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INERT STEMMING SL

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

SECTION 1. Identification

1.1. Product identifier

Product name INERT STEMMING SL

1.2. Recommended use of the chemical and restrictions on use

Application Inert stemming.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier

Dyno Nobel Inc.

6440 S. Millrock Drive, Suite 150

Salt Lake City, Utah 84121

+1 801-364-4800 +1

801-321-6703

www.dynonobel.com

1.4. Emergency telephone number

Emergency telephone CHEMTREC (USA) +1 800-424-9300

CANUTEC (CANADA) +1 613-996-6666

SECTION 2. Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Eye Irrit. 2 - H319

Environmental hazards Not Classified

2.2. Label elements

Pictogram



Signal word Warning

Hazard statements H319 Causes serious eye irritation.

Precautionary statements

P264 Wash contaminated skin thoroughly after handling.

P280 Wear eye protection.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/ attention.

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P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Calcium chloride 10 - CAS number: 10043-52-4 EC number: 233-140-8 <25%

Classification Eye Irrit. 2 - H319

The full text for all hazard statements is displayed in Section 16.

SECTION 4. First-aid measures

4.1. Description of first aid measures

General information

Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation Move affected person to fresh air and keep warm and at rest in a position

comfortable for

breathing. Maintain an open airway. Loosen tight clothing such as collar, tie

or belt.

Ingestion

to drink.

Rinse mouth thoroughly with water. Give a few small glasses of water or milk

Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight

clothing such as collar, tie or belt.

Skin Contact Wash thoroughly with plenty of soap and water.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open

eyelids wide apart. Continue to rinse for at least 10 minutes.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any

rescue.



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4.2. Most important symptoms and effects, both acute and

delayed

General information See Section 11 for additional information on health hazards. The severity

of the symptoms described will vary dependent on the concentration and

the length of exposure.

Inhalation Prolonged inhalation of high concentrations may damage respiratory

system.

Ingestion Gastrointestinal symptoms, including upset stomach. Fumes from the

stomach contents maybe inhaled, resulting in the same symptoms as

inhalation.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact Irritating to eyes.

4.3. Indication of immediate medical attention and special treatment

needed

Notes for the doctor Treat symptomatically.

SECTION 5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Containers can burst violently or explode when heated, due to excessive Specific hazards

pressure build-up.

Hazardous combustion

products

Thermal decomposition or combustion products may include the following

substances: Harmful gases or vapors.

5.3. Advice for firefighters

firefighting

Protective actions during Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to

disperse vapours and protect men stopping the leak.

Special protective

Wear positive-pressure self-contained breathing apparatus (SCBA) and equipment for firefighters appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide

a basic level of protection for chemical incidents.

SECTION 6. Accidental release measures



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6.1. Personal precautions, protective equipment and emergency

procedures

Personal precautions N

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Do not touch or walk into spilled material.

6.2. Environmental

precautions

Environmental precautions

Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet.

Clear up spills immediately and dispose of waste safely. Reuse or recycle products wherever possible. Approach the spillage from upwind. Small Spillages: Absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental

regulations. Flush

contaminated area with plenty of water. Wash thoroughly after dealing with a

spillage.

Dispose of waste to licensed waste disposal site in accordance with the

requirements of the local Waste Disposal Authority.

6.4. Reference to other

sections

Reference to other

sections

For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment.

Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of



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each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in

accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers

upright. Protect containers from damage.

Storage class Chemical storage.

7.3. Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

SECTION 8. Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure

<u>limits</u>

Ingredient comments

No exposure limits known for ingredient(s).

8.2. Exposure controls

Appropriate engineering

controls

Provide adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if

worker exposure cannot be controlled

adequately by the engineering control measures. Ensure control measures

are regularly

inspected and maintained. Ensure operatives are trained to minimise

exposure.

Eye/face protection Eyewear complying with an approved standard should be worn if a risk

assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Wear tight-fitting, chemical splash goggles or face shield.

Hand protection Chemical-resistant, impervious gloves complying with an approved standard

should be worn if a risk assessment indicates skin contact is possible. The

most suitable glove should be chosen in consultation with the glove

supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is

detected. Frequent changes are recommended.



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Other skin and body

protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin

contamination is possible.

Provide eyewash station and safety shower. Contaminated work clothing Hygiene measures

> should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat,

drink or smoke.

Respiratory protection Respiratory protection complying with an approved standard should be

worn if a risk

assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'marked. Check that the respirator fits tightly and the filter is changed

regularly.

controls

Environmental exposure Not regarded as dangerous for the environment.

SECTION 9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Emulsion.

Color White.

Odor Petroleum.

Odor threshold Not determined.

Not determined. Ha

Melting point Not determined.

Initial boiling point and

range

>200 °C

Flash point >120°C (>250°F).

Evaporation rate <1 (Butyl Acetate = 1).

Evaporation factor Not determined.

Flammability (solid, gas) Not relevant.

Upper/lower flammability or Not relevant.

explosive limits

<1 mm Hg at 20 °C. Vapor pressure

Vapor density Not determined.



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Relative density 1.0-1.5 g/cc

Specific gravity Not determined.

Solubility Insoluble in water.

Partition coefficient Not determined.

Auto-ignition Not relevant.

temperature

Decomposition Not determined.

Temperature

Viscosity Not determined.

Explosive properties Not considered to be explosive.

Oxidising properties Not considered to be oxidising.

9.2. Other information

Other information No information required.

SECTION 10. Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as

recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous No potentially hazardous reactions known.

reactions

10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous

situation.

