



SAFETY DATA SHEET

According to the Hazard Communication Standard, 29 CFR 1910.1200

SDS # : 083664

BIOHYDRAN AW 46

Date of the previous version: 2015-10-13

Revision Date: 2020-06-19

Version 3

1. IDENTIFICATION

Product identifier

Product name BIOHYDRAN AW 46

Other means of identification

Product Code(s) 083664

Number 7MD
Substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Identified uses Hydraulic Fluid.

Uses advised against Do not use for any purpose other than the one for which it is intended

Details of the supplier of the safety data sheet

Supplier Address TOTAL Specialties USA, Inc.
1201 Louisiana St. Suite 1800
Houston, TX 77002
Phone: 713-483-5000

Contact Point Technical/ HSEQ

E-mail Address ProductSafety@total.com

Emergency telephone number

Company Phone Number +1 (908) 862-9300
Emergency telephone 1-866-928-0789 (For Emergencies, call CARECHEM 24/7 Domestic)
1-215-207-0061 (For Emergencies, call CARECHEM 24/7 International)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)



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Hazard Statements

None

Hazards not otherwise classified (HNOC)

None known

Other information**Physical-Chemical Properties**

Contaminated surfaces will be extremely slippery.

Environmental properties

Should not be released into the environment. The product may form an oil film on the water surface that may stop the oxygen exchange.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Mixture****Chemical nature**

Mineral oil of petroleum origin.

Chemical Name	CAS-No	Weight %
Succinic anhydride, alkylation products with C12-rich branched olefins from propene oligomerisation, hydrolyzed, esterification products with propylene oxide	^	0,1>=1,0

Additional information

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

4. FIRST AID MEASURES**First aid measures for different exposure routes****General advice**

IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids.

Skin contact

Remove contaminated clothing and shoes. Wash skin with soap and water. Wash contaminated clothing before reuse.

High pressure jets may cause skin damage. In this case, the casualty should be sent immediately to hospital.

Inhalation

Move to fresh air.

Ingestion

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a



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physician or Poison Control Center immediately.

Most important symptoms/effects, acute and delayed

Skin contact	Not classified based on available data. May cause an allergic skin reaction. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
Eye contact	Not classified based on available data.
Inhalation	Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

<u>Suitable Extinguishing Media</u>	Carbon dioxide (CO ₂). ABC powder. Foam. Water spray or fog.
<u>Unsuitable Extinguishing Media</u>	Do not use a solid water stream as it may scatter and spread fire.
<u>Special Hazard</u>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.
<u>Explosion Data</u>	
<u>Sensitivity to Mechanical Impact</u>	None.
<u>Sensitivity to Static Discharge</u>	None.
<u>Protective Equipment and Precautions for Firefighters</u>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate non-essential personnel.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

General Information	Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.
Other information	See Section 12 for additional information.

Environmental precautions



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General Information

Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for cleaning up

Dam up. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

Prevention of fire and explosion

Take precautionary measures against static discharges. Ground/bond containers, tanks and transfer/receiving equipment.

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep away from food, drink and animal feedingstuffs. Keep in a bunded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Protect from frost, heat and sunlight. Protect from moisture.

Materials to Avoid

Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Mineral oil mist:
USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined)



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Exposure controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

General Information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Eye/face protection If splashes are likely to occur, wear: Safety glasses with side-shields.

Skin and body protection Wear suitable protective clothing. Protective shoes or boots.

Hand Protection Hydrocarbon-proof gloves. Fluorinated rubber. Nitrile rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Respiratory protection None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

9. PHYSICAL AND CHEMICAL PROPERTIES**Physical and chemical properties**

Color	amber
Physical State @20°C	liquid
Odor	Low
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	
Melting point/range		No information available	

Boiling point/boiling range	> 200 °C > 392 °F
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Flash point	296 °C 565 °F	Cleveland Open Cup (COC) Cleveland Open Cup (COC).
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Evaporation rate	< 1.0	EtEt=1
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Flammability Limits in Air		No information available	
upper	-	No information available	
Lower	-	No information available	
Vapor Pressure	< 0.001	@ 38 °C	
Vapor density		No information available	
Relative density	0.924	@ 15 °C	
Density	921 kg/m ³	@ 15 °C	
Water solubility		Not applicable	
Solubility in other solvents		No information available	
logPow		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Viscosity, kinematic	46 mm ² /s	@ 40 °C	ISO 3104
Explosive properties	Not explosive		
Oxidizing Properties	Not applicable		
Possibility of hazardous reactions	Not applicable		
Other information			
Specific Gravity	0.924	@ 15 °C	
Freezing Point		No information available	

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	No information available.
<u>Chemical stability</u>	Stable under recommended storage conditions.
<u>Possibility of hazardous reactions</u>	None under normal processing.
<u>Conditions to avoid</u>	Heat (temperatures above flash point), sparks, ignition points, flames, static electricity.
<u>Incompatible materials</u>	Strong oxidizing agents.
<u>Hazardous Decomposition Products</u>	None under normal use. Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Principle Routes of Exposure	Inhalation, Ingestion, Eye contact, Skin contact.
Symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Skin contact	Not classified based on available data. May cause an allergic skin reaction. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.



