



SAFETY DATA SHEET

Made in accordance to Regulation (EU) No 2015/830

Hydraulic oils
Jasol Hydraulic HV 22-68 Zinc Free

Made on: 2016-02-18

Updated on: -

Version: 1

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

1.1. Product identifier

Trade name: Jasol Hydraulic HV 22-68 Zinc Free.

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

Identified uses: Jasol Hydraulic HV 22-68 Zinc Free are designed primarily for the lubrication of mobile hydraulic construction and mining equipment working in very difficult conditions, variable temperature and humidity. JASOL Hydraulic HV 22-68 Zinc Free oils have exceptional properties of surface antiwear protection, good filterability and high stability which ensures operation in a wide range of weather conditions.

Uses advised against: other uses are not recommended.

1.3. Details of the supplier of the safety data sheet

Manufacturer: Rafineria w Jaśle Sp.z o.o.

Address: 40-007 Katowice, ul. Uniwersytecka13

Phone/Fax No. +48 (13) 44 66 433

E-mail: biurozarzadu@rwj.com.pl

Production plant

38-200 Jasło, ul. 3 Maja 101

(13) 44 66 316/(13) 44 66 315

biuro@rwj.com.pl

1.4. Emergency telephone number:

Company contact phone no.: in working hours from 7.00 a.m till 3.00 p.m. +48 (13) 44 66 316

In case of emergency: 112 (Emergency number), 998 (Fire Brigade), 999 (Ambulance Service)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

The product does not meet the classification criteria for any hazard class in accordance to Regulation (EC) No 1272/2008 [CLP] on classification, labelling and packaging of substances and mixtures.

2.2. Label elements

Pictogram: None

Signal word: None

Hazard statements: None

Precautionary statements: None

2.3. Other hazards



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The product does not meet the PBT or vPvB criteria according to Annex XIII of REACH Regulation.
Flammable product of high flash point.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances – not applicable

3.2. Mixtures: - Mixture of refined mineral oils *and zinc free additive multifunctional , improving utility properties Oil. Hazardous components included in a mixture do not exceed the concentrations limits that require information in SDS and it is not required to classify a mixture as hazardous.

Hazardous ingredients and its concentrations in the mixture:

<u>Substance name</u>	<u>EC No/ CAS No</u>	<u>REACH registration number</u>	<u>Concentration [% wt.]</u>	<u>Classification according to 1272/2008 (CLP)</u>
<i>N,N</i> -Dimethylformamide	270-485- 3/68442-68- 2	Not available	0,15-0,24	Aquatic Chronic3; H412
2,6-di-tert-butylphenyl	204-884- 0/128-39-2	01-2119490822- 33-0000	0,1-0,15	Skin Irrit.2;H315 Aquatic Acute 1;H400 Aquatic Chronic1; H410

* Substances, which have the maximum permissible concentration in the work environment determined at national level - see subsection 8.1.

On a basis of L note unspecified base oils used in a mixture are not classified as carcinogenic. (DMSO extract content (according to IP 346) <3%.)

Description of H phrases and full text of hazard categories is given in Section 16.

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation:

Due to the low content of volatile compounds the oil at ambient temperature does not pose inhalation hazard. The risk of inhalation exists in case of product mist formation or as a result of heating. Remove the victim (move/carry) from the exposure area to fresh air and keep warm and quiet. Place an unconscious person in the recovery position,



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loosen tight parts of clothes; control and maintain patency of the airways. Give oxygen in the case of breathing disorders; if not breathing, use artificial ventilation. In the case of loss of consciousness, respiratory disorders or persisting symptoms obtain medical aid immediately.

Skin contact:

Immediately remove contaminated/soaked clothes and shoes. Thoroughly wash contaminated skin with soapy water or mild detergent, and then rinse with water. Do not use organic solvents; eg. kerosene or gasoline for washing. Consult a doctor if irritation symptoms appear and persist.

Eye contact:

Flush the contaminated eyes with running water, remove contact lenses (if worn) and continue flushing for approx. 15 minutes. When flushing, keep the eyelids wide open and move the eyeball. Consult a doctor if symptoms appear and persist.

