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

1.1. Product identifier

Trade name
Ink Jet Magenta E5B 02

Material number: 206153

REACH - Registration number according to article 20(3): 01-2119456814-32-0000

Chemical nature: C.I. Pigment Violet 19 - Nanoform

CAS number : 1047-16-1

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.

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name	:	C.I. Pigment Violet 19 - Nanoform
CAS-No.	:	1047-16-1

Components

Remarks : No hazardous ingredients

This substance/ mixture contains nanoforms

Particle characteristics

Particle size	:	5,8 µm
		Further particle properties for nanomaterials see section 3
Dustiness	:	Number-Based Dustiness Index: 907.412 1/mg Measurement method: DIN EN 17199-3: Continuous drop method SMPS Number-Based Dustiness Index: 10.002 1/mg Measurement method: DIN EN 17199-3: Continuous drop method OPS
Particle Size Distribution	:	D10 = 0,023 µm ± 0,013 µm D50 = 0,033 µm ± 0,018 µm D90 = 0,048 µm ± 0,028 µm Measurement technique: TEM
Specific surface area	:	100 m2/g ± 30 m2/g Measurement technique: Brunauer, Emmett and Teller (BET) method using Nitrogen
Assessment	:	Assessment: This substance/ mixture contains nanoforms
Shape	:	Shape: cubes Fraction (Weight): 40 - 100 % Measurement technique: TEM

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

Crystallinity : Crystallinity: crystalline
Measurement technique: X-ray Diffraction (XRD)

Surface treatment /Coatings : Surface treatment /Coatings: no

Components:

Nano C.I. Pigment Violet 19:

Particle characteristics

Dustiness : Number-Based Dustiness Index: 907.412 1/mg
Measurement method: DIN EN 17199-3: Continuous drop method
SMPS

Number-Based Dustiness Index: 10.002 1/mg
Measurement method: DIN EN 17199-3: Continuous drop method
OPS

Particle Size Distribution : D10 = 0,023 µm ± 0,013 µm
D50 = 0,033 µm ± 0,018 µm
D90 = 0,048 µm ± 0,028 µm
Measurement technique: TEM

Specific surface area : 100 m2/g ± 30 m2/g
Measurement technique: Brunauer, Emmett and Teller (BET) method using Nitrogen

Assessment : Assessment: This substance/ mixture contains nanoforms
Total Content of Nanomaterials: 90 - 100 %

Shape : Shape: cubes
Fraction (Weight): 40 - 100 %
Measurement technique: TEM

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

Crystallinity : Crystallinity: crystalline
Measurement technique: X-ray Diffraction (XRD)

Surface treatment /Coatings : Surface treatment: no

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	:	Get medical advice/ attention if you feel unwell.
If inhaled	:	Remove to fresh air. If you feel unwell, seek medical advice (show the label where possible).
In case of skin contact	:	IF ON SKIN: Wash with plenty of soap and water.
In case of eye contact	:	Rinse the affected eye with plenty of water, at the same time 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

Risks	:	No additional hazards are known except those derived from the labelling.

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
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)

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Self-contained breathing apparatus
Further information	:	Wear suitable protective equipment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear suitable protective equipment.

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
Avoid dust formation.
Take measures to prevent the build up of electrostatic charge.
Risk of dust explosion.
Treat recovered material as described in the section "Disposal considerations".

6.4 Reference to other sections

Information regarding Safe handling, see chapter 7., For personal protection see section 8., For disposal considerations see section 13.

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
Avoid dust formation.

Advice on protection against fire and explosion : Take precautionary measures against build-up of electrostatic charges, e.g earthing during loading and off-loading operations. Keep away sources of ignition. Dust can form an explosive mixture in air. Observe the general rules of industrial fire protection

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.

Dust explosion class : St1

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 : When used and handled as intended, none.

Keep away from food and drink.

Further information on storage stability : Stable at normal ambient temperature and pressure.

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:

Substance name	End Use	Exposure routes	Potential health effects	Value
Nano C.I. Pigment Violet 19 CAS-No.: 1047-16-1	Workers	Dermal	Long-term systemic effects	42 mg/kg bw/day
	Remarks:DNEL			
	Workers	Inhalation	Long-term systemic effects	147 mg/m3
	Remarks:DNEL			
	Workers	Inhalation	Long-term local effects	3 mg/m3
	Remarks:DNEL			
	General population	Dermal	Long-term systemic effects	25 mg/kg bw/day
	Remarks:DNEL			
	General population	Oral	Long-term systemic effects	25 mg/kg bw/day
	Remarks:DNEL			

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

Substance name	Environmental Compartment	Value
C.I. Pigment Violet 19 - Nanoform CAS-No.: 1047-16-1		
	Remarks:This information is not available.	

