



# MSDS – FISH MEAL

## 1. Identification of the substance/mixture and of the company/undertaking

Product:	Fish Meal
Name:	Karmsund Protein
Address:	Husøyvegen 141
Postcode:	4262
City:	Avandsnes
Country:	Norway
Website:	www.karmsundprotein.no
E-mail:	post@karmsundprotein.no
Tel.:	+47 99 21 24 38

## 2. Hazards identification

This product is not considered to be hazardous due to health, safety, and environment.

## 3. Composition/information on ingredients

Composition of feed	Information	Ingredients	Amount
Pelagic fish	Blue whiting, sandeel and herring	Protein	min 68% - max 73 %
Antioxidant		Naturnox 15	Normally min. 500 ppm
Ash			Max 16 %
Crude fat		Fish oil	Max 12 %
Moisture	Water		Min. 6 - max 10 %
Salt			Max 5 %
NaCl			≥ 5 %
Quality measures	NH3		≥ 0,2 %
	Cadaverine		Max. 1800 ppm
	Histamine		Max. 1000mg/kg
	Salmonella		NEGATIVE
Application	Fish Food		

#### 4. First aid measures

Contact with Skin:	Wash off with plenty of water. Remove contaminated clothing.
Excessive inhalation:	May block the airways. remove to fresh air.
Excessive eye contact:	Rinse out with plenty of water with the eyelid held wide open.
Excessive swallowing:	Consult doctor if feeling unwell.

#### 5. Firefighting measures

General:	Fish meal in bulk can self-ignite and start a smouldering fire.
	Dust of fish meal can ignite if the temperature is high, but lower than flame point(see chapter 9)
Extinguishing equipment:	Powder, foam, spray water, dry chemical, and nitrogen/carbon dioxide.
	Use nitrogen/carbon dioxide if smouldering fire in bulk.
Special risks:	Development of hazardous combustion gases or vapours possible in the unlikely event of fire. The following may develop in the event of fire - use nitrogen oxides.
Protective equipment:	Do not stay in dangerous zone without fresh air respiration.

#### 6. Accidental release measure

Onshore	Physical collection is recommended.
Offshore	Use lenses. Physical collection is recommended. The fish meal contains nutrients, but no harm to the environment.

#### 7. Handling and Storage

Keep dry, cool (recommended below 20°C) in a dark place.

#### 8. Exposure controls/personal protection

Respiratory protection	To be used when dusts are generated.
Eye protection	To be used when dusts are generated.
Hand protection	Not required.

#### 9. Physical and chemical properties

Physical properties	Form: Powder
	Color: yellow / brown
	Odour: Fishy
Solubility in water	5-9 % of the meal
Min. Ignition Energy (MIE)	> 1000 mJ (dust clouds)
Min. Ignition Temperature (MIT)	480 °C (dust clouds)

### 10. Stability and reactivity

Conditions to be avoided	Water coming into the meal.
	Direct sunshine (the meal can rancid.)
Avoid Chlorine because this is an oxidising agent.	
If stored under the recommended conditions, the shelf life is 24 months.	

### 11. Toxicological information

No toxic effects are to be expected when the product is handled appropriately.

### 12. Ecological information

No ecological problems are known.

### 13. Disposal considerations

Authorities or companies in charge shall look fore approved waste disposal companies which will advise you ofhow to dispose fish meal as waste.

UN-number	UN2216
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### 14. Transport information

To be delivered by bulk carrier from site

## 15. Regulatory

Products are manufactured and business approved by the Norwegian food safety authorities according to the provisions of regulations (EC) no. 1069/ 2009 and (EU) no. 142/ 2011

The business is approved for:

Products	FATF, PAP
Activity	PROCP
Category	3
Approval number	1001910

EU	According to COMMISSION REGULATION (EU) 2017/893 of 24 May 2017 'fishmeal —shall not be used in feed for ruminants except unweaned ruminants'. This is referring to Article 21(2) of Regulation (EC) No 1069/2009
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IFFO	IFFO RS Global Standard for Responsible Supply of Marine Ingredients Version 2.0	
	Registration No.:	IFFO 199
	Product Scope:	Fishmeal & Fish Oil
	Date of Evaluation:	04th & 5th December 2018
	Certificate Issue date:	6th March 2019
	Certificate Expiry Date:	30th January 2022

FEMAS	Feed Materials Assurance Scheme: 1st February 2019	
	Certificate No.:	86033
	Scheme ID:	57884
	Scope of Operation:	The production and supply of Norwegian fish meal and crude fish oil for use in fish and other animal feeds
	Certificate Issue:	198061-1
	Valid From:	20/03/2020
	Original Issue:	20/03/20
	Expiry Date:	31/03/2023

## 16. Other information

### Reference to laws:

- <https://lovdata.no/dokument/SF/forskrift/2003-06-30-911> (Forskrift om helse og sikkerhet i eksplosjonsfarlige atmosfærer)
- <https://lovdata.no/dokument/SF/forskrift/2017-11-29-1849> (Forskrift om utstyr og sikkerhetssystem til bruk i eksplosjonsfarlig område)
- The ATEX Directive 2014/34/EU covers equipment and protective systems intended for use in potentially explosive atmospheres.

The information contained in this MSDS is based on the present state of knowledge and on current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee to avoid harm or any accident caused by user of the product.

Husøy, August 19<sup>th</sup>, 2021  
BHL/ TH/ ØS