Swallowing:

Immediately obtain medical aid. DO NOT induce vomiting – increased risk of aspiration. In the case when spontaneous vomiting occurs, keep the victim leaning forward, with her/his face directed to the ground.

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

Not determined.

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

Do not induce vomiting and do not administer anything orally to an unconscious person. Show the material safety data sheet or the label/container to the medical staff. A person providing first aid in the area where vapour/fog concentration is unknown should be equipped with the appropriate respiratory protection.

Indications for a doctor: symptomatic treatment.

SECTION 5. PROCEEDING IN CASE OF FIRE

5.1. Extinguishing media

Suitable extinguishing media: carbon dioxide, dry powder, foam; water spray.

Unsuitable extinguishing media: water jet, it may result in new sources of fire.

5.2. Special hazards arising from the substance or mixture

Flammable liquid of high flash point. In the fire environment smokes containing carbon oxides and other unidentified thermal decomposition products of higher hydrocarbons and additives are formed. Avoid breathing products being released in the fire environment - they may be hazardous for health.

5.3. Advice for fire fighters

Proceed in accordance to procedures applicable for extinguishing chemical fire.

For large fires should be extinguished from a safe distance behind cover, using remote sprinkler. Containers exposed to fire or high temperature should be cooled by dispersed streams of water from a safe distance, if possible and safe remove from the danger area and continue spraying until complete cool. Do not allow the fire fighting sewage and residues penetrate into drains and waterways.

Remove wastewater and residue after firefighting in accordance with valid regulations.



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SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use individual protection measures – see section 8 of the Safety Data Sheet.

Limit the access of bystanders to the endangered area until proper cleaning operations are finished. In the case of great leakage isolate the endangered area. Avoid contact with the eyes, skin and clothes.

NOTE: Spilled product can make surfaces slippery.

Remove ignition sources, extinguish open fire, do not smoke.

6.2. Environmental precautions

Prevent the product from penetrating drains, waters or soil. If it is possible and safe, stop or limit product release, seal, shut off the fluid source, place the damaged container in an emergency container. Limit spreading of the great leakages by embanking the area.

Notify respective authorities in the case of release of large quantities of the product and environmental pollution.

6.3. Methods and material for containment and cleaning up

Cover up small spillage with non-flammable, neutral absorbent material (e.g soil, sand, vermiculite) and collect in an appropriate, closed, labelled waste container. Pump off large amounts of liquid. Clean the contaminated area with water with detergent. Rinse residues with water. Larger amounts collected dispose according to the applicable regulations. If necessary, obtain help from specialist companies dealing with waste transport and utilisation in order to remove the product/absorbent material contaminated with the product.

Dispose according to the applicable regulations.

6.4. Reference to other sections

For information on appropriate personal protection equipment see Section 8.

For information regarding waste disposal see Section 13.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

During use in closed areas provide effective ventilation. Avoid contact with eyes, skin, and clothing and inhalation of vapours / mist. Unused containers tightly closed. Essential hygiene rules should be observed: do not eat, drink or smoke during work, wash hands with soapy water after work/after break in work. Do not use contaminated clothing; Immediately remove contaminated clothing and wash before reuse.. Use individual protection measures in accordance with the information contained in section 8 of the Safety Data Sheet.

7.2. Conditions for safe storage, including any incompatibilities

In a place of use and storage of the product, provide easy access to emergency equipment (in case of fire, release, etc.). Store should be stored in tightly sealed and properly labelled containers, in a cool, well ventilated place with a non-absorbing ground. The product may be stored in storage tanks in accordance with applicable regulations.

Store far from heat sources, protect against mechanical contamination and water accumulation. Keep away from strong oxidisers.



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7.3. Specific end use(s)

None.

SECTION 8. EXPOSURE CONTROL AND PERSONAL PROTECTION EQUIPMENT

8.1. Control parameters

For a product no data available – for similar oils – mineral oils.

Mineral oils (liquid phase of aerosol)*

TLV-TWA: 5 mg/m³,

TLV-STEL: - mg/m³,

TLV-C: –

*In conditions when vapours and fumes are formed - not applicable.