8.2 Exposure controls

Engineering measures

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

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
Respiratory protection	:	Respirator must be worn if exposed to dust.
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	:	red
Odour	:	not significant
Odour Threshold	:	not required
Melting point	:	not determined
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
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	> 400 °C
pH	:	5 - 8 (20 °C) Concentration: 100 g/l Aqueous slurry
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Solubility(ies)		
Water solubility	:	(20 °C) insoluble
Vapour pressure	:	Not applicable
Relative density	:	no data available

Density	:	1,47 g/cm3
Bulk density	:	350 - 400 kg/m3
Relative vapour density	:	Not applicable
Particle characteristics		
Assessment	:	Assessment: This substance/ mixture contains nanoforms
Particle size	:	5,8 µm

Further particle properties for nanomaterials see section 3

Particle Size Distribution	:	D10 = 0,023 µm ± 0,013 µm D50 = 0,033 µm ± 0,018 µm D90 = 0,048 µm ± 0,028 µm Measurement technique: TEM
Dustiness	:	Number-Based Dustiness Index: 907.412 1/mg Measurement method: DIN EN 17199-3: Continuous drop method SMPS Number-Based Dustiness Index: 10.002 1/mg Measurement method: DIN EN 17199-3: Continuous drop method OPS
Specific surface area	:	100 m2/g ± 30 m2/g Measurement technique: Brunauer, Emmett and Teller (BET) method using Nitrogen
Shape	:	Shape: cubes Fraction (Weight): 40 - 100 % Measurement technique: TEM Shape: spheres Fraction (Weight): 0 - 50 % Measurement technique: TEM
Crystallinity	:	Crystallinity: crystalline Measurement technique: X-ray Diffraction (XRD)
Surface treatment /Coatings	:	Surface treatment: no

9.2 Other information

Explosives	:	Not explosive Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Flammable solids		

Burning number	:	2 Short flaring up without spreading
Self-ignition	:	390 °C
Substances and mixtures, which in contact with water, emit flammable gases	:	The substance or mixture does not emit flammable gases in contact with water.
Metal corrosion rate	:	Not applicable
Dust deflagration index (Kst)	:	132 m.b_/s
Dust explosion class	:	St1
Evaporation rate	:	Not applicable
Minimum ignition energy	:	6 - 13 mJ with inductive electrical resistance 13 - 30 mJ without inductive electrical resistance
Molecular weight	:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Hazardous reactions : None known.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	:	LD50 (Rat, female): > 10.000 mg/kg Method: OECD Test Guideline 401 GLP: no Remarks: No significant adverse effects were reported
Acute inhalation toxicity	:	LC50 (Rat, male): > 3,1 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Other GLP: no Assessment: The substance or mixture has no acute inhalation toxicity Remarks: No mortality observed at this dose.
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 GLP: yes Assessment: The substance or mixture has no acute dermal toxicity Remarks: By analogy with a product of similar composition

Skin corrosion/irritation

Product:

Species	:	Rabbit
Exposure time	:	24 h
Method	:	Other
Result	:	No skin irritation
GLP	:	no data available

Serious eye damage/eye irritation

Product:

Species	:	Rabbit
Exposure time	:	24 h
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes

Respiratory or skin sensitisation

Product:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Dermal
Species	:	Mouse
Method	:	OECD Test Guideline 429

Result	:	Not a skin sensitizer.
GLP	:	yes
Test Type	:	Maximisation Test
Exposure routes	:	Dermal
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
GLP	:	yes
Remarks	:	By analogy with a product of similar composition

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 3 - 5000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Concentration: 0,31 - 200 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: By analogy with a product of similar composition

Test Type: In vitro gene mutation study in mammalian cells
Test system: mouse lymphoma cells
Concentration: 78,1 - 5000 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: By analogy with a product of similar composition

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse (male and female) Strain: NMRI Cell type: Bone marrow cells Application Route: oral (gavage) Exposure time: single administration Dose: 2500 mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity-Assessment	:	In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

Carcinogenicity

Product:

Carcinogenicity - Assessment	:	No information available.

