

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

Product: Additiv 1030



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

1.1 Product identifier

Trade name	Additiv 1030
Chemical Name	Zinc di(ethylhexyl)dithiophosphate (ZDDP)
CAS Number	4259-15-8
EC Number	224-235-5

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

2.1 Classification of the substance or mixture

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

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	H318	Causes serious eye damage
	H411	Toxic to aquatic life with long lasting effects

Precautionary statements

General	P103	Read label before use.
Prevention	P273	Avoid release to the environment.
	P280	Use protective gloves and eye protection.
Response	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.
	P391	Collect spillage
Storage	-	
Disposal	P501	Dispose of contents and container in accordance with national regulations

2.3 Other hazards

Under assessment as Persistent, Bioaccumulative and Toxic

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(ethylhexyl)dithiophosphate (ZDDP)
IUPAC Name	1-Hexanol, 2-ethyl-, O,O-diester with phosphorodithioic acid, zinc salt
CAS No.	4259-15-8

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

Product: Additiv 1030



EC No. 224-235-5
Molecular Formula not applicable (UVCB)
Molecular Weight not applicable (UVCB)

Ingredient	Classification	Concentration (%)	SCL, M-factor, ATE
Zinc di(ethylhexyl)dithiophosphate	Eye Dam. 1, Aq. Chr. 2 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

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 irritating fumes of 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

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.

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

Product: Additiv 1030



- 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.
- Advice on general occupational hygiene**
- 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** Class10 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 Contains no substances with occupational exposure limit values.
- DNEL/DMEL (Workers)**
- Acute - local effects, inhalation insufficient hazard data available
- Long-term - systemic effects, dermal 9.6 mg/kg bodyweight/day
- Long-term - systemic effects, inhalation 6.6 mg/m³
- Long-term - local effects, inhalation insufficient hazard data available
- DNEL/DMEL (General population)**
- Acute - local effects, inhalation insufficient hazard data available
- Long-term - systemic effects, oral 0.19 mg/kg bodyweight/day
- Long-term - systemic effects, inhalation 1.67 mg/m³
- Long-term - systemic effects, dermal 4.8 mg/kg bodyweight/day
- Long-term - local effects, inhalation insufficient hazard data available
- PNEC (Water)**
- PNEC aqua (freshwater) 4µg/l
- PNEC aqua (marine water) 4.6µg/l
- PNEC (Sediment)**
- PNEC sediment (freshwater) 0.322 mg/kg dwt
- PNEC sediment (marine water) 0.032 mg/kg dwt
- PNEC (Soil)**
- PNEC soil 0.062mg/kg dwt
- PNEC (STP)**
- PNEC sewage treatment plant 3.8 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

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

Product: Additiv 1030



Hand protection	Butyl-rubber	0.5 mm	> 480 min
	Polychloroprene (PCP)	0.5 mm	110 min
Body protection	Boots, body suit		
Respiratory protection	Use half mask respirator with an organic vapor cartridge if exposure limit is exceeded. 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 -27°C)
Boiling point	not determined (decomposes before boiling)
Flash point	147°C (closed cup)
Evaporation rate	not determined
Flammability (solid, gas)	not applicable (product is a liquid)
Flammability limits	no data available
Vapour pressure	4.2x10 ⁻⁴ Pa at 25°C
Vapour density	not determined
Relative density	1.10 -1.20 at 15.6°C
Solubility in water	9.1 mg/L at 22°C, pH 5
Partition coefficient	3.59 log POW (n-octanol/water) at 22°C
Ignition temperature	240°C
Decomposition temperature	222°C
Viscosity at 100°C	12-22 cSt
Particle characteristics	Not applicable (substance is a liquid)

9.2 Other information

Explosive properties	no explosive properties based on chemical structure
Oxidizing properties	no oxidizing properties based on chemical structure
Surface tension	63.7 mN/m at 21°C. The substance is not a surface-active material

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	No hazardous reaction when handled and stored according to provisions.
10.2 Chemical stability	Material can become unstable at elevated temperatures and pressures. Under storage at normal ambient temperatures (-40°C to +45°C), the product is stable. Decomposition Temperature 222 °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. Odorous and toxic fumes may form from decomposition of this product if heat sources in excess 121°C are used.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50	oral	rat	3100 mg/kg bw	Category 5
LC50	inhalation	Not required as vapor pressure is very low		
LD50	Dermal	rabbit	>5000 g/kg bw	not classified

Skin irritation

Not irritating; 24h (rabbit)

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

Product: Additiv 1030



Serious eye irritation	Irritating Cat 1, H 318 (irreversible effects on the eye),24h (rabbit)
Respiratory or skin sensitization	Not sensitizing
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 125 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	LL50	96h	4.5mg/L	<i>Oncorhynchus mykiss</i>
Toxicity to aquatic invertebrates	EL50	48h	75mg/L	<i>Daphnia magna</i>
Toxicity to aquatic algae and cyanobacteria	EL50	72h	410mg/L	<i>Desmodesmus subspicatus</i>
Toxicity to microorganisms	EC50	16h	380mg/L	<i>Pseudomonas putida</i>

12.2 Persistence and degradability

Biodegradation

not readily biodegradable (1.5% in 28days) **Aq. Chr. Cat 2H411**

12.3 Bioaccumulative potential

Bioconcentration factor <1000L/Kg
very low potential for bioaccumulation

12.4 Mobility in soil

Calculated Koc = 770L/Kg

12.5 Results of PBT and vPvB assessment

Undergoing a PBT/vPvB assessment

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 DI(2-ETHYLHEXYL) 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 147°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 (Tracking no. 123059)

Canada (DSL) listed

Australia (AICS) listed

Japan (MITI) listed (MITI No. 2-2185)

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

Product: Additiv 1030



Korea (KECL)	listed (KECI No. 28657)
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
EL50	Median effective level
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 (organic carbon/ water)
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
LL50	Median lethal level
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
POW	Partition coefficient (n-Octanol/ Water)
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/14204>

Disclaimer: Information herein is given in good faith. Prasol Chemicals Limited makes no representations or warranties as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving the same will make their own determination as to its suitability for their purpose prior to use. Prasol Chemicals Limited shall not be responsible for damages of any nature whatsoever resulting from the use or reliance upon this information. The data provided are based on samples tested and are not guaranteed for all samples or applications. Such data are intended as guides only. No representations or warranties for a particular purpose or any other nature are made with respect to this information or the product.

-End of safety data sheet-