according to Regulation (EC) No. 1907/2006



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

1.1. Product identifier

Trade name

Graphtol Blue AN 01
Material number: 286266

Chemical nature: C.I. Pigment Blue 15 - Nanoform

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

Relevant identified uses of the substance or mixture

Industry sector : Industrial Performance Chemicals Type of use : Techno-chemical industry.

1.3. Details of the supplier of the safety data sheet

Identification of the company

Heubach Colorants Germany GmbH Brüningstraße 50 65929 Frankfurt am Main

Telephone no.: +49 69 305 13619

Information about the substance/mixture

Product Stewardship

e-mail: SDS.PI.Europe@clariant.com

1.4. Emergency telephone number

00800-5121 5121 (24 h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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According to the present state of knowledge provided this product is handled correctly, there is no danger to humans or the environment

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Remarks : No hazardous ingredients

This substance/ mixture contains nanoforms

Components:

Nano C.I. Pigment Blue 15:

Particle characteristics

Particle Size Distribution : D10 = $0.023 \mu m \pm 0.018 \mu m$

D50 = 0,035 μ m \pm 0,025 μ m D90 = 0,050 μ m \pm 0,030 μ m Measurement technique: TEM

Specific surface area : $60 \text{ m2/g} \pm 30 \text{ m2/g}$

Measurement technique: Brunauer, Emmett and Teller (BET)

method using Nitrogen

Assessment : Assessment: This substance/ mixture contains nanoforms

Total Content of Nanomaterials: 80 - 100 %

Shape : Shape: cubes

Fraction (Weight): 5 - 100 % Measurement technique: TEM

Shape: spheres

Fraction (Weight): 0 - 50 % Measurement technique: TEM

Shape: rods

Fraction (Weight): 0 - 70 % Measurement technique: TEM

Crystallinity : Crystallinity: crystalline

Measurement technique: X-ray Diffraction (XRD)

Surface treatment

/Coatings

: Surface treatment /Coatings: no

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Get medical advice/ attention if you feel unwell.

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If inhaled : Remove to fresh air.

In case of skin contact : IF ON SKIN: Wash with plenty of soap and water.

Rinse the affected eye with plenty of water, at the same time In case of eye contact

keep the unaffected eye well protected.

If swallowed If swallowed do not induce vomiting, seek medical advice and

show safety datasheet or label

4.2 Most important symptoms and effects, both acute and delayed

Symptoms No symptoms known currently.

Risks No hazards known at this time.

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 spray jet

Foam

Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.

Unsuitable extinguishing

media

High volume water jet

Carbon dioxide (CO2)

Dry powder

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

In case of fires, hazardous combustion gases are formed:

Carbon monoxide (CO) Carbon dioxide (CO2) Nitrogen oxides (NOx)

Copper oxides

5.3 Advice for firefighters

for firefighters

Special protective equipment : Self-contained breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear suitable protective equipment.

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6.2 Environmental precautions

Environmental precautions : The product should not be allowed to enter drains, water

courses or the soil.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Take up mechanically

Take measures to prevent the build up of electrostatic charge.

Treat recovered material as described in the section "Disposal

considerations".

6.4 Reference to other sections

Information regarding Safe handling, see chapter 7.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : When used and handled appropriately no special measures

are needed

Advice on protection against :

fire and explosion

Observe the general rules of industrial fire protection Take precautionary measures against build-up of electrostatic

charges, e.g earthing during loading and off-loading

operations. Keep away sources of ignition.

Hygiene measures : Wash hands before breaks and at the end of workday. Use

protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before

reuse.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage

areas and containers

Keep only in the original container. Keep container tightly

closed.

Further information on

storage conditions

Keep container dry.

Advice on common storage : No conditions to be specially mentioned.

Further information on

storage stability

: no data available

7.3 Specific end use(s)

Specific use(s) : No further recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

according to Regulation (EC) No. 1907/2006



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Substance name	End Use	Exposure routes	Potential health effects	Value
Nano C.I. Pigment Blue 15 CAS-No.: 147-14-8	Workers	Inhalation	Acute local effects	10 mg/m3
	Remarks:DNEL			
	Workers	Inhalation	Long-term local effects	10 mg/m3
	Remarks:DNEL			

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection : Safety glasses

Hand protection

Remarks : Nitrile rubber gloves. Minimum breakthrough time (glove): not

determined Minimum thickness (glove): not determined Take note of the information given by the producer concerning permeability and break through times, and of special

workplace conditions (mechanical strain, duration of contact).

