

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

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

1.1. Product identifier

Product name : Sinova Marine HLP-ZF 46
Product code : SA/HF - 0018

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

Identified uses : Lubricant – hydraulic oil
Uses advised against : No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer : ALCO LLC
3, Vali Mammadov st., Sabail dist., AZ1095, Baku, Azerbaijan
Tel.: +994 12 505 68 10
Email: sds@azlub.com

Unified emergency number : 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Physical hazards Health : Not classified
Hazards Environmental : Not classified
hazards : Not classified.

2.2. Label elements

Labelling according to Regulation (EC) 1272/2008 (CLP) : Not applicable

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

2.3. Other hazards

This mixture does not meet the criteria for vPvB or PBT according to Regulation (EC) No. 1907/2006, Annex XIII. This mixture is not identified as having endocrine disrupting properties by the criteria set out in the Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

: Not applicable

3.2. Mixtures

Distillates (petroleum), solvent-refined heavy paraffinic (Note L)

CAS No.	64741-88-4
EC No.	265-090-8
Index No. REACH	649-454-00-7
No.	01-2119488706-23-0056
Weight (%)	>85 - <90
Classification according to Regulation (EC) No. 1272/2008	Not classified
SCL, M-factor, ATE	-

Residual oils (petroleum), solvent-dewaxed (Note L)

CAS No.	64742-62-7
EC No.	265-166-0
Index No. REACH	649-471-00-X
No.	01-2119480472-38-0041
Weight (%)	>10 - <15
Classification according to Regulation (EC) No. 1272/2008	Not classified
SCL, M-factor, ATE	-

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

Note L: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346 “Determination of polycyclic aromatics in unused lubricating base oils and asphaltene-free petroleum fractions - Dimethyl sulphoxide extraction refractive index method”, Institute of Petroleum, London.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Never pour anything into the mouth of an unconscious person!
In all cases of doubt, or when symptoms persist, seek medical advice.

Inhalation

Remove a casualty to well-ventilated area and keep at rest in a position comfortable for breathing.

If the casualty is unconscious and not breathing - ensure that there is no obstruction to breathing and provide artificial respiration by trained personnel.

If the casualty is unconscious and breathing - place them in the recovery position. Administer oxygen if necessary. Get medical attention if breathing remains difficult.

Ingestion

If swallowed, immediately call a Poison Centre or doctor/ physician. Do not induce vomiting. If vomiting does occur, have casualty lean forward to reduce the risk of aspiration.

Skin contact

Remove contaminated, saturated clothing immediately. Wash area with soap and water for 10 to 15 minutes.

Get medical attention if adverse health effects persist or are severe.

Eye contact

Remove contact lenses.

Irrigate exposed eyes with plenty of water for at least 15 minutes. Keep eyes wide open while rinsing.

Get medical attention if irritation occurs.

4.2. Most important symptoms and effects, both acute and delayed

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

No data available

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Unsuitable
extinguishing media

Foam, water fog, carbon dioxide, dry chemical powder High
volume water jet

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

: Carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂, etc.)

5.3. Advice for firefighters

In the event of a large fire or in confined or poorly ventilated spaces, wear full fire-resistant protective clothing and a self-contained breathing apparatus (SCBA) with a full-facepiece operated in positive-pressure mode.

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Stop or contain the leak at its source if it is safe to do so. Avoid direct contact with released material. Stay upwind. Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and, if possible, advised by a trained, competent person in charge of managing the emergency. It is recommended to eliminate all ignition sources if safe to do so (e.g., electricity, sparks, fires, flares). If necessary, notify the relevant authorities in accordance with all applicable regulations.

For emergency responders

Small spillages: regular antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material.
Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons (gloves made of PVA are not water-resistant, and are not suitable for emergency use).
Work helmet. Antistatic non-skid safety shoes or boots.
Goggles or a face shield, if splashes or contact with the eyes is possible or anticipated.
Respiratory protection will be necessary only in special cases (e.g., formation of mists). A half or full-face respirator with combined dust/organic vapor filter(s), or a Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be assessed entirely, or if an oxygen deficiency is possible, only SCBAs should be used.

6.2. Environmental precautions

Avoid discharge into drains, sewers, watercourses, other bodies of water and soil. Inform the relevant authorities if environmental pollution occurs.

6.3. Methods and material for containment and cleaning up

For containment

: Impound and recover a large spill by mixing it with inert granular solids.

