

Floranid N31

Version: 3.5

Revision Date:
19.01.2017

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

1.1 Product identifier

Trade name : Floranid N31

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

Use of the Sub-
stance/Mixture : Fertilizer

1.3 Details of the supplier of the safety data sheet

Company : COMPO EXPERT GmbH
Kroegerweg 10
D-48155 Münster

Telephone : +49 (0) 251 29 79 81 – 000

Telefax : +49 (0) 251 29 79 81 - 111

E-mail address of person
responsible for the SDS : info@compo-expert.com

1.4 Emergency telephone number

Quality / Safety / Environment
Telephone:+49 (0) 2151 - 579 - 0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Fertilizer
N - fertilizer contains: ,N,N´-(2-Methylpropyliden)-bis-urea,
urea.

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Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
N,N''-(isobutylidene)diurea	6104-30-9 228-055-8 01-2119457269-28-XXXX		<= 100

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.
On inhalation of decomposition products:
In case of lung irritation, first treatment with dexametason aerosol (spray).
Keep patient calm, remove to fresh air, seek medical attention.
- In case of skin contact : Wash thoroughly with soap and water.
- In case of eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water
- Unsuitable extinguishing media : Foam
Dry chemical
Carbon dioxide (CO₂)
Sand

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire- : Can decompose at above 100 °C. Thermal decomposition

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
N,N''-(isobutylidene)diurea	Workers	Skin contact	systemic effects	37,5 mg/m ³
Remarks:	Continuous exposure			
	Workers	Inhalation	systemic effects	66,12 mg/m ³
Remarks:	Continuous exposure			
	Consumers	Skin contact	systemic effects	18,75 mg/m ³
Remarks:	Continuous exposure			
	Consumers	Inhalation	systemic effects	16,31 mg/m ³
Remarks:	Continuous exposure			
	Consumers	Ingestion	systemic effects	9,375 mg/m ³
Remarks:	Continuous exposure			

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
N,N''-(isobutylidene)diurea	Fresh water	0,5 mg/l
	Marine water	0,05 mg/l
	Fresh water sediment	1,76 mg/l
	Marine sediment	0,176 mg/l
	Soil	10,7 mg/l
	Behaviour in waste water treatment plants	640 mg/l

8.2 Exposure controls

Personal protective equipment

Respiratory protection : Breathing apparatus only if aerosol or dust is formed.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Retain and dispose of contaminated wash water.

SECTION 9: Physical and chemical properties

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9.1 Information on basic physical and chemical properties

Appearance	: granular
Colour	: white
Odour	: very faint
pH	: ca. 6,5, Concentration: 100 g/l (20 °C)
Melting point/range	: 205 °C
Boiling point/boiling range	: Not applicable
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: not highly flammable
Upper explosion limit	: No data available
Lower explosion limit	: 120 mg/m ³ Medium: air
Vapour pressure	: Not applicable
Bulk density	: ca. 550 kg/m ³
Solubility(ies)	
Water solubility	: 2 g/l (20 °C)
Partition coefficient: n-octanol/water	: log Pow: -0,903 Method: OECD Test Guideline 107
Auto-ignition temperature	: > 140 °C
Decomposition temperature	: ca. 100 °C To avoid thermal decomposition, do not overheat. Thermal decomposition above the indicated temperature is possible. The product is not capable of self-sustaining progressive thermal decomposition (UN S1).
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable

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Explosive properties : Not explosive
Dust can form an explosive mixture with air.

Oxidizing properties : Not considered an oxidizing substance

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.

10.4 Conditions to avoid

Conditions to avoid : No dangerous reaction known under conditions of normal use.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition products : Isobutyraldehyd

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat): > 10.000 mg/kg

Components:

N,N''-(isobutylidene)diurea:

Acute oral toxicity : LD50 (Rat): > 10.000 mg/kg
Remarks: Calculation method

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402

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Skin corrosion/irritation

Product:

Species: Rabbit
Method: OECD Test Guideline 404
Result: non-irritant

Serious eye damage/eye irritation

Product:

Species: Rabbit
Method: OECD Test Guideline 405
Result: non-irritant

Respiratory or skin sensitisation

Components:

N,N''-(isobutylidene)diurea:
Species: Mouse
Method: OECD Guideline 429
Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

N,N''-(isobutylidene)diurea:
Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects

Carcinogenicity

Components:

N,N''-(isobutylidene)diurea:
Remarks: Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Components:

N,N''-(isobutylidene)diurea:
Effects on fertility : Remarks: Animal testing did not show any effects on fertility.

Effects on foetal development : Remarks: Did not show teratogenic effects in animal experiments.

STOT - single exposure

Components:

N,N''-(isobutylidene)diurea:

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Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

N,N''-(isobutylidene)diurea:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

SECTION 12: Ecological information

12.1 Toxicity

Product:

- Toxicity to fish : (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l
Exposure time: 96 h
Test Type: LC50
Method: Directive 92/69/EEC, C.1, Acute toxicity for fish
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 500 mg/l
Exposure time: 48 h
Method: Directive 84/449/EEC, C.2
- Toxicity to algae : EC50 (Scenedesmus subspicatus): > 500 mg/l
Exposure time: 72 h
Method: DIN 38412
- Toxicity to bacteria : EC0 (Pseudomonas putida): ca. 640 mg/l
Exposure time: 16 h
Test Type: activated sludge
Method: No data available

Components:

N,N''-(isobutylidene)diurea:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): ca. 500 mg/l
Exposure time: 48 h
Method: Directive 84/449/EEC, C.2
- Toxicity to algae : EC50 (Scenedesmus subspicatus): > 500 mg/l
Exposure time: 72 h
Method: DIN 38412
- Toxicity to bacteria : EC0 (Pseudomonas putida): ca. 640 mg/l

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12.2 Persistence and degradability

Product:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Physico-chemical removability : DOC reduction
ca. 85 %
Remarks: May be eliminated in purification plants

Components:

N,N''-(isobutylidene)diurea:

Biodegradability : Remarks: The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Components:

N,N''-(isobutylidene)diurea:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

Product:

Distribution among environmental compartments : Remarks: Adsorption to solid soil phase is not expected., The substance will not evaporate into the atmosphere from the water surface.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT)..

Components:

N,N''-(isobutylidene)diurea:

Assessment : Remarks: Not applicable

12.6 Other adverse effects

Product:

Additional ecological information : Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

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There is a high probability that the product is acute not harmful to aquatic organisms.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : Check if agriculture use is possible.
Contact manufacturer.
- Contaminated packaging : Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.
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SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

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

Remarks : Not relevant

SECTION 15: Regulatory information

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

Water contaminating class : WGK 1 slightly water endangering
(Germany)

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agree-

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ment concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardization; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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