MATERIAL SAFETY DATA SHEET

FEED UREA

Creation: 24/04/2018
Update: 24/04/2018
Version: 1

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

1.1 Product identifier

Commercial name:	Feed Urea
Description:	Non Protein Nitrogen
Chemical formula:	CH4N2O
CAS No.:	57-13-6
EINECS No.:	200-315-5
Feed additive identification number:	3d1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:	Complementary feed for ruminants
Uses advised against:	Monogastrics consumption, young ruminants consumption, human consumption

1.3 Details of the supplier of the safety data sheet

Supplier :	SIPENA Parc Atalante Allée Metis 35400 Saint Malo - France david@sipena.fr
N° SIRET	81172996100029

1.4 Emergency telephone number

Urgency Call:	ORFILA +33(0)1 45 42 59 59.

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Mono-constituent substance

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]: Not applicable

2.3 Other hazards

Not applicable

SECTION 3: Composition/information on ingredients

Mono Constituant Substance

CAS N°	EC N°	Weight (%)	Name	Classification acc/ to Regulation (EC) N° 1272/2008
57-13-6	200-315-5	≥ 90 - <100	Urea	Not classified

SECTION 4: First Aid Measures

4.1.First aid instructions

Following eye contact: Rinse thoroughly with running water. Check if the victim wears contact lenses and in this case, remove them. If irritation occurs, seek medical

Following skin contact: Washing with water and soap. If irritation occurs, seek medical

Following inhalation: If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Following swallowing: Rinse mouth with water. If a person has swallowed the product and is conscious, give small amounts of water.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute effect on health:

Following eye contact: No known significant effects or critical hazards.

Following skin contact: No known significant effects or critical hazards.

Fallowing inhalation: Exposure to decomposition products may be hazardous to health. The serious effects of exposure may be delayed.

Following swallowing: No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed

Note to doctor: Treat symptomatically. Immediately contact a specialist for the treatment of poisoning, if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatment: No specific treatment

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: Not identified.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: No specific explosion and Fire Risk

Specific hazards arising from combustion products: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides, ammonia.

Avoid breathing dust, vapors or fumes from burning materials. In case of inhalation of decomposition products in a fire, symptoms may be delayed.

5.3 Advice for firefighters

Special precautions for firefighters: In a fire, quickly isolate the scene by removing all persons located near the scene of the accident. No action shall be taken involving any personal risk or without suitable training.

Special protective clothing: Firefighters should wear appropriate protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection against chemical accidents.

Other information: None

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Prevent access to unprotected personnel and not wearing protective clothing. Do not touch or walk through spilled product. Wear personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, refer to Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if environmental pollution (sewers, waterways, soil or air) by the product.

6.3 Methods and material for containment and cleaning up

Small accidental spill: Move containers from spill area. Suction or scoop with a broom spilled product and place into a labeled waste container. Disposal by an authorized waste collection company

Large accidental spill: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Suction or scoop with a broom spilled product and place into a labeled waste container. Disposal by an authorized waste collection company

References to other sections: See Section 1 for emergency contact information. See Section 8 for information on personal protective equipment. See Section 13 for additional information on waste treatment

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Protection measures: Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene: It is forbidden to eat, drink or smoke in areas where this material is handled, stored and processed. It is recommended staff to wash their hands and face before eating,

drinking or smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Before any intervention, refer to paragraphs 3 and 4 of the present sheet in the case of specificities due to the preparation.

Without any specific mention, please, respect the following precautions:

Handling: Handling the product has no toxicity. Handled with care in a well ventilated place. Avoid inhalation and physical contact.

Storage: Store in a dry and well-ventilated place. Keep bags closed if they are not fully utilized

7.2. Conditions for safe storage, including any incompatibilities

Recommendations: Store in accordance with local regulations. Store in the original container protected from direct sunlight in a dry, ventilated place away from incompatible materials (see section 10). Keep container tightly closed when not used. Containers that have been opened must be carefully closed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate container to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations: Not available

Industrial sector specific solutions: Not available

SECTION 8: Exposure control – Personal protection

The information in this section contains guidelines and general advice. Check the list of Identified Uses in Section 1 for any use-specific information available scenario of exposure.

8.1. Control parameters

Occupational Exposure limit values: No limit value known

Information on monitoring procedures: If this product contains ingredients with exposure limits, it may be necessary to conduct a review tracking people, the atmosphere on the workplace or living organisms to determine the effectiveness of the ventilation or other control measures and assess the need to use protective equipment respiratory. He must be referring to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (workplace atmospheres - Guide for the application and use of procedures and devices to assess exposure to chemical and biological agents) European Standard EN 482 (workplace atmospheres - General requirements for the performance of the chemical measurement procedures) are also required to refer to national guidance documents for methods for determining hazardous substances.

DNELs / DMELs

Substance Name: Urea – CAS Number : 57-13-6

	Worker			
Route of exposure	**Acute effect local**	**Acute effect systemic**	**Chronic effects local**	**Chronic effects systemic**
Oral		-		-
Inhalation		292 mg/m^3		292 mg/m^3
Dermal		580 mg/kg bw/d		580 mg/kg bw/d

PNECs

Substance Name: Urea – CAS Number: 57-13-6

Environmental protection target	
Fresh water	0.047 mg/l
Marine water	0.047 mg/l

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants in the air. If this product contains ingredients with constraints related to exposure limits, use process enclosures, local exhaust ventilation or other engineering controls integrated to keep the exposure below the technician recommended or statutory limits.

8.2.2. Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working day. Wash contaminated clothing before reuse. A washing or water system must be accessible for cleaning the eyes and skin

Eye and face protection

Safety eyewear complying with an approved standard if a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts

Skin protection

Hands protection

Impervious gloves and chemical resistant, complying with an approved standard should be worn at all times when handling chemical products if a risk assessment is identified

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the operation performed and the risks involved and should be approved by a specialist before handling this product

Respiratory protection

Wear a respirator properly fitted with particulate filter and complies with an approved standard if a risk assessment indicates this is necessary. The choice of respiratory protection should be based on the exhibitions known or anticipated levels, the hazards of the product and the safe working limits of the selected respirator

8.2.3. Environmental exposure controls

It is important to test emissions from ventilation or work process equipment to ensure they comply with the requirements of the legislation on environmental protection. In some cases it will be necessary to equip the material for manufacturing a gas scrubber or filter or engineering modifications to reduce emissions to acceptable levels.

SECTION 9: Physical and Chemical properties

Appearance:	solid - free flowing granules
Color:	white
Odour:	Slight ammonia
pH:	7-10 at 100 g/L in water
Solubility in water:	> 10 g/L
Explosive properties:	none
Oxidising properties:	none

SECTION 10: Stability and Reactivity

10.1. Reactivity	No specific test data related to reactivity available for this product or its components.
10.2. Chemical stability	Under storage at normal ambient temperatures (+5 to +30°C), the product is stable
10.3. Possibility of hazardous reactions	No hazardous reaction when handled and stored according to provisions
10.4. Conditions to avoid	Avoid contamination including that of metals, dust and organic substances
10.5. Incompatible materials	Urea reacts with sodium or calcium hypochlorite to form explosive nitrogen trichloride.
10.6. Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be appeared.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Substance Name: Urea – CAS Number: 57-13-6

Result	**specie**	**dosage**	**exposition**	**ref**
Oral LD 50	rat	14.300 mg/kg OECD 401	-	IUCLID 5

Conclusion: No known significant effects or critical hazards

Skin corrosion / irritation: conclusion:
Skin: No known significant effects or critical hazards
Eye: No known significant effects or critical hazards
Respiratory: No known significant effects or critical hazards

Sensitizing: conclusion:
Skin: No known significant effects or critical hazards
Eye: No known significant effects or critical hazards
Respiratory: No known significant effects or critical hazards

Germ cell mutagenicity: conclusion: No known significant effects or critical hazards

Carcinogenicity

Substance Name: Urea – CAS Number: 57-13-6

Result	**specie**	**dosage**	**exposition**	**ref**
Oral – negative NOAEL	rat	2250 mg/kg	7 days a week	IUCLID 5

Conclusion: No known significant effects or critical hazards

Reproductive toxicity

Substance Name: Urea – CAS Number: 57-13-6

Toxicity during pregnancy	**Fertility**	**Toxicity for development**	**Specie**	**dosage**	**exposition**	**ref**
-	-	negative	rat	Oral: 500 mg/kg	7 days a week	IUCLID 5

Conclusion:	No known significant effects or critical hazards

Teratogenicity

Conclusion:	No known significant effects or critical hazards
Information on likely routes of exposure	No known significant effects or critical hazards

Potential acute effects on health

Inhalation	Exposure to decomposition products may be hazardous to health. The serious effects of exposure may be delayed.
Ingestion	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards
Eye contact	No known significant effects or critical hazards

Symptoms corresponding to physical, chemical and toxicological attributes

Inhalation	No specific data
Ingestion	No specific data
Skin contact	No specific data
Eye contact	No specific data

Delayed effects, immediate effects, chronic effects of a short or long term exposure

Short-term exposure	Potential immediate effects: no known significant effects or critical hazards Potential delayed effects: no known significant effects or critical hazards
Extended exposure	Potential immediate effects: No known significant effects or critical hazards Potential delayed effects: no known significant effects or critical hazards

Potential chronical effects on health

Substance Name: Urea – CAS Number: 57-13-6

Result	**specie**	**dosage**	**exposition**	**ref**
Chronical oral NOAEL	rat	2250 mg/kg	12 months 7 days a week	IUCLID 5

Conclusion:	No known significant effects or critical hazards General: No known significant effects or critical hazards Carcinogenicity: No known significant effects or critical hazards Mutagenicity: No known significant effects or critical hazards Teratogenicity: No known significant effects or critical hazards Effects on development: No known significant effects or critical hazards Effects on fertility: No known significant effects or critical hazards

Toxicokinetics

Absorption:	Quickly absorbed
Distribution:	Not metabolized in liver tissues before entering the systemic circulation.
Metabolism:	Metabolite not considered as toxic
Elimination:	The chemical and its metabolites are excreted in full and do not accumulate in the body

SECTION 12: Ecological information

12.1 Toxicity

Substance Name: Urea – CAS Number: 57-13-6

Result	Specie	dosage	exposition	ref
Acute LC 50	Fish	6.810 mg/ml fresh water	96h	IUCLID 5
Acute LC 50		10.000 mg/ml fresh water	24h	IUCLID 5
Acute NOEC	Aquatic plant Algae	47 mg/ml fresh water	192h	

Conclusion: No known significant effects or critical hazards

12.2. Persistence and degradability

Substance Name: Urea – CAS Number: 57-13-6

Test	Result	dosage	Inoculum	ref
-	96% - 16 days		Activated sludge	

Conclusion: No known significant effects or critical hazards

12.3. Bioaccumulative potential

Substance Name: Urea – CAS Number: 57-13-6

LogPow	FBC	Potential	ref
1,73 -2,11 – 1,73	-	low	-

Conclusion: No known significant effects or critical hazards

12.4. Mobility on soil

Soil/water partition coefficient: Not available

Mobility: This product can be transported by ground water infiltration or surface runoff because its water solubility is: high

12.5. Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

12.6. Other adverse effects No known significant effects or critical hazards

SECTION 13: Disposal Considerations

The information in this section contains guidelines and general advice. Check the list of Identified Uses in Section 1 for any use-specific information available scenario of exposure.

13.1. Waste treatment methods

Product

Waste disposal methods	It is recommended to avoid or minimize the generation of waste. Disposal of this product, solutions and by-products should at all times comply with the legal requirements for environmental protection and disposal of waste and the requirements of all local authorities. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Do not discharge untreated waste into drains, unless this is in conformity with the requirements of all relevant authorities.
Hazardous waste	The present knowledge of the supplier, this product is not regarded as hazardous waste as defined by EU Directive 2008/98/EC.

European waste catalogue

Waste code:	06 10 99
Waste designation:	Waste not specified elsewhere

Packaging

Waste disposal methods:	It is recommended to avoid or minimize the generation of waste. Recycling of packaging waste. Incineration or landfill should only if recycling is not feasible
Special precautions:	Do not dispose of this material and its container in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1. UN Number	unregulated	unregulated	unregulated	unregulated
14.2. UN proper shipping name	-	-	-	-
14.3. Transport hazard class(es)	-	-	-	-
14.4. Packing group	-	-	-	-
14.5. Environmental hazards	No	No	No	No
14.6. Other information	ADR / RID	AND	IMDG	IATA
marine pollutant	*no*	*no*	*no*	*no*

14.7. Transport in bulk according to Annex II of Marpol112 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

UE Regulation (EC) n° 1907/2006 (REACH):	Annex XIV: substances submitted to authorization - substances of very high concern: not applicable
Other EU regulations:	Europe inventory: All components are listed or exempted.
Seveso II Directive:	This product is not controlled according to the Seveso II directive
National regulations:	Articles L.461-1 to L.461-7 of the Social Security Code, reinforced medical surveillance: No substance listed Article R 4624-18 of the Labour Code establishing the list of jobs that require reinforced medical surveillance: not applicable
Information relative to the country:	Decree of 30 June 2004 establishing the list of indicative occupational exposure limit values in implementation of Article R. 232-5-5 of the Labour Decree No. 2009-1571 of 15 December 2009 on the control of chemical risk workplaces.
Notes:	To our knowledge, no other national or government regulation only applies

15.2. Chemical Safety Assessment

This product contains substances still requiring chemical risk assessment

SECTION 16: Other Information

Abbreviations and acronyms

ADN:	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
bw:	body weight
CLP:	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL:	Derived No Effect Level
DMEL:	Derived Minimum Effect Level
EC:	European Community
LC50:	Lethal Concentration to 50 % of a test population
LD50:	Lethal Dose to 50% of a test population (Median Lethal Dose)
PNEC:	Predicted No Effect Concentration(s)
PTP:	Persistent, Bioaccumulative and Toxic substance
REACH:	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation (EC) No 1907/2006
UICLID:	International Uniform Chemical Information Database
vPvB:	Very Persistent and Very Bioaccumulative

Main references	EU REACH UICLID5 CSR National institute for Occupational safety and Health, U.S. Dept of Health, Education and Welfare, Reports and Memoranda Registry of Toxic Effects of chemical Substances. HIS, 4777 Levy street, St Laurent, Quebec HAR 2P9, Canada. Regulation (CE) n° 1272/2008 Annex VI

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP / GHS]

Classification:	not classified

Justification:	calculation method
Full text of abbreviated H sentences:	not applicable
Full text of classifications CLP/GHS:	not applicable
Full text of abbreviated R sentences:	not applicable
Full text of classifications DSD/DPD:	not applicable

Note to the reader

To our knowledge, the information provided in this Safety Data Sheet is correct at time of publication. This information is an indication of safety and apply only to products and uses listed in this sheet. This information does not necessarily apply to this product if it is associated with one or more other products, or if it is made of uses other than those described here, as all products may have unknown risks and should be used with caution. The final decision as to the proper use of any product is the sole responsibility of the user.