For cleaning up

: Detergent. Absorb liquid spills with absorbent materials such as sand, saw dust, or kieselguhr.

Other information

: Spill area may be slippery. Use suitable disposal containers.

6.4. Reference to other sections

For further information on personal protection and waste disposal, see Section 8 and Section 13, respectively.

6.5. Additional information

No additional information available

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Take precautionary measures against static electricity.
Avoid splash filling of bulk volumes when handling hot liquid product. Avoid contact with skin.
Avoid breathing fume/mist. Prevent the risk of slipping.
Use personal protective equipment as required.

Advice on general occupational hygiene

Ensure that proper housekeeping measures are in place.
Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept in pockets.
Keep away from food and beverages.
Do not eat, drink, or smoke when using this product. Wash the hands thoroughly after handling.
Change contaminated clothes at the end of the working shift.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Ensure that all relevant regulations regarding the handling and storage facilities of combustible products are followed. Store in a dry, well-ventilated area.

Keep away from sparks/open flames/hot surfaces.
Do not smoke. Store separately from oxidising agents.

Packaging materials

Recommended materials: For containers, or container linings use mild steel, stainless steel.
Unsuitable materials: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

Container advice if the product is supplied in containers

Keep only in the original container or in a suitable container for this kind of product.
Keep containers tightly closed and properly labelled. Empty containers may contain combustible product residues. Do not weld, solder, drill, cut or perform similar operations unless they have been adequately cleaned.

Requirements for storage rooms and vessels:

Storage area layout, tank design, equipment, and operating procedures must comply with relevant European, national, or local legislation.
Storage installations should be designed with adequate bunds to prevent ground and water pollution in case of leaks or spills. The cleaning, inspection, and maintenance of the internal structure of storage tanks must be performed only by properly equipped and qualified personnel as defined by national, local, or company regulations.

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

EU - Occupational Exposure Limits

IOELV TWA | 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract < 3% mm)

USA - ACGIH - Occupational Exposure Limits Biodegradation

ACGIH OEL TWA | 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract < 3% mm)
ACGIH OEL STEL | 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract < 3% mm)

Residual oils (petroleum), solvent-dewaxed (64742-62-7)

EU - Occupational Exposure Limits

IOELV TWA | 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract < 3% mm)

USA - ACGIH - Occupational Exposure Limits Biodegradation

ACGIH OEL TWA | 5 mg/m³ (Mineral base oil mist, severely refined, DMSO extract < 3% mm)
ACGIH OEL STEL | 10 mg/m³ (Mineral base oil mist, severely refined, DMSO extract < 3% mm)

8.1.2. Recommended monitoring procedures

Monitoring procedures should be selected according to the guidelines established by national authorities or labor contracts. Refer to relevant legislation and, in any case, to the good practice of industrial hygiene.

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Ensure good ventilation at the work station.

Before entering storage tanks and commencing any operation in a confined area, carry out an adequate clean-up and check the atmosphere for oxygen content, flammability, and the presence of sulphur compounds.

8.2.2. Personal protection equipment

Personal protective equipment

Gloves, protective clothing, safety glasses, dust/aerosol mask. Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

When there is a risk of contact with the eyes, use safety goggles or other means of protection (face shield). If necessary, refer to national standards or to the EN 166 standard.

8.2.2.2. Skin protection

Skin and body protection

Use of protective clothing is good industrial practice.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin.

Overalls should be laundered on a regular basis.

When the risk of skin exposure is high (e.g., when cleaning up spillages or if there is a risk of splashing) then chemical-resistant aprons and/or impervious chemical suits and boots will be required.

Hand protection

When there is a risk of contact with the skin, use hydrocarbon-resistant, felt-lined gloves. Adequate materials: nitrile (NBR) or PVC with a protection index > 5 (permeation time > 240 min.). Use gloves in accordance with all the conditions and within the limits set by the manufacturer.

Replace gloves immediately in case of cuts, holes or other signs of damage or degradation. If necessary, refer to EN 374 standard.

8.2.2.3. Respiratory protection

In addition to other possible actions (such as technical modifications, operating procedures, and other means to limit worker exposure), personal protective equipment can be used as needed.

Open or well-ventilated spaces: in the presence of oil mists and if the product is handled without adequate containment means: use full or half-face masks with a filter for mists/aerosols (P).