Skin and body protection : working clothes

Protective measures : Observe the usual precautions for handling chemicals.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : powder

Colour : dark blue

Odour : not significant

Odour Threshold : not available

Melting point : $> 300 \, ^{\circ}\text{C}$

Boiling point : Not applicable

Flammability : not determined

Upper explosion limit / upper

flammability limit

Not applicable

Lower explosion limit / Lower :

flammability limit

Not applicable

Flash point : Not applicable

according to Regulation (EC) No. 1907/2006



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Auto-ignition temperature : Not applicable

Decomposition temperature : > 300 °C

pH : 7,0 - 7,6

Viscosity

Viscosity, dynamic : Not applicable

Viscosity, kinematic : Not applicable

Flow time : Not applicable

Solubility(ies)

Water solubility : insoluble

Vapour pressure : Not applicable

Relative density : not available

Density : 1,65 g/cm3 (20 °C)

Bulk density : 0,3 kg/m3 (20 °C)

Relative vapour density : Not applicable

Particle characteristics

Assessment: This substance/ mixture contains nanoforms

Particle size : Further particle properties for nanomaterials see section 3

9.2 Other information

Explosives : no data available

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Method: Expert judgement

Flammable solids

Burning number :

Spread of a glowing fire

Self-ignition : not available

Substances and mixtures, which in contact with water

which in contact with water, emit flammable gases

Method: Expert judgement

The substance or mixture does not emit flammable gases in

contact with water.

Metal corrosion rate : Not corrosive to metals

Evaporation rate : Not applicable

according to Regulation (EC) No. 1907/2006



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Miscibility with water : not tested.

Minimum ignition energy : 13 - 30 mJ

with inductive electrical resistance

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal

use.Stable

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : None.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product:

Acute oral toxicity : Remarks: no data available

Acute inhalation toxicity : Remarks: no data available

Acute dermal toxicity : Remarks: no data available

Skin corrosion/irritation

Product:

Remarks : no data available

Serious eye damage/eye irritation

Product:

Remarks : no data available

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Respiratory or skin sensitisation

Product:

Remarks : no data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

> considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

Experience with human exposure

Product:

General Information The possible symptoms known are those derived from the

labelling (see section 2).

Further information

Product:

Remarks no data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish Remarks: no data available

Toxicity to daphnia and other : Remarks: no data available

aquatic invertebrates

Toxicity to algae/aquatic

plants

: Remarks: no data available

12.2 Persistence and degradability

Product:

Biochemical Oxygen 0%

Demand (BOD) Incubation time: 14 d Concentration: 100 mg/l

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

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12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

12.7 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Product should be taken to a suitable and authorized waste

disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator

and/or the competent Authorities

Contaminated packaging : Packaging that cannot be cleaned should be disposed of as

product waste

SECTION 14: Transport information

Section 14.1. to 14.5.

ADR not restricted
ADN not restricted
RID not restricted
IATA not restricted
IMDG not restricted

14.6. Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according IBC - Code.

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SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on

the market and use of certain dangerous substances,

mixtures and articles (Annex XVII)

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

Regulation (EC) No 1005/2009 on substances that

deplete the ozone layer

Regulation (EU) 2019/1021 on persistent organic

pollutants (recast)

Council Regulation (EC) No 111/2005 laying down rules

for the monitoring of trade between the Community and

third countries in drug precursors

Regulation (EC) No 649/2012 of the European

Parliament and the Council concerning the export and

import of dangerous chemicals

REACH - List of substances subject to authorisation

(Annex XIV)

: Not applicable

Not applicable

Not applicable

Not applicable

. .

Neither banned nor restricted

Not applicable

Not applicable

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

The components of this product are reported in the following inventories:

EINECS : Listed

Notification number: 205-685-1

2007-01-01

ECHA Registered : Listed

Substances Full - Indicates registration under REACH Article 10 as a full

dossier

Notification number: 205-685-1

2011-10-19

15.2 Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

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SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; 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; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; 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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Heubach makes no warranties, express or implied, as to the information's accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Heubach's products for its particular application. Nothing included in this information waives any of Heubach's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Heubach products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet

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information before handling any of these products. For additional information, please contact Heubach.

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