

MATERIAL SAFETY DATA SHEET
(COMMISSION REGULATION EU No 453/2010)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier
LIFEFORCE™ FORMULA
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
LIFEFORCE™ FORMULA is a complementary feed (767/2009) to be incorporated into feedingstuffs.
- 1.3 Details of the supplier of the safety data sheet
Alltech Ireland Ltd.
Sarney Summerhill Road
Dunboyne Co. Meath, Ireland
- 1.4 Emergency telephone number
+353 1 8252244
Hours of Operation: 8:00 to 16:30

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture Not applicable
- 2.2 Label elements Not applicable
- 2.3 Other hazards
- Inhalation: Exposure to dust may cause irritation to the nose, throat or respiratory system. Symptoms may include coughing, shortness of breath. Repeated inhalation may induce sensitization and may cause allergic type reactions in sensitized individuals. Persons with allergies should avoid exposure.
- Skin Contact: Skin contact may cause a slight irritation. Symptoms may include redness, itching and pain. Persons with allergies should avoid exposure.
- Eye Contact: Product may cause slight irritation. Symptoms include redness, itching and pain.
- Ingestion: Not found to be toxic by oral exposure. Ingestion of this product may cause slight irritation.
- Chronic Health Effects: Not identified.

SECTION 3: Composition/information of ingredients

- 3.1 Substances Not applicable
- 3.2 Mixtures

CAS#:	EC#:	Component	Weight %
NA	NA	Distillers dried grains 1.12.11	Not disclosed
NA	NA	Yeast product derived from <i>Saccharomyces cerevisiae</i> 12.1.5	Not disclosed
NA	NA	Zinc chelate of amino acids hydrate E6	Not disclosed
NA	NA	Cupric chelate of amino acids hydrate E4	Not disclosed
NA	NA	Manganese chelate of amino acids hydrate E5	Not disclosed
NA	NA	Organic form of selenium produced by <i>Saccharomyces cerevisiae</i> CNCM I-3060	Not disclosed
NA	NA	<i>Saccharomyces cerevisiae</i> CBS 493.94 E1704-4a1704	Not disclosed

NA: Not applicable

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eyes: Flush eyes immediately with copious amounts of clean water for 15 minutes. If irritation or redness persists, seek medical attention if allergic response exhibited.
- Skin: Remove affected clothing immediately. Flush affected area(s) with copious amounts of soap and water. If skin surface is damaged, apply a clean dressing. Wash contaminated clothing before reuse. If irritation or redness develops, seek medical attention immediately.
- Inhalation: Remove victim from source and allow to rest in well ventilated area. If breathing is difficult, obtain medical attention immediately.
- Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention.

- 4.2 Most important symptoms and effects, both acute and delayed Not identified.
- 4.3 Indication of any immediate medical attention and special treatment needed Not identified.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Use media that is appropriate to treat surrounding fire. Consider alcohol-resistant foam, carbon dioxide, regular dry chemical, or water spray. Avoid heavy stream of water. Self contained breathing apparatus is required.

5.2 Special hazards arising from the substance or mixture

Evolves carbon dioxide, carbon monoxide or hydrocarbon fumes upon combustion.

5.3 Advice for firefighters

Move container from fire area if it can be done without risk. Do not scatter spilled

material with high pressure water streams. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay up wind and keep out of low areas.

Fire fighters should wear self-contained breathing apparatus with full face piece operated in positive pressure mode and protective clothing to prevent contact with skin and eyes.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Ventilate the area. Wear appropriate protective equipment as specified in section 8. Avoid dust formation and avoid inhalation of dust. Use a respirator or a combination filter. Keep unnecessary personnel away.

6.2 Environmental precautions

Place contaminated materials in disposal containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material. Do not dispose in canals, surface water, or ground water.

6.3 Methods and material for containment and cleaning up

Sweep, shovel, or vacuum up the material. Avoid any excess dust formation. Use caution as product may be slippery when wet. Keep product out of sewage and drainage systems and all bodies of water. Clean spills immediately. Ventilate the contaminated area. Thoroughly wash the area with water after a spill.

6.4 Reference to other sections

Wear appropriate protective equipment as specified in section 8.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly with soap and water after handling. The use of respiratory protection is advised when dust concentrations exceed any established exposure limits (see section 8).

7.2 Conditions for safe storage, including any incompatibilities

Store in normal conditions in a cool, dry place. Open containers should be resealed. Shelf life under these conditions is 12 months.

