecular Weight: 87.98g/mol

SECTION 4: First aid measures

4.1 General information: Remove soiled/dirty clothing, brush well and wash carefully.

After inhalation:

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

After skin contact:

Remove all contaminated clothing and footwear.

Wash immediately, abundantly and thoroughly with soap and water.

In case of inflammation (redness, irritation) obtain medical attention.

Use appropriate protective equipment when treating a contaminated person

After eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

After swallowing:

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Consult a physician.

Information for doctor:

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available. Use first aid techniques to restore vital functions. Place contaminated clothing in a sealed bag for disposal. Use appropriate protective equipment when treating a contaminated person

SECTION 5: Firefighting measures

5.1 Suitable extinguishing agents:

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2 Special hazards arising from the substance or mixture NOT combustible. However, it may present a risk in the event of a fire. Under fire conditions, where the substance may be exposed to high temperatures, a violent exothermic decomposition reaction occurs above 239°C releasing the highly flammable, toxic gas- phosphine.

Phosphine gas spontaneously ignites in air. Danger of explosion as a result of thermal decomposition. On heating there is a risk of a build-up of pressure in hermetically sealed containers or tanks. Dehydration above 100 °C may result in steam capable of causing packaging to burst.

5.3 Protective equipment: Wear self-contained breathing apparatus for firefighting if necessary.

Additional information Use water spray to cool unopened containers

SECTION 6: Accidental release measures

6.1 Person-related safety precautions:

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.2 Measures for environmental protection:

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Prevent further leakage or spillage if safe to do so.
Do not allow to enter sewers/ surface or ground water.

6.3 Measures for cleaning/collecting:

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Avoid the formation of dust. Use dust extraction (suction). Provide water supplies and ocular fountains near the point of use. Do NOT handle without gloves. Do NOT handle if hands have any cuts or wounds. Avoid any direct contact with the product. Avoid contact with organic materials (wood, paper, cardboard, etc.). Avoid contact with hot surfaces.

Information about fire - and explosion protection: Keep ignition sources away. No smoking. Take measures to prevent the buildup of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities:

Packaging: Polyethylene liner inside a fibre-board drum Packaging material - Recommended: Stainless steel 316 L. Plastic materials (polyethylene, polypropylene) High density polyethylene (HDPE)
- Not suitable: None, to our knowledge Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Information about storage in one common storage facility: Store away from incompatible materials.

Further information about storage conditions: Store away from moisture. Store in cool and dry place.

7.3 Specific end use(s) No further relevant information available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Extraction to remove dust at its source.
Ensure good ventilation of the work station.
Workplace and equipment which are easy to decontaminate.

Ingredients with limit values that require monitoring at the workplace:

Occupational exposure limits

Limits (France) No specific limits.

Inhalable dust - VME: 10 mg/m³ Respirable dusts - VME: 4 mg/m³.

Limits (U.S.A./A.C.G.I.H.) (particles with no chemical-specific limits)

Inhalable Particles - TLV (TWA): 10 mg/m³ Respirable particles - TLV (TWA): 3 mg/m³

Limits (UK) No specific limits.

Total inhalable dust: 10 mg/m³ - (8h TWA) Total respirable dust: 4 mg/m³ - (8h TWA).

Additional information: Monitoring of the atmosphere in the work place. The recommended limits SHOULD NOT be exceeded.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Respiratory protection:

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Protection of hands: Protective gloves

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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Material of gloves and penetration time of glove material

Immersion protection: Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: >480 min

Material tested: Dermatril® (Aldrich Z677272, Size M)

Splash protection: Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: >30 min

Material tested: Dermatril® (Aldrich Z677272, Size M)

Eye protection: Tightly sealed goggles

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Body protection:

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	: white crystalline solid
Odour	: no data available
Odour threshold	: no data available
pH	: no data available
Melting point/Melting range	: 90°C (loss of water); 238°C (decomposes) by thermal analysis
Boiling point/Boiling range	: not applicable
Flash point	: non-flammable
Evaporation rate	: not applicable
Flammability	: non flammable
Upper/lower flammability or explosive limits	: not applicable
Vapour pressure at 20°C	: not applicable
Vapour density	: not applicable
Relative density at 20°C	: 1.77
Solubility in / Miscibility with water	: 909 g/L at 30°C very soluble
Partition coefficient (n-octanol/water) at 20°C	: no data
Auto-ignition temperature	: 239°C due to decomposition and formation of phosphine
Decomposition temperature	: 238°C
Viscosity	: no data available
Explosive properties	: none
Oxidising properties	: none
9.2 Other information	: pKb 11.73

SECTION 10: Stability and reactivity

10.1 Reactivity strong chemical reducing agent

Possibility of hazardous reactions No dangerous reactions known.

