MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : **Sorbitan mono laurate**

Application : Emulsifier

2. HAZARD IDENTIFICATION

Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. This substance is not classified as dangerous according to Directive 67/548/EEC.

Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

Other hazards

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.
May irritate eyes.
May irritate skin.
Ingestion may cause irritation to mucous membranes.
May cause irritation of respiratory tract

3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME: Sorbitan mono laurate

CAS NUMBER: 1338-39-2

4. FIRST AID MEASURES

Description of first aid measures

If inhaled:

If breathed in, move person into fresh air.
If symptoms persist, call a physician.

In case of skin contact:

In case of contact, immediately flush skin with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed:

If large quantities of this material are swallowed, call a physician immediately.

Most important symptoms and effects, both acute and delayed

Symptoms:

None known.

Indication of any immediate medical attention and special treatment needed

Treatment:

None known.

5. FIRE – FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media:

High volume water jet

Special hazards arising from the substance or mixture

Specific hazards during fire-fighting:

In case of fire hazardous decomposition products may be produced such as: Carbon oxides
Do not use a solid water stream as it may scatter and spread fire.

Advice for fire-fighters

Special protective equipment for fire-fighters:

In the event of fire, wear self-contained breathing apparatus.

Further information:

Prevent fire extinguishing water from contaminating surface water or the ground water system.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTIAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Personal precautions:

Ensure adequate ventilation.
Use personal protective equipment.

Environmental precautions
Environmental precautions**:**

Prevent product from entering drains.

Methods and material for containment and cleaning up
Methods for cleaning up:

Soak up with inert absorbent material.
Sweep up and shovel into suitable containers for disposal.

Reference to other sections

None.

7. HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling:

Handle in accordance with good industrial hygiene and safety practice**.**

Advice on protection against fire and explosion

: Provide appropriate exhaust ventilation at places where dust is formed. Avoid dust formation in confined areas.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities
Requirements for storage areas and containers:

Store in original container. Keep container tightly closed in a dry and well-ventilated place.

Advice on common storage:

No special restrictions on storage with other products.

Other data:

Keep in a dry place. Stable under recommended storage conditions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters
Contains no substances with occupational exposure limit values.
Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:
End Use: Workers
Exposure routes: Skin contact
Potential health effects: Acute systemic effects
Remarks: not applicable
Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:
End Use: Workers

Exposure routes: Inhalation
Potential health effects: Acute systemic effects
Remarks: not applicable
Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:
End Use: Workers
Exposure routes: Skin contact
Potential health effects: Acute local effects
Remarks: not applicable
Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:
End Use: Workers
Exposure routes: Inhalation
Potential health effects: Acute local effects
Remarks: not applicable
Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:
End Use: Workers
Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 7 mg/kg bw/day
Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:
End Use: Workers
Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 49.4 mg/m3
Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:
End Use: Workers.
Exposure controls

Personal protective equipment
Eye protection: Safety glasses with side-shields

Hand protection
Remarks: For prolonged or repeated contact use protective gloves.
Skin and body protection: impervious clothing
Respiratory protection: No personal respiratory protective equipment normally required.
Environmental exposure controls
General advice: Prevent product from entering drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow viscous liquid
Boiling Point:	>200°C
Melting Point/ Freezing point °C:	< 10 Typical
Density @20°C	1.090 Typical
Viscosity @25°C	3500 -4500 cps
Solubility:	insoluble in water
Flashpoint COC°C	> 150
Flammability Limits:	Not Available
Vapour pressure	No data available
Decomposition Temperature	No data available
Explosive properties	No data available
Oxidizing properties	No data available

10. STABILITY & REACTIVITY

Chemical stability:

Stable under normal conditions of use

Conditions to avoid:

None Known

Incompatible materials:

Strong oxidizing agents

Hazardous decomposition products:

None with proper storage and handling

Hazardous reactions:

No hazardous reactions with proper storage and handling

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity
Product:
Acute oral toxicity:

LD50 Oral (rat, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity:

LC50 (rat, male and female): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity:

Remarks: not applicable
Skin corrosion/irritation
Product:
Species: rabbit
Assessment: Based on available data, the classification criteria are not met.
Method: OECD Test Guideline 404
Remarks: Information given is based on data obtained from similar substances.

Serious eye damage/eye irritation
Product:

Assessment: Based on available data, the classification criteria are not met.
Remarks: Information given is based on data obtained from similar substances.

