Safety Data Sheet

SDS Number	SDS-72
Prepare Date	22.01.2022
Revision Date	
Revison	0

PHOSPHORIC ACID %75

likitkimya

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

1.1 Product identifiers

Product name: Phosphoric acid %75

CAS-No.: 7664-38-2

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

Identified uses: Laboratory chemicals, Manufacture of substances, Food additives ,Intermediate, Corrosion inhibitors

1.3 Details of the supplier of the safety data sheet

Company: Likit Kimya Sanayi Ticaret A.Ş.

Terminal Address: Sultanköy Merkez Mah. İncirli Mandıra Cad. No;64 M.Ereğlisi/TEKİRDAĞ/TURKEY

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1.4 Emergency telephone number

Emergency Phone: 112

Company information desk: +90 (282) 613 41 38

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Acute Tox. 4 H302 Harmful if swallowed.

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word: Danger

Hazard statement(s)

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H302	Harmful if swallowed.

Precautionary statement(s)

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes.

2.3 Other hazards

Lachrymator.

3. Composition/information on ingredients

3.1 Substances

Formula **H_3PO_4**

Molecular weight 98,0 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
Phosphoric Acid			
CAS No	7664-38-2	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H302 Harmful if swallowed.	%74 ≥ C ≥ %76
EC No	200-633-2		
Index-No	015-011-00-6		

For the full text of the H-Statements in this Section, see Section 16

4. First aid measures

4.1 Description of first aid measures

General advice

Do not leave affected persons unattended.

Personal protection for the First Aider.

Involve doctor immediately.

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Provide oxygen treatment if affected person has difficulty breathing.

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If inhaled

Take affected persons into fresh air and keep quiet.

Supply fresh air. Call a doctor immediately.

In case of skin contact

Immediately wash with water and soap and rinse thoroughly.

Call a doctor immediately.

In case of eye contact

Rinse opened eye for several minutes under running water.

If swallowed

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

NOTE: Never give an unconscious person anything to drink.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Gastric or intestinal disorders

4.3 Indication of any immediate medical attention and special treatment needed

Medical supervision for at least 48 hours.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

The product is not flammable.

Use fire extinguishing methods suitable to surrounding conditions.

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released

Phosphorus oxides (e.g. P2O5)

5.3 Advice for firefighters

Wear self-contained respiratory protective device.

Wear fully protective suit.

5.4 Further information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Mount respiratory protective device.

6.2 Environmental precautions

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and materials for containment and cleaning up

Absorb with liquid-binding material (sand, vermiculite, acid binders).

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Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

7. Handling and storage

7.1 Precautions for safe handling

Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
When diluting always pour product into water and not vice versa.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original receptacle. Use polyolefine receptacles. Provide acid-resistant floor.
Suitable material for receptacles and pipes: Stainless steel.

7.3 Specific end use(s)

No further relevant information available.

8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

7664-38-2 Orthophosphoric acid

IOELV (EU)	Short-term value: 2 mg/m³	Long-term value: 1 mg/m³
PEL (USA)	1 mg/m³	
REL (USA)	Short-term value: 3 mg/m³	Long-term value: 1 mg/m³
TLV (USA)	Short-term value: 3 mg/m³	Long-term value: 1 mg/m³
AGW (Germany)	Long-term value 2 E mg/m³	2(I);DFG, EU, AGS, Y

DNELs

For workers:
Long-term-local effects (inhalation) DNEL: 1 mg/m³
Acute local effects (inhalation) DNEL: 2 mg/m³
Long-term-systemic effects (inhalation): 10.7 mg/m³
For general population:
Long-term-local effects (inhalation) DNEL: 0.36 mg/m³
Long-term-systemic effects (oral) DNEL: 4.57 mg/kg bw/day

PNECs

Not applicable
Phosphoric acid toxicity is related to its acidic nature. A generic PNEC (water) cannot be derived as the effects are highly depending on the pH of the receiving water and its buffer capacity highly variable.

8.2 Exposure controls

Appropriate engineering controls

The usual precautionary measures are to be adhered to when handling chemicals.

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Do not eat or drink while working.
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.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

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.

Full contact

Material:

Minimum layer thickness:	0,7 mm	butyl-rubber
Minimum layer thickness:	0,4 mm	*Nitrile rubber*
Minimum layer thickness:	0,5 mm	*Chloroprene rubber*
Minimum layer thickness:	0,4 mm	*Fluorocarbon rubber (Viton)*
Minimum layer thickness:	0,5 mm	*Natural rubber*
Minimum layer thickness:	0,5 mm	*Neoprene gloves*

Penetration time of glove material *≥8 h*

Not suitable are gloves made of the following materials: Leather gloves

Body Protection

Acid resistant protective clothing and boots

Risk management measures

Regular control of the pH value previous to or during discharges into open waters is required. Discharges should be carried out as to minimize pH changes in receiving surface waters. In general most aquatic organisms can tolerate pH values in the range of 6-9.

