



Chemifloc Ltd.

SAFETY DATA SHEET Chemblue

Conforms to Regulation (EC) No.1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Section 1: Identification of the substance and of the company/undertaking

Identification of the substance or mixture

Product Name:	Urea Solution
Chemical Name:	Urea
Registration Number:	01-2119463277-33-xxxx
Synonyms:	Urea Solution
Date of first issue:	03-January-2012
Version number	04
Revision date:	02-04-2021
Supersedes date:	24-03-2016

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

Identified uses	As a NOx reducing agent in diesel engines, Anti-freeze and de-icing products, Food/feedstuff additives, Intermediate, Fertilizers, pH regulating agents, in wastewater treatment.
Uses advised against	Not known.

Details of the supplier of the safety data sheet

Manufacturer:	Chemifloc Ltd Smithstown, Shannon, Co. Clare, Rep. of Ireland. Tel: 00353 61 708699 Fax: 00353 61 708698 e-mail: info@chemifloc.ie
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**Emergency Telephone Number: National Poison Information Centre,
00353 1 8379964**

Section 2: Hazards Identification

Classification of the substance

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) no 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary

Physical hazards	Not classified for physical hazards.
Health hazards	Not classified for health hazards.
Environmental hazards	Not classified for hazards to the environment.
Specific hazards	Product may form explosive dust/air mixtures if high concentration of product dust is suspended in air. However, because of the physical nature of this product, dust generation is not expected. Dust will only be formed if the material is allowed to dry out.
Main symptoms	Not available.

Label elements**Label according to Regulation (EC) No. 1272/2008 as amended**

Hazard statements	The mixture does not meet the criteria for classification.
Precautionary statements	
Prevention	Not applicable.
Response	Not applicable.
Storage	Not applicable.
Disposal	Not applicable.
Supplemental label information.	Not applicable.
Other hazards	Not assigned.

Section 3: Composition/Information on Ingredients**Substance
General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Urea	40	57-13-6 200-315-5	01-2119463277-33-xxxx	-	#
Water	60	7732-18-5 231-791-2			

Classification:

Urea **CLP: Regulation No. 1272/2008.**

#: This substance has workplace exposure limit(s).

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

Section 4: First Aid Measures

General information	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Description of first aid measures	
Inhalation	No specific treatment is necessary since this material is not likely to be hazardous by inhalation. Move to fresh air in case of accidental inhalation of vapours or decomposition products. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists. Take off contaminated clothing and wash before reuse.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops and persists.
Ingestion	Have victim rinse mouth thoroughly with water. Do not induce vomiting without medical advice. If ingestion of a large amount does occur, call a poison control centre immediately.
Most important symptoms and effects, both acute and	Irritant effects.

delayed

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5: Firefighting measures

General fire hazards	Non-combustible, substance itself does not burn.
Extinguishing media	
Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Special hazards arising from the substance or mixture	The product itself does not burn. No unusual fire or explosion hazards noted.
Advice for firefighters	
Special protective equipment for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Special firefighting procedures	No unusual fire or explosion hazards noted.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up.
For emergency responders	As detailed in section for non-emergency personnel Use personal protection recommended in Section 8 of the MSDS.
Environmental precautions	No special environmental precautions required.
Methods and material for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. Collect and dispose of spillage as indicated in section 13. For personal protection, see section 8. For waste disposal, see section 13.
Reference to other sections	Not available.

Section 7: Handling and storage

Precautions for safe handling	Wear appropriate personal protective equipment. Avoid prolonged exposure. Use care in handling/storage. When using, do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practices.
Conditions for safe storage, including any incompatibilities	Store in accordance with local/regional/national/international regulation. Store in original tightly closed container. Store in a closed container away from incompatible materials. Do not store together

	with oxidising agents.
Materials for packaging:	Suitable material: plastic (PE, PP), fiberglass-reinforced polyester, proof or rubber-coated steel. The material can be stored at ambient or slightly elevated temperatures (these are needed in the case of concentrated solutions) in mild steel tanks of welded construction.
Materials to avoid:	
Other data:	Stable under recommended storage conditions.
Specific end use(s)	Not available.

Section 8: Exposure controls / personal protection

Control parameters

Occupational exposure limits	No exposure limits noted for the ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures DNEL	Follow standard monitoring procedures.

Components	Type	Route	Value	Form
Urea (57-13-6)	Consumer	Oral	42 mg/kg bw/day	Long term exposure, local effects.
		Inhalation	125 mg/m ³	
	Industry	Derma	580 mg/kg bw/day	Long term exposure, local effects.

PNEC

Components	Type	Route	Value	Form
Urea (57-13-6)	Not applicable	Water	0.047 mg/l	Long term exposure, local effects.

Exposure Controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide adequate general and local exhaust ventilation.
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Individual protection measures, such as personal protective equipment.

