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MATERIAL SAFETY DATA SHEET
REQUIRED UNDER SAFETY AND HEALTH REGULATION FOR SHIP REPAIRING

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DATE UPDATED: NOVEMBER 27, 2015

SECTION 1. ----- CHEMICAL IDENTIFICATION -----

Product Name Saponin
Product Code(s) SB4521
Recommended Use For Laboratory Use Only
Not for Human or Animal Drug Use

SECTION 2. ----- HAZARDS IDENTIFICATION -----

GHS - Classification

Classification Eye irritation 2A Specific target organ toxicity - single exposure 3

Signal Word Warning



Hazard Statements H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.

Precautionary Statements P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P305 + P351 +P338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
Saponin	232-462-6	Not available	8047-15-2	95-100	-

SECTION 4. ----- FIRST-AID MEASURES -----

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation Move to fresh air. If not breathing, give artificial respiration.
Ingestion Never give anything by mouth to an unconscious person. Rinse mouth.
Notes to Physician Treat symptomatically

SECTION 5. ----- FIRE FIGHTING MEASURES -----

Flammable Properties Not flammable
Flash Point Not determined
Suitable Extinguishing Media Dry chemical, CO2, water spray or regular foam
Hazardous Combustion Products No information available.
Explosion Data
Sensitivity to Mechanical Impact Not sensitive
Sensitivity to Static Discharge Not sensitive

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

Personal Precautions Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation
Methods for Containment Prevent further leakage or spillage if safe to do so
Methods for Cleaning Up Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

SECTION 7. ----- HANDLING AND STORAGE-----

Handling Handle in accordance with good industrial hygiene and safety practice. Protect from light.
Storage Keep container tightly closed in a dry and well-ventilated place. Protect from light.
Incompatible Products Strong oxidizing agents.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Saponins 8047-15-2			

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

Eye/Face Protection Avoid contact with eyes. Tightly fitting safety goggles.
Skin and Body Protection Wear protective gloves/clothing

Respiratory Protection

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

Handle in accordance with good industrial hygiene and safety practice

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

Physical State	Powder	Odor	No information available.
Appearance	Off-White to Tan	Odor Threshold	No information available.
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks •Method</u>
pH	No information available.	
Melting point/freezing point		
Boiling Point/Range	No information available.	
Flash Point (High in °C)	No information available.	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available.	
Lower flammability limit:	No information available.	
Vapor pressure	No information available.	
Vapor Density	No information available.	
Specific Gravity	No information available	
Water Solubility	No information available	
Solubility in other solvents	No information available.	
Partition coefficient	No information available	
Autoignition Temperature		
Decomposition Temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available.	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available.
Molecular Weight	No information available
VOC Content	No information available.
Density	No information available
Bulk Density	No information available

SECTION 10. ----- STABILITY AND REACTIVITY -----

Stability	Stable under recommended storage conditions
Incompatible Products	Strong oxidizing agents.
Conditions to Avoid	Protect from light and moisture.
Hazardous Decomposition Products	None known based on information supplied.
Hazardous Polymerization	Hazardous polymerization does not occur

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

Acute Toxicity

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye Contact	Irritating to eyes.
Skin Contact	There is no data available for this product.
Ingestion	There is no data available for this product.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Saponins 8047-15-2			

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Saponins 8047-15-2				

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

SECTION 12. ----- ECOLOGICAL INFORMATION -----

Ecotoxicity

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Saponins 8047-15-2				

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Chemical Name	Log Pow
Saponins 8047-15-2	-

Other Adverse Effects No information available

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations
Contaminated Packaging Dispose of in accordance with all federal, state and local regulations

SECTION 14. ----- TRANSPORT INFORMATION -----

DOT Not regulated
IATA Not regulated

SECTION 15. ----- REGULATORY INFORMATION -----

REACH Title VII Restrictions No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Saponins	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Saponins 8047-15-2	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

International Inventories

TSCA Does not comply
 DSL/NDSL Complies
 EINECS/ELINCS Complies
 ENCS Does not Comply
 IECS Complies
 KECL Complies
 PICCS Complies
 AICS Complies

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 Yes

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)

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

This product does not contain any Proposition 65 chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

Canada

WHMIS Hazard Class

D2B Toxic materials



SECTION 16. ----- OTHER INFORMATION -----

Issuing Date	13-Aug-2009
Revision Date	27-Nov-2015
Revision Note	No information available.
Recommended Restrictions	No information available

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS