

Material Safety Data Sheet

AQUASHIELD



1. PRODUCT AND COMPANY IDENTIFICATION

Product Description AQUASHIELD

Recommended use Water-repellent Lubricant Grease

For use in industrial installations only.

Emergency Telephone Number In Canada, call CANUTEC (24 Hours) 1-613-996-6666
In the USA, call CHEMTREC (24 Hours) 1-800-424-9300
Outside the USA, call CHEMTREC (24 Hours) 1-703-527-3887

Manufacturer / Supplier D. A. Stuart, a Houghton Company. 4580 Weaver Parkway
Warrenville, Illinois, 60555
U.S.A.
1-630-393-0833 (non-emergency)

D. A. Stuart, Inc.
43 Upton Road
Scarborough, Ontario, M1L 2C1
Canada
1-416-757-3226 (non-emergency)

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component materials considered hazardous per national or state/provincial regulatory bodies:

Component	CAS-No	Weight %
Petroleum distillates, solvent-refined heavy naphthenic	64741-96-4	30 - 60
Titanium dioxide	13463-67-7	1 - 5
Lithium hydroxide	1310-65-2	1 - 5

Contains severely-refined mineral oil. See Section 8 for information about oil mists.

3. HAZARDS IDENTIFICATION

The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. The D. A. Stuart Company encourages and expects you to read the entire MSDS, and consult appropriate expertise as necessary, to become aware of and fully understand the information contained in this MSDS and of any hazards associated with the product.

CAUTION

Emergency Overview May cause eye/skin irritation
May cause irritation of respiratory tract
May be harmful if swallowed

Potential Health Effects

Principle Routes of Exposure Eye contact, Skin contact, Inhalation, Ingestion.

Acute Effects

Eyes	Contact with eyes may cause irritation.
Skin	May cause skin irritation and/or dermatitis.
Inhalation	Inhalation of vapours in high concentration may cause irritation of respiratory system
Ingestion	May be harmful if swallowed.
Chronic Effects	Dermatitis. Repeated or prolonged exposure above the NIOSH recommended exposure level (see Section 8) may result in, or aggravation of, upper respiratory irritation, bronchitis, or asthma.
Target Organs	No information available
Aggravated Medical Conditions	Skin disorders. Respiratory disorders. See Section 11 for additional Toxicological information.
Interactions with Other Chemicals	No information available
<u>Potential Environmental Effects</u>	See Section 12 for additional Ecological information

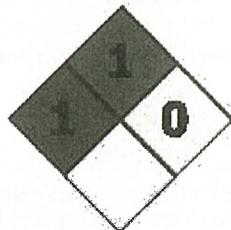
4. FIRST AID MEASURES

General Advice	Use Universal Precautions. Avoid contact with all unknown materials while aiding victim.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin Contact	Wash off with warm water and soap. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. If symptoms persist, call a physician.
Notes to Physician	Show this safety data sheet to the doctor in attendance. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

WHMIS Flammable Properties	Product is combustible. Does not meet WHMIS criteria to be controlled as a flammable/combustible material.
Uniform Fire Code	Combustible Liquid: III-B
Suitable Extinguishing Media	Carbon dioxide (CO ₂). Foam. Dry chemical.
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.
Hazardous Combustion Products	Carbon monoxide, Carbon dioxide (CO ₂), Sulfur Oxides, Hydrogen Sulfide.
Lower Flammability Limit in Air	No information available
Upper Flammability Limit in Air	No information available

Autoignition Temperature	No information available
Impact sensitivity	No
Sensitivity to static discharge	Static Accumulator
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating gases and vapours.
Protective Equipment and Precautions for Firefighters	Standard procedure for chemical fires. Wear self-contained breathing apparatus and protective suit.

NFPA Graphic

Health	1
Flammability	1
Instability	0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with the skin and the eyes. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment.
Environmental Precautions	Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.
Methods for Containment	Dam up. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Avoid run off to waterways and sewers. Do not flush into surface water or sanitary sewer system.
Methods for Cleaning Up	Soak up with inert absorbent material. Prevent product from entering drains. Sweep up and shovel into suitable containers for disposal. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling	Keep away from open flames, hot surfaces and sources of ignition. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Ensure adequate ventilation. Wash hands thoroughly after handling. Wash off with warm water and soap. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Do not take clothing home to be laundered. Use only in area provided with appropriate exhaust ventilation.
Storage	Store in accordance with local regulations. Keep in properly labelled containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep in an area equipped with sprinklers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	Ontario TWAEV	Mexico OEL (TWA)
Titanium dioxide	TWA: 10 mg/m ³	TWA: 10 mg/m ³ TWA: 15 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³ STEL: 20 mg/m ³
Lithium hydroxide			STEL: 1 mg/m ³	

Other Exposure Guidelines

If oil mists are generated, the following exposure limits apply:
ACGIH STEL 10 mg/m³, TWA: 5 mg/m³ and OSHA PEL 5 mg/m³.