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Eye contact	Not classified based on available data.
Inhalation	Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Acute toxicity - Product Information**

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Oral	Not classified based on available data
Dermal	Not classified based on available data
Inhalation	Not classified based on available data

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Succinic anhydride, alkylation products with C12-rich branched olefins from propene oligomerisation, hydrolyzed, esterification products with propylene oxide ^	LD50 2000 mg/kg bw (rat)	LD50 2000 mg/kg bw (rat)	

Skin corrosion/irritation	Not classified based on available data.
Serious eye damage/eye irritation	Not classified based on available data.
Sensitization	Not classified based on available data. Contains sensitizer(s). May cause an allergic skin reaction.
Carcinogenicity	Not classified based on available data.
Mutagenicity	Not classified based on available data.
Reproductive toxicity	Not classified based on available data.
Target Organ Effects (STOT)	None known.
STOT - single exposure	Not classified based on available data.
STOT - repeated exposure	Not classified based on available data.
Other adverse effects	Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).
Aspiration hazard	Not classified based on available data.

12. ECOLOGICAL INFORMATION

<u>Ecotoxicity</u>	Harmful to aquatic life with long lasting effects
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Acute aquatic toxicity - Product Information

No information available

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to microorganisms
Succinic anhydride, alkylation products with C12-rich branched olefins from propene oligomerisation, hydrolyzed, esterification products with propylene oxide ^	EL50(72h) 67-100 mg/l	LL50(96h) 100 mg/L	EL50(48h) 100 mg/l	

Chronic aquatic toxicity - Product Information

No information available

Chronic aquatic toxicity - Component Information

No information available

Effects on terrestrial organisms No information available.**Persistence and degradability****General Information** No information available.**Bioaccumulative potential****Product Information** No information available.**logPow** No information available**Component Information**

Chemical Name	log Pow
Succinic anhydride, alkylation products with C12-rich branched olefins from propene oligomerisation, hydrolyzed, esterification products with propylene oxide ^	4.65 @ 40°C and pH 3

Mobility**Soil** Given its physical and chemical characteristics, the product generally shows low soil



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Air	mobility
Water	Loss by evaporation is limited
Other adverse effects	Insoluble The product spreads on the surface of the water.

General Information	No information available
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13. DISPOSAL CONSIDERATIONS**Waste treatment**

Waste Disposal Methods	Should not be released into the environment. Dispose of in accordance with all applicable national environmental laws and regulations.
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Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.
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14. TRANSPORT INFORMATION

DOT	Not regulated
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ICAO/IATA	Not regulated
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IMDG/IMO	Not regulated
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ADR/RID	Not regulated
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15. REGULATORY INFORMATION

International Inventories	All the substances contained in this product are listed or exempted from listing in the following inventories: U.S.A. (TSCA)
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U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
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Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

To the best of our knowledge, this product does not contain any substances known to the State of California to cause cancer, developmental and/or reproductive harm.

U.S. State Right-to-Know Regulations

No information available

16. OTHER INFORMATION

NFPA	Health Hazard 2	Flammability 1	Instability 0	Special hazards -
HMIS	Health Hazard 1	Flammability 1	Physical Hazard 0	Personal protection X

NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Hazards are split into categories each with a 0 to 4 rating, 0 meaning no hazard and 4 meaning high hazard

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Revision Note Document Review
Abbreviations, acronyms



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ACGIH = American Conference of Governmental Industrial Hygienists

bw = body weight

bw/day = body weight/day

EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

LL = Lethal Loading

NIOSH = National Institute of Occupational Safety and Health

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material

ATE = Acute Toxicity Estimate

QSAR = Quantitative Structure-Activity Relationship

EL50 = median Effective Loading

NOELR = No Observed Effect Loading Rate

PAH = Polycyclic aromatic hydrocarbons

LOEC = Lowest Observed Effect Concentration

PVA = Polyvinyl alcohol

PVC = Polyvinyl chloride

ECOSAR = Ecological Structure Activity Relationships

CNS = Central nervous system

EPA = Environmental Protection Agency

ErL50 = effective loading on growth rate in algae test, to cause a 50% response

EbL50 = effective loading on growth with the control in algae test, to cause a 50% response

Legend

Section 8

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH - National Institute for Occupational Safety and Health

TLV - Threshold Limit Values

PEL - Permissible Exposure Limits

IDLH - Immediately Dangerous to Life or Health concentrations

TWA - Time Weight Average

STEL - Short Term Exposure Limits

S* - Skin notation

TSCA - Toxic Substance Control Act

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.



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End of the Safety Data Sheet