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29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Praestol™ 851 TR
FLOCCULANT
™ Trademark, Solenis or its subsidiaries or affiliates,
registered in various countries

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Flocculating agent


Details of the supplier of the safety data sheet Solenis LLC 500 Hercules Road Wilmington Delaware 19808 United States of America RegulatoryRequestsNA@solenis.com	Emergency telephone number 1-844-SOLENIS (844-765-3647) / 606-329-5705 Product Information 1-844-SOLENIS (844-765-3647)
--	--

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Combustible Dust :
Carcinogenicity (Dermal) : Category 2

GHS Label element

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : May form combustible dust concentrations in air.
Suspected of causing cancer in contact with skin.

Precautionary Statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face

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protection.

Response:

IF exposed or concerned: Get medical advice/ attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
AMIDE	254504001-5518	Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).	>= 1.00 - < 1.50

Trade Secret Composition - Conceal the Identity + Concentration

CITRIC ACID, MONOHYDRATE	5949-29-1	Eye Irrit. 2A; H319	>= 1.00 - < 1.50
COCO DIETHANOLAMIDE	68603-42-9	Skin Irrit. 2; H315 Eye Irrit. 2A; H319	>= 0.10 - < 0.50

Trade Secret Composition - Conceal the Identity + Concentration

SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

If inhaled : If breathed in, move person into fresh air.
 If unconscious place in recovery position and seek medical advice.
 If symptoms persist, call a physician.

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- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
Headache
Dizziness
Suspected of causing cancer in contact with skin.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
- Specific hazards during firefighting : Organic dusts at sufficient concentration can form explosive mixtures in air.
Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
Nitrogen oxides (NOx)
acid vapors
Ammonia
- Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Avoid dust formation.
 Avoid breathing dust.
 Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
 If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.
 Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.


SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid dust formation.
 Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.
- Conditions for safe storage : Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 No smoking.
 Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
AMIDE	254504001-5518	TWA	10 mg/m ³ Total particulate.	WEEL
COCO DIETHANOLAMIDE	68603-42-9	ST ESL	100 µg/m ³	TX ESL
		AN ESL	10 µg/m ³	TX ESL

- Engineering measures** : Provide appropriate exhaust ventilation at places where dust is formed.
 General room ventilation should be adequate for normal

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conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.

- Eye protection : Safety glasses

- Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

- Hygiene measures : Avoid breathing dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : powder

- Physical state : solid

- Colour : white, light yellow

- Odour : characteristic
No data available

- Odour Threshold : No data available

- pH : 4, Concentration: 10 g/l (20 °C)

- Melting point/freezing point : Not applicable

- Boiling point/boiling range : Not applicable

- Flash point : Not applicable

- Evaporation rate : Not applicable

- Flammability (solid, gas) : No data available

- Upper explosion limit : Not applicable

- Lower explosion limit : 30,000 mg/m3
No data available

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Vapour pressure : Not applicable

Relative vapour density : No data available

Relative density : No data available

Density : ca. 0.72 g/cm³

Bulk density : 650 kg/m³

Solubility(ies)

Water solubility : soluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : > 400 °C

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : Keep away from heat, flame, sparks and other ignition sources.

Incompatible materials : Acids
 Chlorine
 Metals
 nitrates
 Strong bases
 Strong oxidizing agents
 strong reducing agents

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Hazardous decomposition
products

acid vapors
carbon dioxide and carbon monoxide
Nitrogen oxides (NOx)
Ammonia

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD 50 (Rat): > 2,000 mg/kg

Components:

CITRIC ACID, MONOHYDRATE:

Acute oral toxicity : LD 50 (Rat): 3 g/kg

COCO DIETHANOLAMIDE:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): > 2 g/kg

Assessment: Not classified as acutely toxic by dermal
absorption under GHS.

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: Not irritating to skin

Components:

AMIDE:

Result: Not irritating to skin


Components:

CITRIC ACID, MONOHYDRATE:

Result: Slightly irritating to skin

COCO DIETHANOLAMIDE:

Result: Irritating to skin

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Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result: Mildly irritating to eyes

Remarks: Unlikely to cause eye irritation or injury., Product dust may be irritating to eyes, skin and respiratory system.