Respiratory or skin sensitisation
Product:

Test Type: Maximisation Test (GPMT)
Exposure routes: Dermal
Species: Guinea pig
Assessment: Based on available data, the classification criteria are not met.
Method: OECD Test Guideline 406
Result: Did not cause sensitisation on laboratory animals.
Remarks: Information given is based on data obtained from similar substances.
Method: QSAR
Result: Unlikely to cause skin sensitisation.

Germ cell mutagenicity
Product:
Genotoxicity in vitro:
Test Type: In vitro gene mutation study in bacteria
Test species: Salmonella typhimurium and Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: Information given is based on data obtained from similar substances.

: Test Type: In vitro gene mutation study in mammalian cells
Test species: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
: Test Type: Chromosome aberration test in vitro
Test species: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Carcinogenicity
Product:

Remarks: not applicable

Reproductive toxicity
Product:
Reproductive toxicity - Assessment:

No toxicity to reproduction, Information given is based on data obtained from similar substances.
Did not show teratogenic effects in animal experiments, Information given is based on data obtained from similar substances.

STOT - single exposure
Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure
Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, re-peated exposure.

12. ECOLOGICAL INFORMATION

Toxicity
Product:
Toxicity to fish:

LL50 (Oryzias latipes (Japanese medaka)): > 13.7 mg/l
Exposure time: 96 h
Test Type: semi-static test
Remarks: No toxicity at the limit of solubility
Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates:

EL50 (Daphnia magna (Water flea)): > 27.8 mg/l
Exposure time: 48 h
Test Type: semi-static test
Remarks: No toxicity at the limit of solubility
Information given is based on data obtained from similar substances.
LL50 (Acartia tonsa): 452.84 mg/l
Exposure time: 48 h
Test Type: static test
Method: ISO 14669 and PARCOM method
Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae:

EL50 (Skeletonema costatum): 17.89 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: ISO 10253
EL50 (Pseudokirchneriella subcapitata (green algae)): > 122 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Remarks: Information given is based on data obtained from similar substances.

Toxicity to fish (Chronic toxic-ity):

Remarks: not applicable

Toxicity to daphnia and other aquatic invertebrates (Chron-ic toxicity):

NOEC: 1.44 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211

Persistence and degradability
Product:
Biodegradability:

Result: Readily biodegradable.
Method: OECD Test Guideline 301C
Remarks: Information given is based on data obtained from similar substances.
Result: Readily biodegradable.
Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301C
Remarks: This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on de-tergents. Data to support this assertion are held at the dispos-al of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Bioaccumulative potential
Product:
Bioaccumulation:

Remarks: Bioaccumulation is unlikely.

Mobility in soil

No data available

Results of PBT and vPvB assessment
Product:
Assessment:

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects
No data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Product:

Dispose of in accordance with local regulations.

Contaminated packaging:

Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION.

UN number

Not regulated as a dangerous good

Proper shipping name

Not regulated as a dangerous good

Transport hazard class

Not regulated as a dangerous good

Packing group

Not regulated as a dangerous good

Environmental hazards

Not regulated as a dangerous good

Special precautions for user

Remarks

Not classified as dangerous in the meaning of transport regulations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied

15. REGULATORY INFORMATION.

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

The components of this product are reported in the following inventories:

TSCA: All chemical substances in this product are listed on the TSCA Inventory.

REACH: On the inventory, or in compliance with the inventory

CH INV: On the inventory, or in compliance with the inventory

DSL: All components of this product are on the Canadian DSL.

AICS: On the inventory, or in compliance with the inventory

NZIoC: On the inventory, or in compliance with the inventory

ENCS: On the inventory, or in compliance with the inventory

ISHL: On the inventory, or in compliance with the inventory

KECI: On the inventory, or in compliance with the inventory

PICCS: On the inventory, or in compliance with the inventory

IECSC: On the inventory, or in compliance with the inventory

Chemical Safety Assessment

Not hazardous

16. OTHER INFORMATION

None of the data given herein constitutes a specification. The information provided is based on data of which we are aware and believed to be correct as the date hereof. Since the information contained herein maybe applicable under conditions beyond our control and with which we maybe unfamiliar, and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his/her own determinations of the suitability of the material for his/her particular purpose. Therefore, no Warranty, either Expressed or Implied, of Merchantability or Fitness for Particular Purpose is made with respect to the product or information contained herein.

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