SAFETY DATA SHEET

According to Canadian Hazardous Products Regulations (HPR) (SOR/2015/17)

SDS # : 087300

BIOSPEC HYD 68

Date of the previous version: 2018-02-27 **Revision Date:** *2019-03-22* **Version** *2*

1. IDENTIFICATION

Product identifier

Product name BIOSPEC HYD 68

Other means of identification

Product Code(s) 087300

Number A9T
Substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Identified uses Hydraulic oil

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

TOTAL CANADA INC.
220, LAFLEUR
LASALLE, QUEBEC
H8R 4C9
Tel: (514) 595-7579
Fax: (514) 595-5950

Contact Point service HSE

E-mail Address ProductSafety@total.com

Emergency telephone number

Emergency telephone
Company Phone Number

1-800-463-3955
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

The product is not classified as hazardous according to WHMIS

Label elements

The product is not classified as hazardous according to WHMIS

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Hazard Statements
None

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other information

Other hazards Harmful to aquatic life with long lasting effects

Physical-Chemical Properties Contaminated surfaces will be extremely slippery.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical nature Vegetable oil based.

Chemical Name	EC-No	CAS-No	Weight %
Dec-1-ene, dimers, hydrogenated	500-228-5	68649-11-6	10-<20
Distillates (petroleum), hydrotreated light naphthenic	265-156-6	64742-53-6	1-<3
2,6-di-tert-butylphenol	204-884-0	128-39-2	0.1-<1.0
Succinic anhydride, alkylation products with C12-rich branched olefins from propene oligomerisation, hydrolyzed, esterification products with propylene oxide	943-535-3	^	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 Immediately flush with plenty of water. After initial flushing, remove any contact lenses and

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	continue flushing for at least 15 minutes. Keep eye wide open while rinsing.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. High pressure jets may cause skin damage. Take victim immediately to hospital.
Inhalation	Remove casualty to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration.
Ingestion	Clean mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Protection of First-aiders	First aider needs to protect himself. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms/effects, acute and delayed

Skin contact	Not classified based on available data. May produce an allergic 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	No information available.

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

Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Carbon dioxide (CO_2). ABC powder. Foam. Water spray or fog.
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.
Special Hazard	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. Nitrogen oxides (NOx). Silicon dioxide.

Explosion Data

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Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Special protective equipment for fire-fighters	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

General Information	Do not allow material to contaminate ground water system. Prevent entry into waterways, sewers, basements or confined areas. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment	Dike to collect large liquid spills. If necessary dike the product with dry earth, sand or similar non-combustible materials.
Methods for cleaning up	Dispose of contents/container in accordance with local regulation. In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	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.
Hygiene measures	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing is recommended. 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

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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. Store at room temperature. 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/m^3, NIOSH (REL) TWA 5 mg/m^3, STEL 10 mg/m^3, ACGIH (TLV) TWA 5 mg/m^3 (highly refined). .
Legend	See section 16

Exposure controls

Engineering Measures	Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment

General Information	Protective engineering solutions should be implemented and in use before personal protective equipment is considered. The personal protective equipment (PPE) recommendations apply to the product ITSELF. In case of mixtures or formulations, it is suggested that you contact the relevant PPE suppliers.
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 under normal use conditions. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination

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filter for vapor/particulate. Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties

Color		amber	
Physical State @20°C		liquid	
Odor		Petroleum distillates	
Odor Threshold		No information available	
Property	**Values**	**Remarks**	**Method**
pH		Not applicable	
Melting point/range		No information available	
Boiling point/boiling range		No information available	
Flash point	**247 °C**		ASTM D92
	476 °F		ASTM D92.
Evaporation rate		No information available	
Flammability Limits in Air			
upper		No information available	
Lower		No information available	
Vapor Pressure		No information available	
Vapor density		No information available	
Relative density	0.920	@ 15 °C	ASTM D 1298
Density	920 kg/m^3	@ 15 °C	ASTM D 1298
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	61.2 - 74.8 mm2/s	@ 40 °C	ASTM D 445
	12.5 mm2/s	@ 100 °C	ASTM D 445
Explosive properties	Not explosive		
Oxidizing Properties	Not applicable		
Possibility of hazardous reactions	Not applicable		
Other information			
Specific Gravity	0.920	@ 15 °C	ASTM D 1298
Freezing Point		No information available	
Pour point	-25 °C		ASTM D 97

10. STABILITY AND REACTIVITY

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Reactivity None under normal processing.