Limitation and supervision of exposure into the environment

Avoid discharging of phosphoric acid solutions into municipal wastewater, surface water or soils, when such discharges are expected to cause significant pH changes.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form	liquid
		Colour	colourless
b)	Odour	Odourless	
c)	Odour Threshold	No data available.	

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d)	pH at 20 °C:	<1
e)	Melting point	-17,5 °C
f)	Initial boiling point and boiling range	135 °C
g)	Flash point	Not applicable. This product is inorganic substance.
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	Product is not flammable
j)	Upper/lower flammability or explosive limits	Upper explosion limit: None Lower explosion limit:None
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	1,579 g/cm³ at 20 °C
n)	Water solubility	>1000 g/l
o)	Partition coefficient: noctanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	>200 °C Thermal decomposition on losing water.
r)	Viscosity	9,4 cP at 20 °C
s)	Explosive properties	None
t)	Oxidizing properties	None

9.2 Other safety information

No further relevant information available.

10. Stability and reactivity

10.1 Reactivity

Corrosive action on metals

Reacts with reducing agents.

Reacts with alkali (lyes).

Ammonia (NH_3), fluorine, sulfur trioxide (SO_3), phosphorus pentoxide (P_2O_5).

10.2 Chemical stability

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Reacts with metals forming hydrogen.

Reacts with alkali (lyes).

10.4 Conditions to avoid

To avoid thermal decomposition do not overheat.

10.5 Incompatible materials

Alkalis, Metals

10.6 Hazardous decomposition products

Phosphorus oxides (e.g. P2O5)

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11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed.

LD/LC50 values relevant for classification:

7664-38-2 Orthophosphoric acid

Oral LD50 300 mg/kg (rat) (equivalent to OECD 423)

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes severe skin burns and eye damage.

Respiratory or skin sensitisation

No sensitising effects known.

Phosphoric acid is classified as skin corrosive, thus a further assessment for sensitization is not necessary.

Germ cell mutagenicity

No data available.

Carcinogenicity

no data available

Reproductive toxicity

no classification is necessary

reproductive toxicity: NOAEL≥500 mg/kg bw/day ; rat; oral (OECD 422)

developmental toxicity: NOAEL≥410 mg/kg bw/day ; rat; oral

maternal toxicity: NOAEL≥410 mg/kg bw/day ; rat; oral (equivalent to OECD 414)

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

Oral NOAEL 250 mg/kg bw/day (rat) (OECD 422 (subchronic))

should not be classified for STOT - repeated exposure

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

Aspiration hazard

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

12. Ecological information

12.1 Toxicity

Phosphoric acid toxicity is related to its acidic nature and, therefore, is more related to concentration than to dose.

EC50/48 h (static) >100 mg/L (Daphnia magna) (OECD 202, freshwater)

EC50/72 h (static) >100 mg/L (algae) (OECD 201, freshwater, 72 h NOEC=100 mg/L)

median lethal pH 96h 3-3,25 (Bluegill fish) fish mortality is caused by low pH values

12.2 Persistence and degradability

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The substance is inorganic; therefore no biodegradation tests are applicable.
Phosphoric acid dissociates in water into H3O+, H2PO4–, HPO4- - ions, which cannot be further degraded.

12.3 Bioaccumulative potential

Does not accumulate in organisms
This substance is highly water soluble and dissociating.
Phosphoric acid dissociates in water into H3O+, H2PO4–, HPO4- - ions, which are ubiquitous in the environment.
Phosphoric acid is absorbed in form of phosphate anions. This anion is an essential component of the body.

12.4 Mobility in soil

This substance is highly water soluble and dissociating.
When spilled onto soil, polyphosphoric acid will infiltrate downward and will be partially neutralized by dissolving some of the soil material. On reaching the ground table polyphosphoric acid will be dispersed and diluted. Therefore, the environmental assessment should be limited to the aquatic compartment.

12.5 Results of PBT and vPvB assessment

PBT: No assessment is required for inorganic substances.
vPvB: No assessment is required for inorganic substances.

12.6 Other adverse effects

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

13. Disposal considerations

13.1 Waste treatment methods

Product

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local

Contaminated packagin

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

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PHOSPHORIC ACID %75

14. Transport information

14.1 UN number

ADR/RID: 1805 IMDG: 1805 IATA: 1805

14.2 UN proper shipping name

ADR/RID	1805 PHOSPHORIC ACID SOLUTION
IMDG	SOLUTION PHOSPHORIC ACID
IATA	PHOSPHORIC ACID SOLUTION

14.3 Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

Warning: Corrosive substances.

15. Regulatory information

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

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

Directive 2000/60 EC (phosphates)

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Further information

 The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Likit Kimya Company and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.likitkimya.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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