

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

1.1 Product identifier

Trade name Phosphate esters (Additiv PE81, PE82, PE51)
Chemical Name Phosphoric acid, mono and dialkyl esters

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

Relevant identified uses Heavy duty alkaline cleaning products, Laundry Detergents, Textile auxiliaries, Acid cleaners, Metal working fluids, Emulsifiers, Wetters, Dispersants, Water based lubricants
 Intermediate for the synthesis of other anionic surfactants

Uses identified against Food additive, medicinal products, cosmetic products

1.3 Details of the supplier of the safety data sheet:

Manufacturer Prasol Chemicals Pvt. 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.
Telephone +91-22-27782555
Telefax +91-22-27782430
e-mail address sales@prasolchem.com; inquiry@prasolchem.com

1.4 Emergency telephone number

Telephone +91-22- 27782555
Language English

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Acute Toxicity	Category 4	H302	Harmful if swallowed
Acute Toxicity	Category 4	H312	Harmful in contact with skin
Skin Corrosion	Category 1C	H314	Causes severe skin burns and eye damage
Eye Damage	Category 1	H318	Causes serious eye damage

Information concerning particular hazards for human and environment: No further information

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms



GHS05



GHS07

Signal word Danger

Hazard statements H302 Harmful if swallowed
 H312 Harmful in contact with skin
 H314 Causes severe skin burns and eye damage
 H318 Causes serious eye damage

Precautionary statements

General	P103	Read label before use.
Prevention	P260	Do not breathe dusts or mists.
	P264	Wash hands thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P280	Use protective gloves and eye protection.
Response	P301 + P312	IF SWALLOWED: Call a doctor if you feel unwell.
	P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P302+P352	IF ON SKIN: Wash with plenty of water.
	P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
	P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	P310	Immediately call a doctor.
	P312	Call a doctor if you feel unwell.
	P321	Specific treatment: wash with plenty of water and mild soap.
	P330	Rinse mouth.

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	P362+P364	Take off contaminated clothing and wash it before reuse.
	P363	Wash contaminated clothing before use.
Storage	P405	Store locked up.
Disposal	P501	Dispose of contents and container in accordance with national regulations

2.3 Other hazards

Not a PBT, vPVB substance according to the criteria of REACH regulation

SECTION 3: Composition/information on ingredients

3.1 Substances

Ingredient	CAS No.	EC No.	Concentration (%)
Phosphate esters (Additivs PE81, PE82, PE51) (Phosphoric acid, mono and dialkyl esters)	Proprietary information		80-100

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Show this safety data sheet to the doctor in attendance. First aider needs to protect himself. Place affected clothing in a sealed bag for subsequent decontamination

After inhalation

Move to fresh air. Keep at rest. Consult a physician..

After skin contact

Take off all contaminated clothing immediately. If symptoms persist, call a physician. Wash off immediately with soap and plenty of water.

After eye contact

Rinse immediately with plenty of water and seek medical advice.

After swallowing

Do not induce vomiting and seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO₂, dry powder, foam, sand, water spray

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Highly irritating vapours are released.

Hazardous decomposition products formed under fire conditions:

Carbon oxides. Oxides of phosphorus.

5.3 Advice for firefighters

Cool closed containers exposed to fire with water spray.

Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

Avoid breathing vapours, mist or gas during processing.

Ensure adequate ventilation

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste.

Keep in suitable, closed containers for disposal.

Suitable binder: sand

6.4 Reference to other sections

Section 8 for information on personal protection equipment.

Section 13 for disposal information

SECTION 7: Handling and storage

7.1 Precautions for safe handling

If possible, use material transfer, metering and blending plants that are closed.

Avoid contact with skin and eyes.

Avoid inhalation of vapour or mist.

7.2 Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion

Follow normal measures for preventive fire protection.



Storage	German storage class: 10 - Combustible liquids Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Mechanical exhaust required.
Advice on common storage	Observe prohibition against storing together!
Storage stability	Maximum Storage Temperature: 45°C
7.3 Specific end use(s)	No further relevant information available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters	Occupational Exposure Limit	Contains no substances with occupational exposure limit values.		
8.2 Exposure controls	Appropriate engineering controls	If possible, use material transfer, metering and blending plants that are closed controls		
	Personal protective equipment			
	Eye/ face protection	closed goggles, face shield		
	Skin protection	Type of material	Thickness	Breakthrough time
	Hand protection	Butyl-rubber	0.5 mm	> 480 min
		Polychloroprene (PCP)	0.5 mm	110 min
	Body protection	Boots, body suit		
	Respiratory protection	If mist is formed: self-contained breathing apparatus; Avoid inhaling vapours.		
	Thermal hazards	Combustible liquid, possibility of decomposition on excess heating		
	Industrial hygiene	Avoid contact with skin and eyes. Remove immediately all contaminated clothing. Keep working clothes separately. Smoking, eating and drinking should be prohibited in the application area.		