Regulation of the Minister of Work and Social Policy dated June 6th, 2014 on the maximum occupational levels of factors hazardous to health at the workplace (*Journal of Laws of 23 June 2014, item 817*)

DNEL, PNEC – no data available for the mixture

Concentration limits of substances in biological material: not determined

8.2. Exposure controls

Recommendations to the procedure of monitoring of hazardous components in the air - method of measurements:

Regulation of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful to life in the working environment (*Journal of Laws No. 33, item 166*)

Recommended methods of exposure assessment in the air:

- PN-Z-04008-7:2002 – “Air purity protection -- Sampling methods -- Principles of air sampling in work place and interpretation of results”

- PN-Z-04108-6:2006 „Air purity protection -- Determination of mineral oil (liquid phase aerosol) in work places by absorption spectrometry method in ultra-violet ”.

-PN-Z-04108-5:2006 „Air purity protection -- Tests for content of oils -- Determination of mineral oil (liquid phase of aerosol) in work places by absorption spectrometry method in infra-red”

Appropriate engineering controls:

General ventilation and/or local fume hood in order to maintain hazardous agent concentration in air below acceptable limits. Local fume hood is preferred, since it enables emission control at source and prevents spreading throughout the working area.



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Individual protection measures

The requirement for use and selection of appropriate personal protection measures should take into account the type of hazard posed by the product, workplace conditions and handling of product. Use protection measured offered by reputable manufacturers.

Personal protection measures should comply with the requirements specified in the standards and regulations.

Eye or face protection:

Tight safety eyeglasses (goggles) in the case of prolonged exposure or the risk of liquid splashing to the eye. It is recommended to equip the workplace with a water shower to flush eyes.

Skin protection:

Hand protection: protective gloves are required to protect against petroleum products made of nitrile rubber or other gloves authorized by the manufacturer of gloves for work with this type of product.

Body protection: work clothing is required, oil-resistant, anti-slippery shoes are recommended.

Respiratory protection:

Not required under normal conditions of use. In case of insufficient ventilation, wear a mask with universal filter-absorber. In the case of work in the limited space / insufficient oxygen content in the air, a large uncontrolled emissions, and in all circumstances when the mask with filter-absorber does not provide sufficient protection use self-contained respiratory equipment.

Thermal hazards:

Not applicable

Environmental exposure controls:

Consider using precautionary measures in order to protect the area around storage tanks.

Follow the standards regarding the permissible environmental pollution identified in the regulations in force.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- | | |
|--|--|
| a) Appearance | : Liquid, light brown |
| b) Odour | : characteristic for petroleum product |
| c) Odour threshold | : No data available |
| d) pH | : Not applicable |
| e) Melting/solidification temperature | : max -24°C (pour point) |
| f) Initial boiling temperature and melting temperature range | : not determined |
| g) Ignition point | : > 175°C |
| h) Evaporation rate | : No data available |
| i) Flammability (solid, gas) | : Not applicable for liquids |
| j) Upper/lower flammability limit or upper/lower explosion limit | : Not applicable |
| k) Vapour pressure | : Not relevant |
| l) Vapour density | : Not relevant |
| m) Relative density | : approx. 0,88 g/cm ³ (at 15°C). |



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n) Solubility	: Insoluble in water. Soluble in hydrocarbon solvents.
o) Distribution coefficient n-octanol/ water	: Not determined
p) Self-ignition point	: Not determined
q) Decomposition temperature	: Not determined
r) Viscosity	: 19,8, -74,8 mm ² /s at 40 °C
s) Explosive properties	: Not applicable
t) Oxidizing properties	: Not applicable

9.2. Other information

None

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

The product is not reactive.

10.2. Chemical stability

The product is stable under normal ambient conditions, as well as under the expected temperature and under the expected pressure.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid:

High temperature, open flame and other ignition sources.

10.5. Incompatible materials

Strong oxidisers

10.6. Hazardous decomposition products

No decomposition when it is used as intended. Thermal decomposition products formed during a fire can be hazardous – see subsection 5.2 of the safety data sheet.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects (for a product no data available, for similar product – base oil)

Acute toxicity:

LD₅₀: >5000 mg/kg (oral, rat)

LC₅₀: >5.53 mg/l (inhalation, rat)

LD₅₀: >5000 mg/kg (skin, rabbit)

Skin corrosion/irritation:

Classification criteria have not been met based on the available data.