10.2 Chemical stability Stable at ambient temperature and under normal conditions of use

10.3 Possibility of hazardous reactions Sodium hypophosphite undergoes rapid thermal decomposition (pyrolysis) at >239°C to form the highly flammable, toxic gas phosphine and oxides of phosphorus. Phosphine gas spontaneously ignites in air. Thermal decomposition may be violent. Possible risk of explosion/fire as consequence of decomposition on heating at temperature in excess of 239°C. Possible risk of explosion/fire as a consequence of decomposition on contact with very hot surfaces and flames.

10.4 Conditions to avoid Heat, flames and sparks.

10.5 Incompatible materials: Reacts violently with strong oxidising agents such as chlorates and nitrates. It reacts in hot alkaline solutions to form flammable hydrogen gas and flammable, toxic phosphine gas. Danger of explosion on mixing with: oxidizing agents (chlorates, nitrates) alkalis and hot concentrated caustic products

10.6 Hazardous decomposition products: phosphine and oxides of phosphorus

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD50 Oral rat >5000mg/kg

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LD0 Dermal rat >2000mg/kg
Skin corrosion/irritation: irritating (rabbit)
Serious eye damage/irritation: irritating (rabbit)
Respiratory or skin sensitization: non-sensitizing on skin (mouse)
Germ cell mutagenicity: non genotoxic
Carcinogenicity: 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
Reproductive toxicity: NOAEL 1080 mg/kg/d; not a reproductive toxicant
STOT-single exposure: no data available
STOT-repeated exposure: no data available
Aspiration hazard: no data available
Additional information: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

LC50	96h	>100mg/L	Danio rerio/ zebra fish	non-hazardous
EC50	48h	>100mg/L	Daphnia magna/ water flea	non-hazardous
EC50	72h	>100mg/L	Pseudokirchneriella subcapitata/green algae	non-hazardous

12.2 Persistence and degradability

Biodegradation readily biodegradable

12.3 Bio accumulative potential No further relevant information available.

12.4 Mobility in soil Koc 15ml/g

12.5 Results of PBT and vPvB assessment No data available

12.6 Other adverse effects No further relevant information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product: Disposal in accordance with local and national regulations.

May be reused following decontamination. Do not allow the product to be released into the environment.

Do NOT incinerate.

Contaminated packaging: Do not burn empty packaging. Do not cut using oxyacetylene torch.

Do NOT dispose of untreated packaging with industrial waste. Dispose of as unused product.

SECTION 14: Transport information

Land Transport (ADR/RID) Marine Transport (IMDG) Air Transport (ICAO/ IATA)

14.1 UN/ID Number: - (not a restricted material)

14.2 UN proper shipping name: Not dangerous goods

14.3 Transport hazard class: -

14.4 Packaging group: -

14.5 Environmental hazards: not a marine pollutant

14.6 Special precautions for the user: no data available

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: no data available

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

Hazard pictograms Please refer section 2

Signal word Warning

Labeling according to EU guidelines: Please refer section 2

Code letter and hazard designation of product: Please refer section 2

Risk phrases: Please refer section 2

15.2 Chemical safety assessment A Chemical Safety Assessment has not been carried out and will be applicable

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at the time of REACH Registration.

Substances of very high concern (SVHC) according to REACH, Article 57: The substance is not listed as SVHC.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS:

Product safety department.

Contact:

Tel: +91-22- 27782555

Fax: +91-22- 27782430

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service (division of the American Chemical Society)

EC50: Half Maximal Effective concentration

EINECS: European Inventory of Existing Commercial Chemical Substances

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IATA: International Air Transport Association

IBC Code: International Bulk Chemical Code

IMDG: International Maritime Code for Dangerous Goods

LC50: Lethal concentration, 50 percent

Marpol 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978

NOAEL: No Observed Adverse Effect Level

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

Sources

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

•ECHA: http://apps.echa.europa.eu/registered/data/dossiers/DISS-975e8819-9290-06de-e044-00144f67d031/DISS-975e8819-9290-06de-e044-00144f67d031_DISS-975e8819-9290-06de-e044-00144f67d031.html

•chemidpluslite: <http://chem.sis.nlm.nih.gov/chemidplus/rn/7681-53-0>

•Sigma-Aldrich MSDS:

<http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=S5012&brand=ALDRICH&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Faldrich%2Fs5012%3Flang%3Den>

Data compared to the previous version altered.

- Section 1: Chemical Product and Company Identification
- Section 3: Composition and Information on Ingredients
- Section 4: First Aid Measures
- Section 5: Fire and Explosion Data
- Section 6: Accidental Release Measures
- Section 7: Handling and Storage
- Section 8: Exposure Controls/Personal Protection
- Section 9: Physical and Chemical Properties
- Section 10: Stability and Reactivity Data
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