The National Institute of Occupational Safety and Health (NIOSH) has established a Recommended Exposure Level (REL) of 0.5 mg/m³, total particulate mass, as a time-weighted average for up to 10 hr/day during a 40-hr week, for metalworking fluid mists.

Note: Personal protective equipment (PPE) requirements are related to conditions of use, which cannot be suitably predicted by the product manufacturer. Determination of necessary PPE is the responsibility of the employer/user, based on assessment and knowledge of the employer's processes and environment. In every circumstance of chemical exposure, the employer shall limit employee exposures first by implementing effective engineering controls, and second by implementing administrative controls. PPE shall be used diligently by employees when engineering and administrative controls do not fully prevent chemical exposure.

Engineering Measures	Ensure adequate ventilation, especially in confined areas
Personal Protective Equipment	Ask supervisor or safety specialist for handling instructions
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Opaque
Color	Light Greenish-blue
Physical State	Grease
Odor	Mineral oil
Odor Threshold	No information available
pH	No data available
Flash Point	246°C / 475°F
Boiling Point/Range	No information available
Melting Point/Range	No information available
Explosive Properties	No information available
Evaporation Rate	No data available
Vapour Pressure	No information available
Vapour Density	Heavier than air
Specific Gravity	0.894
Molecular Weight	No data available
Water Solubility	Insoluble
Partition Coefficient (water/oil)	No data available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions. Hazardous polymerization does not occur.
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition
Incompatible Products	Strong oxidizing agents.

Hazardous Decomposition Products None under normal use

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information:

Irritation	No information available
Corrosivity	No information available
Sensitization	No information available
LD50 Oral:	No information available
LD50 Dermal:	No information available
LC50 Inhalation:	No information available
NIOSH IDLH:	No information available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Petroleum distillates, solvent-refined heavy naphthenic	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	2.18 mg/L (Rat) 4 h
Titanium dioxide	10000 mg/kg (Rat)		
Lithium hydroxide	210 mg/kg (Rat)		960 mg/m ³ (Rat) 4 h

Chronic Toxicity

Product Information:

Carcinogenicity There are no known carcinogenic chemicals in this product

Component	ACGIH	IARC	NTP	OSHA	Mexico
Titanium dioxide		Group 2B		X	

Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	No information available
Teratogenicity	No information available
Synergistic Products	No information available
Target Organs	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Petroleum distillates, solvent-refined heavy naphthenic		LC50 > 5000 mg/L Oncorhynchus mykiss 96 h		EC50 > 1000 mg/L 48 h

Persistence and Degradability No information available

Bioaccumulation No information available
Mobility in Environmental Media No information available

Marine Pollutant NO

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with local regulations
Contaminated Packaging Empty containers should be taken for local recycling, recovery or waste disposal
US EPA Waste Number No information available

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

Mexico Not regulated

ICAO/IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

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(n) of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No

Reactive Hazard	No
Sudden Release of Pressure Hazard	No

U.S. State Regulations

California Proposition 65 This product does not contain any Proposition 65 chemicals.

State Right-to-Know Information

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Titanium dioxide	X	X	X		X

Other International Regulations**Mexico**

Mexico - Grade Slight Risk, Grade 1

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class Non-controlled

International Inventories

TSCA	Complies
DSL / NDSL	Complies
EINECS/ELINCS	Not determined/Information not available
ENCS	Not determined/Information not available
CHINA	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

16. OTHER INFORMATION

Health Hazard	1
Fire Hazard	1
Reactivity	0

HMIS® ratings involve data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

The National Institute of Safety and Health (NIOSH) has published Criteria for a Recommended Standard: Occupational Exposure to Metalworking fluids (DHHS Publication 98-102), available at: <http://www.cdc.gov/niosh/98-102.html>. Consult this Criteria Document for specific information about any adverse health effects associated with occupational exposure to metalworking fluids.

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Reason for revision No information available

This MSDS is intended to meet the specific requirements of 29 CFR 1910.1200 (U.S.A.), Hazardous Products Act and Controlled Product Regulations (Canada), NOM 018 STPS 2000 (Mexico), and ANSI Z400.1-2004, and should be used accordingly. While the information has been obtained from sources believed to be accurate and reliable, no warranty, expressed or implied, can be made with regard to its completeness, correctness or accuracy. It is offered for your consideration, investigation and verification. The information presented here pertains only to the product as shipped. Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product. Since conditions for use of the product are not under control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of the product. Final determination of suitability of any material is the sole responsibility of the user. Any users or handlers of this product who are not under the direct control of D. A. Stuart Company are responsible for evaluating this information in light of their particular situation, and are responsible for all losses, damages or expenses that result while this material is under their control. It is also the responsibility of the users and handlers to observe any and all laws and regulations (federal, state, provincial, and local) concerning the transportation, use, handling, storage, and disposal of this product.

End of MSDS