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks. Take precautionary measures against static discharges.

Incompatible materials Strong oxidizing agents.

Hazardous Decomposition Products Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Nitrogen oxides (NOx). Silicon dioxide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Symptoms No information available.

Skin contact Not classified based on available data. May produce an allergic 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.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity - Product 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
Dec-1-ene, dimers, hydrogenated 68649-11-6	LD50 >5000 mg/kg Oral (Rat)	LD50 (24h) >3000 mg/kg	LC50 (4h) < 5 mg/l (Rat)

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		(Rabbit-OECD 402)	
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	LD50 > 5000 mg/kg (Rat - OECD420)	LD50 > 5000 mg/kg (Rabbit - OECD 402)	LC50 (4h) > 5.53 mg/l (Rat - aerosol - OECD403)
2,6-di-tert-butylphenol 128-39-2	> 5000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	
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.
Respiratory or skin sensitization Not classified based on available data. Contains sensitizer(s). May produce an allergic reaction.
Germ cell mutagenicity Not classified based on available data.
Carcinogenicity 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.
Aspiration hazard Not classified based on available data.

12. ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic life with long lasting effects

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
Dec-1-ene, dimers, hydrogenated 68649-11-6	EC50 (72h) >1000 mg/l Scenedesmus capricornutum static	LC50 (96h) >1000 mg/l Oncorhynchus mykiss semi-static	EC50 (48h) >1000 mg/l Daphnia magna static	
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6		LL50(96h) > 100 mg/l (Pimephales promelas - static - OECD203)	EL50 (48h) > 10000 mg/L (Daphnia magna - static - OECD202)	
2,6-di-tert-butylphenol 128-39-2	EC50 (72h) 1.2 mg/l	LC50(96h) 1 mg/l (fish)	EC50 (48h) = 0.45 mg/L Daphnia magna	

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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

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Dec-1-ene, dimers, hydrogenated 68649-11-6		NOEC (21d) 125 mg/l Daphnia magna		
Distillates (petroleum), hydrotreated light naphthenic 64742-53-6	NOEL (72h) >= 100 mg/l (Pseudokirchnerella subcapitata - static - OECD201)	NOEL(21d) 10 mg/l (Daphnia magna - semi static - OECD211)		
2,6-di-tert-butylphenol 128-39-2			NOEC (28d) 0.3 mg/l (fish)	

Effects on terrestrial organisms No information available.

Persistence and degradability

No information available

Bioaccumulative potential

Product Information No information available.

logPow No information available

Component Information .

Chemical Name	log Pow
Dec-1-ene, dimers, hydrogenated 68649-11-6	6.6
2,6-di-tert-butylphenol 128-39-2	4.48
Succinic anhydride, alkylation products with C12-rich branched olefins from propene oligomerisation, hydrolyzed, esterification products with	4.65 @ 40°C and pH 3

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propylene oxide ^	

Mobility

Soil	Given its physical and chemical characteristics, the product generally shows low soil mobility
Air	Loss by evaporation is limited
Water	The product is insoluble and floats on water

Other adverse effects

General Information	No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from residues/unused products	Should not be released into the environment. Do not empty into drains. Dispose of in accordance with all applicable national environmental laws and regulations. Where possible recycling is preferred to disposal or incineration. Other Regulatory Status: No Canadian federal standard; however, for general discharge guidance, federal installations limited to 15 mg/L for total oil and grease. Provincial criteria are likely and should be requested when notifying provincial authorities.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

TDG	Not regulated
ICAO/IATA	Not regulated
IMDG/IMO	Not regulated
ADR/RID	Not regulated

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) (SOR/2015/17) and the Safety Data Sheet (SDS) contains all the information required by the HPR

International Inventories	All the substances contained in this product are listed or exempted from listing in the following inventories:

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Canada (DSL/NDSL)
U.S.A. (TSCA)

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

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

Revision Date: 2019-03-22
Revision Note *** Indicates updated section

Abbreviations, acronyms
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
NTP = National Toxicology Program
Section 8
TWA - Time Weight Average
STEL - Short Term Exposure Limits

+	Sensitizer	*	Skin designation
C:	Carcinogen	R:	Toxic to reproduction
Ceiling:	Ceiling Limit Value		

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End of the Safety Data Sheet