In cases where there is a significant presence of vapours (e.g., through handling at high temperatures), use full or half-face masks with filters for organic vapours (A) and H₂S (B), where applicable. (EN 136/140/145).

Combined gas/dust mask with filter type: EN 14387.

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II as amended by Commission Regulation (EU) 2020/878

Closed or confined areas (e.g., tank interiors): the use of protection measures for airways (masks or self-contained breathing apparatus) must be assessed according to the specific activity, as well as the level and duration of predicted exposure (EN 136/140/145). Approved respiratory protection equipment shall be used in spaces where hydrogen sulphide may accumulate: full face mask with cartridge/filter type "B" (grey for inorganic vapours including H₂S) or self-contained breathing apparatus (SCBA) (EN 136/140/145)

8.2.2.4. Thermal hazards

If contact with a hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated.

8.2.3. Environmental exposure controls

Avoid release to the environment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Brown
Odour	: Characteristic
Odour threshold	: No data available
Melting point	: -30°C (pour point)
Freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flammability	: No data available
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Flash point	: 200°C (COC)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
pH	: No data available
Kinematic viscosity	: 46.00 mm ² /s (40 °C)
Kinematic viscosity	: 8.150 mm ² /s (100 °C)
Solubility	: Insoluble
Partition coefficient n-octanol/water (log value)	: Not applicable
Vapour pressure	: No data available
Density and / or relative density	: 0.872 g/cm ³ (20 °C)
Relative vapour density	: No data available
Particle characteristics	: Not applicable

9.2. Other information

No data available

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

SECTION 10: Stability and reactivity

10.1. Reactivity	No specific reactivity hazards associated with this product.
10.2. Chemical stability	Stable under normal ambient temperature and when used as recommended.
10.3. Possibility of hazardous reactions	No potentially hazardous reactions known.
10.4. Conditions to avoid	Keep away from sparks/open flames/hot surfaces, and sources of ignition.
10.5. Incompatible materials	Oxidising agents
10.6. Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

11.1 Information on basic physical and chemical properties

Acute toxicity

Acute oral toxicity	: Not classified (Based on available data, the classification criteria are not met.)
Acute inhalation toxicity	: Not classified (Based on available data, the classification criteria are not met)
Acute dermal toxicity	: Not classified (Based on available data, the classification criteria are not met)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

LD50 - oral - rat	> 5000 mg/kg body weight (OECD 401)
LC50 - inhalation - rat - 4 hours	> 5.53 mg/l (OECD 403)
LD50 - dermal - rabbit	> 5000 mg (OECD 402)

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

Residual oils (petroleum), solvent-dewaxed (64742-62-7)

LD50 - oral - rat	> 5000 mg/kg body weight (OECD 401)
LC50 - inhalation - rat - 4 hours	> 5.53 mg/l (OECD 403)
LD50 - dermal – rabbit	> 5000 mg (OECD 402)

Skin corrosion/irritation	:Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	:Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitization	:Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	:Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	:Not classified (Based on available data, the classification criteria are not met)
STOT - single exposure	:Not classified (Based on available data, the classification criteria are not met)
STOT - repeated exposure	:Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	:Not classified (Based on available data, the classification criteria are not met)

11.2.1 Endocrine disrupting properties

This mixture is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

11.2.2 Other information

No additional information available

SECTION 12: Ecological Information

12.1 Toxicity

Ecology - general

: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Ecology - air

: The product has a low vapour pressure. A significant exposure may only if the product is used at high temperature, or in the case of sprays and mists.

HLP-ZF 46

Ecology - water

According to Regulation (EC) No 1907 / 2006, Annex II as amended by Commission Regulation (EU) 2020/878

: The product is not soluble in water. It floats on water and forms a film on the surface. The damage to aquatic organisms is of a mechanical kind (Immobilization and entrapment).

