Safety data sheet as per Commission Regulation (EU) 2020/878
Product: Additiv 630

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name **Additiv 630**

Chemical Name Zinc dialkyl dithiophosphate (ZDDP)

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

Relevant identified uses Industrial use: Lubricant additive; Anti-wear additives to lubricants such as greases, gear oils, and motor oils; corrosion inhibitors and antioxidants, as a vulcanization additive in production of tyres and rubber products
Professional use: Used in manufacture of lubricants and greases in vehicles and machinery
Consumer use: Lubricants and greases

Uses identified against Food additive, medicinal products, cosmetic products

1.3 Details of the supplier of the safety data sheet:

Manufacturer: Prasol Chemicals Limited
Prasol House, Plot No.A-17/2/3,
T.T.C. Industrial Area, Khairne M.I.D.C.,
NaviMumbai-400710.
Maharashtra, India.

Telephone: +91-22-69450600/ 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

2.1Classification of the substance or mixture

Classification according to Regulation (EC) No1272/2008 (CLP)

Skin Irritation	Category 2	H315	Causes skin irritation
Eye Damage	Category 1	H318	Causes serious eye damage
Aquatic Chronic	Category 2	H411	Toxic to aquatic life with long lasting effects

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

2.2 Label elements

Labeling according to Regulation (EC) No1272/2008 (CLP)

Hazard pictograms

GHS05

GHS09

Signal word Danger

Hazard statements	H315	Causes skin irritation
	H318	Causes serious eye damage
	H411	Toxic to aquatic life with long lasting effects

Precautionary statements

General	P103	Read label before use.
Prevention	P264	Wash hands thoroughly after handling.
	P273	Avoid release to the environment.
	P280	Use protective gloves and eye protection.
Response	P302+P352	IF ON SKIN: Wash with plenty of water.
	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.
	P321	Specific treatment: wash with plenty of water and mild soap.
	P332 + P313	If skin irritation occurs: Get medical attention.
	P362+P364	Take off contaminated clothing and wash it before reuse.
	P391	Collect spillage
Storage	-	
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 Annex XIII to 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	Zinc di(alkyl)dithiphosphate (ZDDP)
IUPAC Name	Dialkyl, O,O-diester with phosphorodithioic acid, zinc salt
CAS No.	68649-42-3
EC No.	272-028-3
Molecular Formula	not applicable (UVCB)
Molecular Weight	not applicable (UVCB)

Ingredient	Classification	Concentration (%)	SCL, M-factor, ATE
Zinc di(alkyl) dithiphosphate	Skin Irrit. 2, Eye Dam. 1, Aq. Chr. 2 H315, H318, H411	80-100	M(Chronic)=0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
There are no other ingredients present, which are classified as hazardous and hence require reporting in this section.
None of the ingredients present are classified as skin sensitisers 1A, respiratory sensitisers 1A, aspiration hazards and endocrine disruptors.

3.2 Mixtures not applicable

None of the ingredients present are classified as skin sensitisers 1A, respiratory sensitisers 1A, aspiration hazards and endocrine disruptors.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information	Symptoms of poisoning may only appear several hours later. When symptoms persist or in all cases of doubt seek medical advice. Remove from exposure, lie down. Never give anything by mouth to an unconscious person.
After inhalation	After inhalation of vapours during processing, remove the patient to fresh air at once.
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	May cause eye damage, skin and respiratory irritation, burns to mouth, throat and stomach if ingested
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
Unsuitable extinguishing media	water jet
5.2 Special hazards arising from the substance or mixture	May form toxic sulfur dioxide and carbon oxides if burning. Closed container may rupture if strongly heated. Combustible liquid. Explosive mixtures may occur at temperatures at or above the flashpoint.
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. Section13fordisposalinformation

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. Empty containers retain product residue and can be hazardous. Do not reuse container. Maximum Handling Temperature 70 °C

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

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: Not required; except in case of aerosol formation. 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

Physical state	Liquid
Color	Colorless to pale brown
Odour	characteristic of sulfur-containing compounds
Odour threshold	no data available
pH	5.5-7.5
Melting point	not determined (liquid; pour point -21°C)
Boiling point	not determined (decomposes before boiling)
Flash point	143°C (closed cup)
Evaporation rate	not determined
Flammability (solid, gas)	not applicable (product is a liquid)
Flammability limits	no data available
Vapour pressure	0.078Pa at 25°C
Vapour density	not determined
Relative density	1.15 at15.6°C
Solubility in water	54.2 mg/L at 20°C, pH 5.6
Partition coefficient	1.67 log Pow (n-octanol/water) at 20°C
Ignition temperature	242°C
Decomposition temperature	215°C
Viscosity at 100 °C	10 cSt
Particle characteristics	Not applicable (substance is a liquid)

9.2 Other information

Surface tension: 64.6mN/m at 21.4°C. The substance is not a surface-active material.