General information	Eye wash fountain and emergency showers are recommended.
Eye/face protection	Wear eye/face protection. (EN166)
Skin protection	
- Hand protection	PVC or other plastic material gloves. Use protective gloves made of: Butyl rubber. Nitrile. Rubber (natural, latex). Viton rubber (fluor rubber). (EN374)
- Other	Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection	Not normally needed. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Not available
Hygiene measures	Handle in accordance with good industrial hygiene and safety practices.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

General information (Appearance, odour)

Physical State	Aqueous solution
Colour	Colourless
Odour	Odourless

Important health safety and environmental information

pH	9.2 ó 9.5@ 10% solids
Melting/freezing point	Not available.
Boiling point	Not available.
Flash point	not applicable.
Flammibility (solid, gas)	not applicable.
Explosive properties	
- Lower explosive limit	not applicable.
- Upper explosive limit	
Vapour Pressure	not applicable.
Density	1.087 ó 1.093 @ 20 °C
Viscosity	Not available.
Solubility(ies)	
- Water solubility	soluble
Partition coefficient (n-octanol/water)	-1.73 Log Pow for substance
Thermal Decomposition	135 °C (275 °F)
Other information	No relevant additional information available.

Section 10: Stability and reactivity

Reactivity	Incompatible with oxidizing agents. Decomposes by reaction with alkaline solutions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Stable under recommended storage conditions. Hazardous polymerisation does not occur.
Conditions to avoid	None under normal conditions.
Incompatible materials	None known.
Hazardous decomposition products	Nitrogen oxides (NOx). Ammonia.
Thermal decomposition	Not available

Section 11: Toxicological information

General information	This product has no known adverse effect on human health.
Information on likely routes of exposure	
Ingestion	Not applicable

Inhalation	Not applicable
Skin contact	Not available.
Eye contact	Not available.
Symptoms	No specific data for inhalation, ingestion or skin contact. Symptoms may include irritation and redness if in contact with the eyes.

Information on toxicological effects

Acute toxicity	Not classified
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Product	Test results
Chemblue (Mixture)	Acute Oral LD50 Mouse: 33.8 g/kg estimated Acute Oral LD50 Rat: 26.1 g/kg estimated Acute Oral LDLO Rabbit: 30.8 g/kg estimated Acute Oral LDLO Rat: 2.3 g/kg estimated
Components	Test results
Urea (57-13-6)	Acute Oral LD50 Mouse: 11 g/kg Acute Oral LD50 Rat: 14.3 g/kg Acute Oral LD50 Rat: 8.5 g/kg Acute Oral LDLO Rabbit: 10 g/kg Acute Oral LDLO Rat: 0.8 g/kg

Skin corrosion /Irritation	Not classified.
Serious eye damage/ eye irritation	Not classified.
Respiratory or skin sensitization	Not classified. According to the classification criteria of the European Union, the product is not considered as being a skin irritant.
Germ cell mutagenicity	Not mutagenic in AMES Test.
Carcinogenicity	Not classified.
Reproductive toxicity	Not available
Specific target organ toxicity -single exposure	Not available
Specific target organ toxicity -repeated exposure	Not available
Aspiration hazard	Not available
Other information	Not available

Section 12: Ecological information

Toxicity	<ul style="list-style-type: none"> - Fishes, various species, LC50, 96 h, 20953.8 mg/l (Chemblue mixture) - Fishes, various species, LC50, 96 h, 6810 mg/l (Urea)
Persistence and degradability	
Abiotic degradation	The product is biodegradable. Test OECD 302B for solid substance - 96% @ 16 days
Bioaccumulative potential	Low potential.
Mobility	Not available.
Water, Soil/sediments:	Considerable solubility and mobility
Soil/sediments:	Mobile, soluble, ionization/neutralization
Air:	Chemical degradation
Other adverse effects	No data available.

Section 13: Disposal considerations

Waste disposal methods	Material should be recycled if possible. Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Empty containers should be taken to an approved waste handling site for recycling or disposal. The Waste code should be assigned in discussion between the user, the
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producer and the waste disposal company.

Contaminated packaging

Material should be recycled if possible. No components are identified as hazardous wastes. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Can be landfilled or incinerated, when in compliance with local regulations. Do not discharge into drains, water courses or onto the ground.

Section 14: Transport information

ADR/RID:

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available.

Section 15: Regulatory information

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

EU Regulations

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V

Not listed.

Directive 96/61/EC concerning integrated pollution prevention and control (IPPC): Article 15, European Pollution Emission Registry (EPER)

Not listed

Regulation (EC) No.1907/2006 (REACH) with its amendment Regulation (EU) 2020/878, Article 59(1). Candidate List

Not listed.

National regulations Not available.

Other regulations The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC)No.1907/2006 (REACH) with its amendment Regulation (EU) 2020/878.

Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for the components of this mixture.

Country/region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances(PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

Section 16: Other information

List of abbreviations	DNEL: derived no effect level PNEC: Predicted no effect concentration STEL: Short-term exposure limit TWA: Time weighted average EC50: Median effective concentration LC50: Median lethal concentration LD50: Median lethal dose
References:	Not available.

Full text of H-Statements referred to under sections 2 and 3.
None.

Training advice Before handling this substance / preparation, the personnel involved should be instructed by means of this safety data sheet.

Further information

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