

Safety data sheet as per Commission Regulation (EU) 2020/878

Product: Additiv 2030



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

1.1 Product identifier

Trade name	Additiv 2030
Chemical Name	Zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate) (ZDDP)
CAS No.	68442-22-8
EC Number	270-478-5
REACH Registration number	01-2119948548-22-0010

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	Not to be used as a food additive or in medicinal and cosmetic products

1.3 Details of the supplier of the safety data sheet:

Manufacturer	Prasol Chemicals Limited Prasol House, PlotNo.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

2.1 Classification 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

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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 bis(O,O-ethylhexyl and isobutyl dithiophosphate) (ZDDP)
IUPAC Name	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and isobutyl) esters, zinc salts
CAS No.	68442-22-8
EC No.	270-478-5
Molecular Formula	not applicable (UVCB)
Molecular Weight	not applicable (UVCB)

Ingredient	Classification	Concentration (%)	SCL, M-factor, ATE
zinc bis(O,O-ethylhexyl and isobutyl dithiophosphate) (ZDDP)	Skin Irrit. 2, Eye Dam. 1, Aq. Chr. 2; H315, H318, H411	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

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, respiratory irritation, burns to mouth, throat and stomach if ingested

After inhalation

Headache. Respiratory difficulties.

After skin contact

Red skin. Tingling/irritation of the skin.

After eye contact

Irritation of the eye tissue. Inflammation/damage of the eye tissue.

After swallowing

Vomiting. Nausea. Disturbances of consciousness

Chronic symptoms

Skin rash/inflammation

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

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.

Explosive mixtures may occur at temperatures at or above the flashpoint.

Decomposition products may include the following materials: carbon oxides (CO, CO₂); metal oxide/oxides; Hydrogen sulfide; sulfur oxides (SO₂, SO₃), mercaptans.

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

For small spills and large spills: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Clear spills immediately.

For non-emergency personnel

Protective equipment: Gloves, Face shield, Protective clothing.



	Emergency procedures: Mark the danger area. No naked flames. Wash contaminated clothes.
For emergency responders	Protective equipment: Equip cleanup crew with proper protection. Emergency procedures: Ventilate area.
6.2 Environmental precautions	Do not allow to enter sewers, surface or ground water.
6.3 Methods and material for containment and cleaning up	For containment: Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply For cleaning up: Soak up with inert absorbent material eg. sand, earth, vermiculite or powdered lime stone and keep in suitable, closed containers for disposal. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
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	Measures to prevent fire: Keep away from naked flames/heat. Use spark-/explosion proof appliances. Measures to prevent aerosol and dust generation: Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Measures to protect the environment: Keep container tightly closed. If possible, use material transfer, metering and blending plants that are closed. Maximum Handling Temperature 70 °C Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
7.2 Conditions for safe storage, including any incompatibilities	
Technical measures and storage conditions	Keep only in the original container in a cool, well ventilated place away from ignition sources and incompatible materials. Keep container closed when not in use Follow normal measures for preventive fire protection.
Packaging material	SUITABLE MATERIAL: steel, stainless steel, carbon steel, HDPE, glass
Incompatible products	Strong bases. Strong acids, reducers, acid anhydrides
Storage conditions	Store in a cool, dry area. Ventilation at floor level. Store at ambient temperature. Keep container tightly closed in a dry and well-ventilated place. Residual vapours might explode on ignition
Advice on common storage	Observe prohibition against storing together!
Storage stability	Maximum Storage Temperature: 45°C; Stable under recommended storage conditions
Storage class	Class 10 Combustible liquid
7.3 Specific end use(s)	No further relevant information available

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters	
Occupational Exposure Limit	5 mg/m ³ - ACGIH TLV (inhalable fraction)
Occupational Exposure Limit	Contains no substances with occupational exposure limit values
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	No hazard identified
Long-term - systemic effects, dermal	11.4 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	8.05 mg/m ³
Long-term - local effects, inhalation	No hazard identified
DNEL/DMEL (General population)	
Acute - local effects, inhalation	No hazard identified
Long-term - systemic effects, oral	0.24 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.98 mg/m ³
Long-term - systemic effects, dermal	5.71 mg/kg bodyweight/day
Long-term - local effects, inhalation	No hazard identified
PNEC (Water)	
PNEC aqua (freshwater)	4 µg/l
PNEC aqua (marine water)	4.6 µg/l

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PNEC (Sediment)

PNEC sediment (freshwater) 0.045 mg/kg dw

PNEC sediment (marine water) 0.005 mg/kg dw

PNEC (Soil)

PNEC soil 0.45 mg/kg dw

PNEC (STP)

PNEC sewage treatment plant 100 mg/l

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
Colour 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)
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 1.0735 at 15.6°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 10.94 cSt
Particle characteristics Not applicable (substance is a liquid)

9.2 Other information

Evaporation rate not determined
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

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. 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.

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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	<i>Oncorhynchus mykiss</i>
Toxicity to aquatic invertebrates	LC50	48h	23 mg/L	<i>Daphnia magna</i>
Toxicity to aquatic algae and cyanobacteria	EC50	72h	21 mg/L	<i>Desmodesmus subspicatus</i>
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

12.6 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		

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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	(Tracking No. 433789)
Canada (DSL)	listed	
Australia (AICS)	not listed	
Japan (MITI)	not listed	
Korea (KECL)	not listed	
Philippines (PICCS)	listed	
China	listed	
New Zealand	listed	
Taiwan	listed	

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out

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
MARPOL	International Convention for the Prevention of Pollution from Ships
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
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/13505/6/1>

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End of safety data sheet