Reproductive toxicity

Product:

Effects on fertility	:	Test Type: reproductive and developmental toxicity study Species: Rat, male and female Strain: Sprague-Dawley Application Route: oral (gavage) Dose: 0, 111, 333, 1000 mg/kg bw/d General Toxicity - Parent: NOAEL: 1.000 mg/kg body weight General Toxicity F1: NOAEL: 1.000 mg/kg body weight Method: OECD Test Guideline 422 GLP: yes
Effects on foetal development	:	Test Type: Pre-natal Species: Rat, female Strain: Sprague-Dawley Application Route: oral (gavage) Dose: 111, 333, 1000 mg/kg bw/d General Toxicity Maternal: NOAEL: 1.000 mg/kg body weight Embryo-foetal toxicity: NOAEL: 1.000 mg/kg body weight Method: OECD Test Guideline 414 GLP: yes
Reproductive toxicity - Assessment	:	No information available.

STOT - single exposure

Product:

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

STOT - repeated exposure

Product:

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

Repeated dose toxicity

Product:

Species	:	Rat, male and female
NOAEL	:	1.000 mg/kg
Application Route	:	oral (gavage)
Exposure time	:	91 d
Number of exposures	:	Once a day
Dose	:	50 - 200 - 1000 mg/kg
Control Group	:	yes
Method	:	OECD Test Guideline 408
GLP	:	yes
Remarks	:	By analogy with a product of similar composition

Species	:	Rat, male and female
NOAEL	:	1000 mg/kg bw/day
Application Route	:	oral (gavage)
Number of exposures	:	daily
Dose	:	0, 111, 333, 1000 mg/kg bw/d
Control Group	:	yes
Method	:	OECD Test Guideline 422
GLP	:	yes

Aspiration toxicity

Product:

No aspiration toxicity classification

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.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 100 mg/l End point: mortality Exposure time: 96 h

Test Type: semi-static test
Analytical monitoring: no
Method: OECD Test Guideline 203
GLP: yes
Remarks: By analogy with a product of similar composition
The details of the toxic effect relate to the nominal concentration.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

NOEC (Daphnia magna (Water flea)): 100 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 10 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
Remarks: No toxicity at the limit of solubility
By analogy with a product of similar composition

NOEC (Desmodesmus subspicatus (green algae)): 10 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
Remarks: No toxicity at the limit of solubility
By analogy with a product of similar composition

Toxicity to fish (Chronic toxicity) : NOEC: >= 10 mg/l
End point: Other
Exposure time: 28 d
Species: Danio rerio (zebra fish)
Test Type: semi-static test
Analytical monitoring: no

Method: OECD Test Guideline 215
GLP: yes
Remarks: By analogy with a product of similar composition
The details of the toxic effect relate to the nominal concentration.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0,02 mg/l
End point: Reproduction rate
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Analytical monitoring: no
Method: OECD Test Guideline 211
GLP: yes
Remarks: No toxicity at the limit of solubility
By analogy with a product of similar composition

Toxicity to microorganisms : NOEC (activated sludge): > 1.000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: aquatic
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: By analogy with a product of similar composition

Toxicity to soil dwelling organisms : Test Type: artificial soil
LC50: > 1.000 mg/kg
Exposure time: 14 d
End point: mortality
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
GLP:yes
Remarks: By analogy with a product of similar composition

Test Type: artificial soil
NOEC: 1.000 mg/kg
Exposure time: 14 d
End point: mortality
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207
GLP:yes
Remarks: By analogy with a product of similar composition

Sediment toxicity : NOEC: 993 mg/kg dry weight (d.w.)
Analytical monitoring: no
Duration: 28 d
Sediment: artificial soil
Species: Lumbriculus variegatus (Worm)
Basis for effect: mortality
Method: OECD 225
GLP: yes
Remarks: By analogy with a product of similar composition

Ecotoxicology Assessment

Acute aquatic toxicity	:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: slightly soluble
Physico-chemical removability	:	Remarks: Not readily biodegradable.

12.3 Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: Low potential for bioaccumulation (log Pow < 3).

12.4 Mobility in soil

Product:

Distribution among environmental compartments	:	adsorption Medium: Soil Remarks: Not expected to adsorb on soil.

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

Product:

Environmental fate and pathways	:	not available
Additional ecological information	:	The product should not be allowed to enter drains, water courses or the soil.

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.

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)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors	:	Neither banned nor restricted
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and	:	Not applicable

import of dangerous chemicals

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

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.

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

REG_EU / EN