7.3 Specific end use(s)

Not identified

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

Component (CAS#): Selenium
TWA: 0.2 mg(Se)/m³. This is equivalent to 100 mg/m³ of the organic form of selenium
Ingredient

- 8.2 Exposure controls
- Engineering: Use process enclosure, general dilution ventilation, or local exhaust systems, where necessary, to maintain airborne dust concentrations below the applicable regulations. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.
- Respiratory: Protection is not normally required. Wear a dust mask or other appropriate (P1 EN 143) approved respiratory protection when effective engineering controls are not feasible or during operations that generate airborne dust concentrations exceeding the relevant standards. A respiratory protection program that meets (P1 EN 143) requirements whenever workplace conditions warrant a respirator's use. Persons with allergies should avoid exposure.
- Hand/Skin: Wear impervious gloves and general purpose overalls with elasticized cuffs and leg bottoms. Persons with allergies should avoid exposure.
- Eye: Protective goggles conforming to EN 166:2002 or face shields.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

(a) Physical appearance	Medium brown powder
(b) Odour	No discernible odor
(c) Odour Threshold	Not available
(d) Bulk Density	512 kg/m ³
(e) Melting point/freezing point	Not available
(f) Initial boiling point	Not available
(g) Flash point	Not available
(h) Evaporation rate	Not available
(i) Flammability	Not available
(j) Upper/lower flammability or explosive limits	Not available
(k) Vapour pressure	Not available
(l) Vapour density	Not available
(m) Relative density	Not available
(n) Solubility	Not available
(o) Partition coefficient: n-octanol/water	Not available
(p) Auto ignition temperature	Not available
(q) Decomposition temperature	Not available
(r) Viscosity	Not available
(s) Explosive properties	Not available
(t) Oxidising properties	Not available

9.2 Other information

To the best of our knowledge the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

SECTION 10: Stability and reactivity

10.1	Reactivity	Not available
10.2	Chemical stability	Product is stable under normal storage conditions (21 °C, 1atm).
10.3	Possibility of hazardous reactions	Not available
10.4	Conditions to avoid	Avoid moisture, heat and sources of ignition.
10.5	Incompatible materials	Not available
10.6	Hazardous decomposition products	Not available

SECTION 11: Toxicological information

11.1	Information on toxicological effects	
	(a) Acute toxicity	Zinc chelate of amino acids hydrate Oral[rat]: 3000 mg/kg
		Organic form of selenium Oral:>2000 mg/kg BW (studies performed on mice and rats)
		Cupric chelate of amino acids hydrate Oral[rat]: >1600 mg/kg
		Manganese chelate of amino acids hydrate Oral[rat]: >5000 mg/kg
	(b) Irritation	Not expected to be toxic. Exposure may cause slight irritation. Persons with allergies should avoid exposure.
	(c) Corrosivity	Not available
	(d) Sensitisation	Not available
	(e) Repeated dose toxicity	Not available
	(f) Carcinogenicity	Not applicable
	(g) Mutagenicity	Not applicable
	(h) Toxicity for reproduction	Not applicable

Other toxicological information: To the best of our knowledge the chemical, physical and toxicological properties of this product have not been thoroughly investigated.

SECTION 12: Ecological information

12.1	Toxicity	Not available
	Component (CAS#): Test & Species:	
12.2	Persistence and degradability	Not available
12.3	Bioaccumulative potential	Not available
12.4	Mobility in soil	Not available
12.5	Results of PBT and vPvB assessment	Not available
12.6	Other adverse effects	Not available

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods Not identified

Disposal Instructions: Consult local, state and/or provincial environmental regulatory authorities for acceptable disposal procedures and locations. Follow standard disposal procedures in accordance with Directive 2008/98/EC of the European Parliament and of the Council of the Member State.

SECTION 14: Transport information

- 14.1 UN number Not applicable
 14.2 UN proper shipping name Not applicable
 14.3 Transport hazard class(es) Not applicable
 14.4 Packing group Not applicable
 14.5 Environmental hazards Not applicable
 14.6 Special precautions for user Not applicable
 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
 Not applicable

SECTION 15: Regulatory information

- 15.1 Safety, health, and environmental regulation/legislation specific for the substance or mixture
 EU Regulation (EC) N° 767/2009 Classification: Complementary Feed
 Compliance with Other Undesirable Substances:
 Regulations: Dioxin (Directive 2002/32/EC) 0.5 ng WHO-PCDD/F* -TEQ/kg
 *(PCDD+PCDF)
- 15.2 Chemical safety assessment
 To the best of our knowledge the chemical, physical and toxicological properties of this product have not been thoroughly investigated.

SECTION 16: Other information

GMO: No GMO or GM derived products have been used.

This complementary feed is also guaranteed to be hordenine, caffeine and theobromine free.

H Phrases: None listed
 P Phrases: None listed

Preparation Date: 9 July 2012
 Issue Date: 9 July 2012
 Previous Issue Date: 07 February 2012

Sources of keys data used to compile the data sheet:

Commission Regulation (EU) No 453/2010
 Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation 1907/2006
 Classification of Dangerous substances Directive 1999/45/EC
 Classification, Labeling, and Packaging (CLR) Regulation 1272/2008

LIFEFORCE™ FORMULA

Completion Date: 01/09/2011
Revision Date: 09/07/2012
Version Number: 5

The information in this Material Safety Data Sheet has been compiled from data that is, to the best of our knowledge, valid at the date of issue shown herein. However, the conditions under which the product is used are not under our control and so the user is responsible to ensure that a risk assessment is undertaken in accordance with current legislation and that all necessary precautions are taken.