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

SECTION10: 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. Decomposition temperature 215°C
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.
10.5	**Incompatible materials**	Keep away from reducing agents, oxidising agents, acids and bases.
10.6	**Hazardous decomposition products**	Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Hydrogen sulfide and alkyl mercaptans and sulfides may also be released. Under combustion conditions, oxides of the following elements will be formed: phosphorus, sulfur, zinc.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50	oral	rat	2000-5000 g/kg bw	Category 5
LD50	Dermal	rabbit	>2.002 mg/kg bw	not classified

Skin irritation	Irritating 24h (rabbit); **Category 2; H315**
Serious eye irritation	Irritating 24h (rabbit); **Category 1; H318** (irreversible effects on the eye)
Respiratory or skin sensitization	Not a skin sensitizer
Germ cell mutagenicity	non mutagenic (Ames test)
Carcinogenicity	no data available
Reproductive toxicity	NOAEL 30 mg/kg/day (rat)
STOT-single exposure	irritating to eye and skin;
STOT-repeated exposure	not classified as specific target organ toxicant NOAEL 160 mg/kg bw/day; rat (oral)

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

Aquatic toxicity

Toxicity to fish	LC50	96h	4.5mg/L	*Oncorhynchus mykiss*
Toxicity to aquatic invertebrates	LC50	48h	23 mg/L	*Daphnia magna*
Toxicity to aquatic algae and cyanobacteria	EC50	72h	21 mg/L	*Desmodesmus subspicatus*
Toxicity to microorganisms	EC50	3h	>10,000mg	sewage, domestic

12.2 Persistence and degradability	
Biodegradation	not readily biodegradable (1.5% in 28days) **Aq. Chr. Cat 2 H411**
12.3 Bioaccumulative potential	Bioconcentration factor <1000L/Kg very low potential for bioaccumulation
12.4 Mobility in soil	log Pow = 1.67
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	Harmful to aquatic organisms The material is harmful to the environment

SECTION 13: Disposal considerations

13.1	**Waste treatment methods**	Observe all national, state and local environmental regulations.
	Product disposal	Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
	Packaging disposal	Clean container with water. Recover waste water for processing later. Destroy packaging by incineration at an approved waste disposal site.
	Sewage disposal	Do not dispose in sewage.

SECTION 14: TRANSPORT INFORMATION

		ADR/RID	IMDG	ICAO/IATA
14.1	**UN Number**	3082	3082	3082
14.2	**UN proper shipping name**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MIXTURE, CONTAINS ZINC DIALKYL DITHIOPHOSPHATE)		
14.3	**Transport hazard class**	9	9	9
14.4	**Packaging group**	III	III	III
14.5	**Environmental hazards**	environmentally hazardous, marine pollutant		
14.6	**Special precautions for the user**	Combustible liquid; Flash point 140°C (closed cup) Environmentally hazardous substance. Marine pollutants. Irritating to the eyes. Keep dry. Keep separated from foodstuffs		
	EmS Number	F-A (S-F)		
14.7	**Maritime transport in bulk according to IMO instruments**	Ship type: 2; Pollution Category: Y		

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

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

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification for Labeling and Packaging
DMEL	Derived minimal effect level
DNEL	Derived No-Effect Level
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
LC50	Lethal concentration,50 percent
LD50	Lethal dose,50 percent
M-factor	Multiplication Factor
MITI	Ministry of International Trade and Industry
NOAEL	No Observed Adverse Effect Level

PBT	Persistent, bioaccumulative and toxic substances
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No-Effect Concentration
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
SCL	Specific concentration limit
STOT	Specific target organ toxicity
TSCA	Toxic Substances Control Act
UN	United Nations
vPVB	(very) Persistent, (very) Bioaccumulative

Key literature references and sources for data

Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH))

ECHA https://echa.europa.eu/registration-dossier/-/registered-dossier/20794

--End of safety data sheet--