Serious eye damage/irritation:

Classification criteria have not been met based on the available data.

Respiratory or skin sensitisation:



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Classification criteria have not been met based on the available data.

Germ cell mutagenicity:

Classification criteria have not been met based on the available data.

Carcinogenicity:

Classification criteria have not been met based on the available data. Based on L Note the substance is not classified as carcinogenic (DMSO extract content (according to IP 346) < 3%).

Reproductive toxicity:

Classification criteria have not been met based on the available data.

STOT – single exposure:

Accidental ingestion may cause gastric disturbances (nausea, vomiting, stomach pain). High concentrations of vapours / mist can cause irritation of the mucous membranes of respiratory tract.

STOT – repeated exposure:

Classification criteria have not been met based on the available data. Repetitive or prolonged exposure may cause drying, cracking or chronic inflammation of the skin.

Aspiration hazard

Not applicable – kinematic viscosity of the product at temp. 40°C is higher than 20,5 mm²/s.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity:

For finished product no data available, data for: Unspecified base oil

EC50: >10000 mg/l – acute toxicity test on fresh-water invertebrates; Daphnia magna, 48h

NOEL: 100 mg/l – chronic toxicity test on invertebrates; Daphnia magna, 21 days

EC50: >100 mg/l – acute toxicity test on fresh-water algae; Pseudokirchinella subcapitata, 72h

LC50: >100 mg/l – acute toxicity test on fresh-water fish; Pimephales promelas, 96h

NOEL: >1000 mg/l – chronic toxicity test on fresh-water fish; Oncorhynchus mykiss, QSAR, 28 days

12.2. Persistence and degradability

Limited level of biodegradability expected.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

Limited, due to the product's gravity of <1 g / cm³ and that the product is insoluble in water, a product has little ability to penetrate. It can be hazardous to environment in case of misuse or in emergency situations - the product penetrates into the ground, causing contamination of the groundwater.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of REACH Regulation, the product does not meet PBT or vPvB criteria.

12.6. Other adverse effects

The product is insoluble in water and spreads on the surface of water, forming a thin film that limits oxygen transfer



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to water.

SECTION 13. HANDLING OF WASTES

13.1. Waste treatment methods

Do not dispose to sewer. Avoid contamination of surface and ground waters. Consider reuse. Waste product should be recovered or utilised at professional, approved furnaces or waste recycling/neutralization facilities, in accordance with applicable regulations.

Do not dispose to water reservoir and sewage sludge. Avoid contamination of water and soil with concentrated product.

The Act of 14 December 2012 on wastes (*Dz.U. of year 2013, item 21, with amendments*)

Regulation of the Minister of Environment of 9 December 2014, on wastes catalogue (*Dz. U. 2014, item 1923*)

Waste code: 13 01 10* mineral-based non-chlorinated hydraulic oils.

13.2. Packaging

Recovery / recycling / utilisation of package wastes should be performed according to the applicable regulations. **NOTE:** Only completely emptied and cleaned packages may be returned for recycling. Use services of authorised companies.

The Act of 13 June 2013 on packages and package wastes (*Dz.U. item 888*)

SECTION 14. TRANSPORT INFORMATION

The product is not a subject to transport regulations on hazardous goods included in ADR (road transport), RID (rail transport), IMDG (marine transport) and ICAO/IATA (air transport).

14.1. UN number	:not applicable
14.2. UN Proper shipping name	:not applicable
14.3. Transport hazard class(es)	:not applicable
14.4. Packing group	:not applicable
14.5. Environmental hazards	:not applicable
14.6. Special precautions for users	:not applicable
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:not applicable

SECTION 15. REGULATORY INFORMATION

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

- Regulation (EC) No. 1907/2006 of the European Parliament of 18 December 2006 on registration, evaluation and authorisation of chemicals (REACH) as amended
- Regulation of the Commission (EC) No. 453/2010 of 20 May 2010 amending regulation (EC) No. 1907/2006 of the European Parliament and the Council of 18 December 2006 on registration, evaluation



