Safety data sheet as per Commission Regulation (EU) 2020/878
Product: Additiv 51

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

1.1 Product identifier

Trade name	**Additiv 51**
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 Limited (Formerly Prasol Chemicals Private Limited) 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	+91-22-22-69450600/ 61952500
Telefax	+91-22-61952577
e-mail address	sales@prasolchem.com; inquiry@prasolchem.com

1.4 Emergency telephone number

Telephone	+91-22- 7045783555/ 7045790555
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 - Oral	Category 5	H303	May be harmful if swallowed
Skin Corrosion	Category 1B	H314	Causes severe skin burns and 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

Signal word	Danger	
Hazard statements	H303	May be harmful if swallowed
	H314	Causes severe skin burns and eye damage
Precautionary statements		
General	P103	Read label before use.
Prevention	P260	Do not breathe dusts or mists.
	P264	Wash hands thoroughly after handling.
	P280	Use protective gloves and eye protection.
Response	P301+P317	IF SWALLOWED: Get medical help.
	P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	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+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	P316	Get emergency medical help immediately.
	P321	Specific treatment: wash with plenty of water and mild soap.
	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.

Not having endocrine disruptive properties as per criteria of Delegated Regulations (EC) 2017/2100 or (EC) 2018/605

SECTION 3: Composition/information on ingredients

3.1 Substances

Name	Additiv 51
CAS Number	proprietary
EC Number	proprietary
Molecular Formula	not applicable (multicomponent)
Molecular Weight	not applicable (multicomponent)

Ingredient	Classification	Concentration (%)
Additiv 51 (Phosphoric acid, mono and dialkyl esters)	Acute Tox. Oral 5, Skin Corr.1B, H303, H314	80-100

There are no other ingredients present, which are classified as hazardous and hence require reporting in this section.

3.2 Mixtures not applicable

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 Burning, Risk of serious damage to eyes, Irritating to mucous membranes, Redness, Swelling of tissue

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 CO_2, 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, silica gel, acid binder, universal binder, sawdust

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.
Packaging material	Stainless steel, Plastic drum
Incompatibility	Carbon steel
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

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	2.4×10^{-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	50-60 cSt
Particle characteristics	Not applicable (substance is liquid)

9.2 Other information no further information

Explosive properties	no explosive properties based on chemical structure
Oxidizing properties	no oxidizing properties based on chemical structure

SECTION 10: Stability and reactivity

10.1	**Reactivity**	No dangerous reaction known under conditions of normal use
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**	Heat, flames and sparks
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 + CO_2), oxides of Phosphorus.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (read across from structurally similar substance)

LD50	oral	rat	2500 mg/kg bw	**Cat 5, H303** (May be harmful if swallowed)
LD50	inhalation	Corrosive, hence no study conducted		
LD50	Dermal	Corrosive, hence no study conducted		

Skin irritation	corrosive (rabbit) **Cat 1B**, **H314** (exposure of ≥3 minutes to ≤1 hour to cause corrosive effects)
Serious eye irritation	Irritating (rabbit) **Cat 1B**, **H314**
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, low potential for systemic toxicity since severe irritancy / corrosivity will limit exposure in the workplace

11.2 Information on other hazards

Endocrine disrupting properties	No endocrine disrupting properties
Other information	No further information

SECTION 12: Ecological information

12.1 Toxicity (read across from structurally similar substance)

Aquatic toxicity

Toxicity to fish	LC50	96h	>100mg/L	*Danio rerio*
Toxicity to aquatic invertebrates	LC50	48h	>100 mg/L	*Daphnia magna*
Toxicity to aquatic algae and cyanobacteria	EC50	72h	>100 mg/L	*Desmodesmus subspicatus*
Toxicity to microorganisms	EC50	3h	>100mg/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 Endocrine disrupting properties	No endocrine disrupting properties
12.7 Other adverse effects	Corrosive material, can cause change in pH of water

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. (Phosphoric Acid Monoalkylester, Phosphoric Acid dialkylester)		
14.3	**Transport hazard class**	8	8	8
14.4	**Packaging group**	II	II	II
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
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:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
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
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
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
PBT	Persistent, bioaccumulative and toxic 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)

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