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
Appearance	Colorless to yellow liquid
Odour	odourless
Odour threshold	no data available
pH	highly acidic
Melting point	-50°C
Boiling point	not determined (decomposes before boiling)
Flash point	180°C (open cup)
Evaporation rate	no data available
Flammability (solid, gas)	not applicable (product is a liquid)
Flammability limits	no data available
Vapour pressure	2.4x10 ⁻⁵ Pa at 25°C (by QSAR)
Vapour density	not determined
Relative density	1.00 -1.10 at 15.6°C
Solubility in water	0.182g/L at 20°C, moderately soluble
Partition coefficient	6.07 log Pow (n-octanol/water) at 20°C (QSAR)
Ignition temperature	255°C
Decomposition temperature	240°C
Viscosity at 40 °C	60-110 cSt
Explosive properties	no explosive properties
Oxidizing properties	no oxidizing properties
9.2 Other information	no further information

SECTION 10: Stability and reactivity

10.1 Reactivity	No hazardous reaction when handled and stored according to provisions.
10.2 Chemical stability	Under storage at normal ambient temperatures (-40°C to +45°C), the product is stable.
10.3 Possibility of hazardous reactions	Spontaneous decomposition may start at 150°C.; After prolonged heating, slow decomposition may start at above 80°C.
10.4 Conditions to avoid	Extremes of temperature and direct sunlight.

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Product: Phosphate esters (Additiv PE81, PE82, PE51)



- 10.5 Incompatible materials** strong acids; bases, oxidizing materials
10.6 Hazardous decomposition products on combustion or on thermal decomposition (pyrolysis) releases : toxic and corrosive vapours/ flammable vapours which may generate fire or explosion hazards : alcohols, carbon oxides (CO + CO₂), oxides of Phosphorus.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50	oral	rat	500-5000 g/kg bw
LC0	inhalation	rat	>1300 mg/l
LD50	Dermal	rabbit	>2000 g/kg bw

Skin irritation

corrosive (rabbit) Category 1C

Serious eye irritation

Irritating (rabbit) Category 1

Respiratory or skin sensitization

not determined (material is highly corrosive)

Germ cell mutagenicity

non mutagenic (Ames test)

Carcinogenicity

not carcinogenic

Reproductive toxicity

NOAEL >750 mg/kg/day (rat), (due to secondary effects)

STOT-single exposure

irritating to eye and skin

STOT-repeated exposure

no data available

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Toxicity to fish	LC50	96h	30mg/L	<i>Oncorhynchus mykiss</i>
Toxicity to aquatic invertebrates	LC50	48h	60.7 mg/L	<i>Daphnia magna</i>
Toxicity to aquatic algae and cyanobacteria	EC50	72h	>100 mg/L	<i>Desmodesmus subspicatus</i>
Toxicity to microorganisms	EC50	3h	>890mg/L	sewage, domestic

12.2 Persistence and degradability

Biodegradation

readily biodegradable (82% in 28days)

12.3 Bioaccumulative potential

Bioaccumulation factor (BCF) 1.1-2.4

no indication for bioaccumulation

12.4 Mobility in soil

log Kow = 2.88

12.5 Results of PBT and vPvB assessment

Not a PBT, vPvB substance according to the REACH regulation

12.6 Other adverse effects

material is highly acidic, adverse effects on environment can be caused due to increase in acidity

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods** Observe all federal, state, and local environmental regulations.
 Contact a licensed professional waste disposal service to dispose of this material.
 Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
 Do not dispose in sewage.

SECTION 14: Transport information

	ADR/RID	IMDG	ICAO/IATA
14.1 UN Number	3265	3265	3265
14.2 UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s.		
14.3 Transport hazard class	8	8	8
14.4 Packaging group	III	III	III
14.5 Environmental hazards	not environmentally hazardous		
14.6 Special precautions for the user	Highly acidic, corrosive		
EmS Number	F-A, S-B		
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	See regulatory information for transport approval		

SECTION 15: Regulatory information

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

Major accident hazard Seveso III no

International Chemical Inventory Status

USA (TSCA) listed
Canada (DSL) listed
Australia (AICS) listed
Japan (MITI) listed
Korea (KECL) listed
Philippines (PICCS) listed
China listed
New Zealand listed
Taiwan listed

15.2 Chemical safety assessment A Chemical Safety Assessment will be carried out at the time of REACH registration

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.

Further information:

Sections in which changes have been made since the last version are marked with a diamond ◆ in the left hand margin.

Abbreviations and acronyms in English language:

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
AICS Australian Inventory of Chemical Substances
CAS Chemical Abstracts Service (division of the American Chemical Society)
CLP Classification for Labeling and Packaging
DSL Domestic Substances List
EC European Commission
EC50 Half maximal effective concentration
EINECS European Inventory of Existing Commercial Chemical Substances
GHS Globally Harmonized System of Classification and Labeling of Chemicals
IATA International Air Transport Association
IBC International Bulk Chemical
ICAO International Civil Aviation Organization
IMDG International Maritime Code for Dangerous Goods
KECL Korea Existing Chemicals List
KOC Soil adsorption coefficient
KOW Partition Coefficient octanol-water
LC50 Lethal concentration, 50 percent
LD50 Lethal dose, 50 percent
MARPOL International Convention for the Prevention of Pollution from Ships
MITI Ministry of International Trade and Industry
NOAEC No Observed Adverse Effect Concentration
NOAEL No Observed Adverse Effect Level
PBT Persistent, bioaccumulative and toxic substances
PICCS Philippine Inventory of Chemicals and Chemical Substances
RID Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT Specific target organ toxicity
TSCA Toxic Substances Control Act
UN United Nations
vPVB (very) Persistent, (very) Bioaccumulative

Sources

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)