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and authorisation of chemicals (REACH) as amended

- Regulation of the European Parliament and the Council (EC) No. 1272/2008 of 16 December 2008 on classification, labelling and packing substances and mixtures, amending and repealing directives 67/548/EEC and 1999/45/EC and amending regulation (EC) No. 1907/2006
- Act of 25 February 2011 on chemicals and their mixtures (Journal of Laws of 2011 No. 63 item 322)
- Regulation of the Minister of Health of 10 August 2012 on criteria and methods of classifying substances and mixtures (Journal of Laws of 2012 No 0 item 1018)
- Regulation of the Minister of Health of 23 December 2013 amending the Regulation on criteria and methods of classifying substances and mixtures (Journal of Laws of 2014, item 6)
- Regulation of the Minister of Health of 20 April 2012 on labelling packaging of dangerous substances and dangerous mixtures and some mixtures (Journal of Laws 12, item 445)
- Regulation of the Minister of Health of 23 January 2014 amending the Regulation on labelling packaging of dangerous substances and dangerous mixtures and some mixtures (Journal of Laws 2014, item 145)
- Regulation of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful to life in the working environment (Journal of Laws of 2011, No. 33, item 166)
- Regulation of the Minister of Economy of 21 December 2005 on essential requirements for personal protection (Journal of Laws of 2005 No. 259, item 2173)
- Regulation of the Minister of Work and Social Policy dated June 6th, 2014 on the maximum occupational levels of factors hazardous to health at the workplace (Dz.U. 2014, item 817)
- Regulation of the Minister of Health of 30 December 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal of Laws of 2005 No. 11, item 86)
- The Act of 14 December 2012 on wastes (Dz.U. of year 2013, item 21)
- The Act of 15 January 2015 on amendment of Act on wastes and other acts (Dz.U. item 122)
- The Act of 13 June 2013 on packages and package wastes (Dz.U. item 888)
- Regulation of the Minister of Environment of 9 December 2014, on wastes catalogue (Dz. U. 2014, item 1923)

15.2. Chemical safety assessment

No data available for chemical safety assessment for substances included in a mixture.

SECTION 16. OTHER INFORMATION

16.1. Update range

Changes in each sections : adjustment to regulations in force.

16.2. Abbreviations and acronyms in the Safety Data Sheet



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ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	The Regulation on classification, labelling and packaging; Regulation (EC) No 1272/2008
DNEL	Derived No Effect Level
DPD	Dangerous Preparations Directive 1999/45 / EC
DSD	Dangerous Substances Directive 67/548 / EEC
EC ₅₀	Concentration at which 50% inhibition of growth or growth rate is observed
ICAO	Technical Instructions for the Safe Transport of Dangerous Goods by Air
IATA	International Air Transport Association
IMDG	International Maritime Transport of Dangerous Goods
TLV-TWA	Threshold Limit Value
TLV-STEL	Threshold Limit Value, Short Term Exposure Limit
TLV-C	Ceiling exposure limit
LD ₅₀	Dose that will kill 50% of the test animals
LC ₅₀	Concentration that will kill 50% of the test animals
PBT	Persistent, bioaccumulative, and toxic (substance)
PNEC	Predicted No Effect Concentration
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail
UVCB	Unknown substances, of Variable Composition, or of Biological Origin
vPvB	very Persistent, very Bioaccumulative (substance)

16.3. The list of applicable H-phrases in Section 3

- H315 – Causes skin irritation
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long-lasting effects
- H412- Harmful to aquatic life with long-lasting effects

This Safety Data Sheet has been prepared based on data provided by the manufacturers of ingredients the product, according to the national legislation in force at the date of SDS update and owned knowledge. Employees who use the product should be trained on risks for health, hygiene requirements, the use of individual protection measures and actions preventing the accidents.

Safety data sheet is not a quality certificate for the product. All data presented in this sheet are to be taken only as a help in safe handling in transport, distribution, use and storage. They may be obsolete or insufficient for this product used in conjunction with other materials or in different applications than those specified in the Safety Data Sheet.

The user is obliged to follow all applicable standards and regulations and is also responsible for inappropriate use of information contained in this sheet or for an inappropriate use of the product.