10.5. Incompatible

materials

Materials to avoid Strong oxidising materials.

10.6. Hazardous decomposition products

Hazardous Does not decompose when used and stored as recommended. Thermal

decomposition products decomposition or combustion products may include the following

substances: Harmful gases or vapours.

SECTION 11. Toxicological information

11.1. Information on toxicological effects Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal



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Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50}) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye Causes serious eye irritation.

damage/irritation

Respiratory sensitization

Respiratory sensitization Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - Based on available data the classification criteria are not met.

fertility

Reproductive toxicity Based on available data the classification criteria are not met.

development

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a

single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated Not classified as a specific target organ toxicant after repeated exposure.

exposure

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information The severity of the symptoms described will vary dependent on the

concentration and the length of exposure.

Inhalation Prolonged inhalation of high concentrations may damage respiratory

system.

Ingestion Gastrointestinal symptoms, including upset stomach. Fumes from the

stomach contents may be inhaled, resulting in the same symptoms as

inhalation.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact Irritating to eyes.



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Route of exposure Ingestion Inhalation Skin and/or eye contact

Target Organs No specific target organs known.

<u>Toxicological information on ingredients.</u>

Calcium chloride

Acute toxicity - oral

Acute toxicity oral 2,120.0

 $(LD_{50} mg/kg)$

Species Rat

Notes (oral LD_{50}) REACH dossier information.

ATE oral (mg/kg) 2,120.0

Acute toxicity - dermal

Notes (dermal LD_{50}) > 5000 mg/kg, Rabbit REACH dossier information.

Skin corrosion/irritation

Animal data Dose: CaCl2, 4 hours, Rabbit Primary dermal irritation index: 0

REACH dossier information. Not irritating

Serious eye damage/irritation

Serious eye Dose: 0.1 ml (33%), 24, 48, 72 hours, Rabbit REACH dossier

damage/irritation information. Causes serious eye irritation.

Germ cell mutagenicity

information.

Reproductive toxicity

Reproductive toxicity - Maternal toxicity: - NOAEL: > 189 mg/kg/day, Oral, Mouse

development REACH dossier information.

SECTION 12. Ecological Information

Ecotoxicity Not regarded as dangerous for the environment. However, large or

frequent spills may

have hazardous effects on the environment.

<u>12.1. Toxicity</u>

Toxicity Based on available data the classification criteria are not met.

Ecological information on ingredients.

Calcium chloride

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 4630 mg/l, Pimephales promelas (Fat-head Minne

LC₅₀, 48 hours: > 6560 mg/l, Pimephales promelas (Fat-

head Minnow)

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LC₅₀, 24 hours: > 6660 mg/l, Pimephales promelas (Fat-

head Minnow)

REACH dossier information.

Acute toxicity - aquatic NOEC, 48 hours: 2000 mg/l, Daphnia magna invertebrates LC₅₀, 48 hours: 2400 mg/l, Daphnia magna

REACH dossier information.

Acute toxicity - aquatic EC₅₀, 72 hours: 2900 mg/l, Selenastrum plants capricornutum REACH dossier information.

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Calcium chloride

Persistence and degradability

Substance is inorganic. Not applicable.

12.3. Bioaccumulative potential

Bio-Accumulative Potential No data available on bioaccumulation.

Partition coefficient Not determined.

Calcium chloride

Bioaccumulative

Substance is inorganic. Not applicable...

potential

12.4. Mobility in soil

Mobility The product is water-soluble and may spread in water systems.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB

This product does not contain any substances classified

as PBT or vPvB. Assessment

Calcium chloride

Results of PBT and

vPvB

This substance is not classified as PBT or vPvB according to

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current EU criteria.

assessment

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13. Disposal considerations



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13.1. Waste treatment meth

General information

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods

Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14. Transport information

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR).

14.1. UN Number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to

Not applicable

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15. Regulatory information

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

National regulations

Health and Safety at Work etc. Act 1974 (as amended).

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The Carriage of Dangerous Goods and Use of Transportable Pressure

Equipment

Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].

EH40/2005 Workplace exposure limits.

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the

Council of 18

December 2006 concerning the Registration, Evaluation, Authorisation and

Restriction

of Chemicals (REACH) (as amended) Commission Regulation (EU) No 2015/830 of 28 May 2015. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16. Other information

Abbreviations and ADR: European Agreement concerning the International Carriage of

Dangerous Goods by Road. acronyms

used in the safety data sheet

ADN: European Agreement concerning the International Carriage of

Dangerous Goods by Inland Waterways.

RID: European Agreement concerning the International Carriage of

Dangerous Goods by Rail.

IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods.

CAS: Chemical Abstracts Service. ATE: Acute Toxicity Estimate.

LC₅₀: Lethal Concentration to 50 % of a test population.

LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).

Read and follow manufacturer's recommendations. Only trained personnel

EC₅₀: 50% of maximal Effective Concentration.

PBT: Persistent, Bioaccumulative and Toxic substance.

vPvB: Very Persistent and Very Bioaccumulative.

Classification procedures Eye Irrit. 2 - H319: Calculation method.

according to Regulation

(EC) 1272/2008

Training advice

Key literature references

for data

Source: European Chemicals Agency, http://echa.europa.eu/

should use this material.

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Hazard statements in full H319 Causes serious eye irritation.

Party Responsible for the Preparation of this Document Dyno Nobel Inc. 6440 S. Millrock Drive, Suite 150 Salt Lake City, Utah 84121 Phone: 801-364-4800

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