Components:

AMIDE:

Result: Not irritating to eyes

Components:

CITRIC ACID, MONOHYDRATE:

Result: Severely irritating to eyes

COCO DIETHANOLAMIDE:

Result: Severely irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Components:

AMIDE:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

Carcinogenicity

Suspected of causing cancer in contact with skin.

Components:

COCO DIETHANOLAMIDE:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies (dermal)

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks: No data available

Carcinogenicity:

IARC

Group 2B: Possibly carcinogenic to humans

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COCO DIETHANOLAMIDE 68603-42-9

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

- Toxicity to fish : LC 50 (Danio rerio (zebra fish)): > 10 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203
 Remarks: Based on a similar product formulation.
- Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): > 10 mg/l
 Exposure time: 48 h
 Method: OECD Test Guideline 202
 Remarks: Based on a similar product formulation.
- Toxicity to bacteria : EC 50 (Pseudomonas putida): > 925 mg/l
 Remarks: Information given is based on data on the components and the ecotoxicology of similar products.

Components:**AMIDE:**


- Toxicity to fish : LC 50 (Leuciscus idus (Golden orfe)): > 6,810 mg/l
 Exposure time: 96 h
- LC 50 (Poecilia reticulata (guppy)): 17,500 mg/l
 Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): 3,910 mg/l
 Exposure time: 48 h
 Method: Static

CITRIC ACID, MONOHYDRATE:

- Toxicity to fish : LC 50 (Carassius auratus (goldfish)): 440 - 706 mg/l
 Exposure time: 96 h

COCO DIETHANOLAMIDE:

- Toxicity to fish : LC 50 (Danio rerio (zebra fish)): 3.6 mg/l
 Exposure time: 96 h

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Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia pulex)): 2.15 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC 50 (Desmodesmus subspicatus (green algae)): 2.2 mg/l
Exposure time: 72 h

Persistence and degradability

Components:

AMIDE:

Biodegradability : Remarks: Expected to be ultimately biodegradable

COCO DIETHANOLAMIDE:

Biodegradability : Result: Readily biodegradable

Bioaccumulative potential

Components:

AMIDE:

Bioaccumulation : Species: Green algae (Chlorella fusca vacuolata)
Bioconcentration factor (BCF): 11,700
Exposure time: 24 h
Concentration: 0.05 mg/l
Method: Static

Partition coefficient: n-octanol/water : log Pow: -2.11

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life., Harmful to aquatic life with long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.

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Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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U.S. DOT - ROAD

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS


Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

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MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no
------------------	----

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION


- SARA 311/312 Hazards** : Fire Hazard
Chronic Health Hazard
- SARA 313 Component(s)SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
- California Prop 65** Proposition 65 warnings are not required for this product based on the results of a risk assessment.
- The components of this product are reported in the following inventories:**
- TSCA : On the inventory, or in compliance with the inventory
- AUSTR : On the inventory, or in compliance with the inventory
- NZIOC : Not in compliance with the inventory
- ENCS : Not in compliance with the inventory
- KECL : On the inventory, or in compliance with the inventory
- PHIL : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

Registration: Trade Secret

Chemical Name	Identification number
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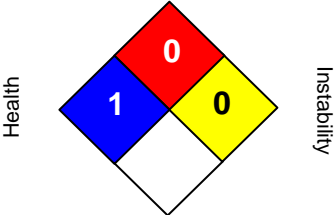
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AMIDE	254504001-5518
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SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
<p>Flammability</p>  <p>Health</p> <p>Instability</p> <p>Special hazard.</p>	<table border="1"> <tr> <td>HEALTH</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>0</td> </tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	1	FLAMMABILITY	0	PHYSICAL HAZARD	0
HEALTH	1						
FLAMMABILITY	0						
PHYSICAL HAZARD	0						

Full text of H-Statements referred to under sections 2 and 3.

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Sources of key data used to compile the Safety Data Sheet

Key literature references and sources of data

SOLENIS Internal data

SOLENIS internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by the Solenis Environmental Health and Safety Department.

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :


ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

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GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System