Hazardous to the aquatic environment short-term (acute) :Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment long-term (chronic) :Not classified (Based on available data, the classification criteria are not met)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

LL50 - Fish	>= 100 mg/l (Pimephales promelas, 96h) (OECD 203)
EL50 - Crustacea	> 10000 mg/l (Daphnia magna, 48h) (OECD 202)
NOEL - Crustacea	10 mg/l (Daphnia magna, 21 day) (OECD 211)
NOEL - Algae	>= 100 mg/l (Desmodesmus subspicatus, 72h) (OECD 201)

Residual oils (petroleum), solvent-dewaxed (64742-62-7)

LL50 - Fish	>= 100 mg/l (Pimephales promelas, 96h) (OECD 203)
EL50 - Crustacea	> 10000 mg/l (Daphnia magna, 48h) (OECD 202)
NOEL - Crustacea	10 mg/l (Daphnia magna, 21 day) (OECD 211)
NOEL - Algae	>= 100 mg/l (Desmodesmus subspicatus, 72h) (OECD 201)

12.2 Persistence and degradability

Sinova Marine HLP-ZF 46

Abiotic degradation	No data available
Physical and photo-chemical elimination	No data available
Biodegradation	Not readily biodegradable (OECD 301B)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

Abiotic degradation	No data available
Physical and photo-chemical elimination	No data available
Biodegradation	Not readily biodegradable (OECD 301B)

Residual oils (petroleum), solvent-dewaxed (64742-62-7)

Abiotic degradation	No data available
Physical and photo-chemical elimination	No data available
Biodegradation	Not readily biodegradable (OECD 301B)

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

12.3 Bioaccumulative potential

Sinova Marine HLP-ZF 46

Partition coefficient n-octanol/water (Log Pow)	No data available
Bioconcentration Factor (BCF)	No data available

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

Partition coefficient n-octanol/water (Log Pow)	No data available
Bioconcentration Factor (BCF)	No data available

Residual oils (petroleum), solvent-dewaxed (64742-62-7)

Partition coefficient n-octanol/water (Log Pow)	No data available
Bioconcentration Factor (BCF)	No data available

12.4 Mobility in soil	No data available
-----------------------	-------------------

12.5 Results of PBT and vPvB assessment	No data available
---	-------------------

12.6 Endocrine disrupting properties	This product is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.
--------------------------------------	--

12.7 Other adverse effects	No known significant effects or critical hazards.
----------------------------	---

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

13.1.1 Product/package disposal

Where possible, arrange for the product to be recycled.

Packaging must be fully emptied prior to disposal.

Empty containers may contain combustible product residues. Do not cut, weld, drill, burn, or incinerate empty containers or drums unless they have been cleaned and declared safe.

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II as amended by Commission Regulation (EU) 2020/878

Dispose of packaging that cannot be cleaned in the same manner as the product.

Waste codes / waste designations according to LoW

Waste Code	Waste Designation
13 02 05	Mineral-based non-chlorinated engine, gear, and lubricating oils
15 01 01	Paper and cardboard packaging
15 01 02	Plastic packaging
15 01 04	Metallic packaging

Deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

13.1.2 Waste treatment - relevant information

Dispose of this material and its container at a hazardous or special waste collection point, in accordance with local, regional, national, and/or international regulations.

13.1.3 Sewage disposal - relevant information

Do not discharge into drains or the environment.

13.1.4 Other disposal recommendations

No additional information available.

SECTION 14: Transport Information

General

This product is not regulated as a dangerous good under international transport regulations (IMDG, IATA, ADR/RID).

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II as amended by Commission Regulation (EU) 2020/878

Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6 Special precautions for user

Overland transport	Not regulated
Transport by sea	Not regulated
Air transport	Not regulated
Rail transport	Not regulated
Inland waterway transport	Not regulated

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory Information

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

15.1.1 EU regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list. Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE

COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II as amended by Commission Regulation (EU) 2020/878

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and the Council of 20 June 2019 on the marketing and use of explosives precursors.

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances

VOC content: 0 %

15.1.2 National regulations | No additional information available

15.2 Chemical Safety Assessment | No chemical safety assessment has been carried out.

SECTION 16: Other Information

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC₅₀: 50% of the maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.
SDS: Safety Data Sheet
DMEL: Derived Minimal Effect level
DNEL: Derived-No Effect Level
EN: European Standard
PNEC: Predicted No-Effect Concentration
BCF: Bioconcentration Factor
CLP: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals, Regulation (EC) No 1907/2006

Notice to reader

The information provided is based on our current knowledge and is intended solely to describe the product in terms of health, safety, and environmental requirements. It should not, therefore, be construed as guaranteeing any specific property of the product.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and



Safety Data Sheet

HLP-ZF 46

According to Regulation (EC) No 1907 / 2006, Annex II
as amended by Commission Regulation (EU) 2020/878

regulations. ALCO LLC shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact ALCO LLC to ensure that this document is the most current available. Alteration of this document is strictly prohibited.