



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

This Safety Data Sheet adheres to the standards and regulatory requirements of Great Britain and may not meet the regulatory requirements in other countries.

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

1.1. Product identifier

Product name : ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

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

Use of the Substance/Mixture : For industrial use only.
For further information, refer to the product technical data sheet.

1.3. Details of the supplier of the safety data sheet

Company : Du Pont de Nemours (Deutschland) GmbH
Hugenottenallee 175
D-63263 Neu-Isenburg
Germany

Telephone : +49 (0) 6102 18-0
Telefax : +49 (0) 6102 18-1224

E-mail address : sds-support@che.dupont.com

1.4. Emergency telephone number

+(44)-870-8200418 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

2.2. Label elements

Special labelling of certain substances and mixtures : EUH210: Safety data sheet available on request., Contains: 1,2-Benzisothiazol-3(2H)-one / EUH208: May produce an allergic reaction.,

The following percentage of the mixture consists of ingredient(s) with unknown acute oral toxicity: 4.176 %

The following percentage of the mixture consists of ingredient(s) with unknown acute dermal toxicity: 4.176 %

The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 4.176 %

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 4.176 %



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

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

2.3. Other hazards

May cause eye and skin irritation.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Registration number	Classification according to Regulation (EU) 1272/2008 (CLP)	Concentration (% w/w)
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Calcium chloride (CAS-No.10043-52-4) (EC-No.233-140-8)

	Eye Irrit. 2; H319	$\geq 3 - < 10 \%$
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1,2-Benzisothiazol-3(2H)-one (CAS-No.2634-33-5) (EC-No.220-120-9) (M-Factor : 10[Acute])

	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 3; H412	$\geq 0.01 - < 0.05 \%$
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The above products are compliant to REACH registration obligations; Registration number(s) may not be provided because substance(s) are exempted, not yet registered under REACH or are registered under another regulatory process (biocide uses, plant protection products), etc.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

- General advice : Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice.
- Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. Get medical attention.
- Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

re-use.

Eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical advice/attention.

Ingestion : If swallowed, call a poison control centre or doctor immediately. Rinse mouth with water. DO NOT induce vomiting unless directed to do so by a physician or poison control center.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms : Inhalation may provoke the following symptoms:, Irritation, Cough
: Skin contact may provoke the following symptoms:, Irritation with discomfort or pain, redness or rash, itching or swelling., Allergic reactions
: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
: Eye contact may provoke the following symptoms:, Irritation, Pain, tearing, swelling, redness, or temporary visual impairment.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment : No specific intervention is indicated. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
: Water spray, Dry chemical, Carbon dioxide (CO2)

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Hazardous decomposition products formed under fire conditions. (see also section 10) Avoid breathing decomposition products.

5.3. Advice for firefighters

Special protective equipment for firefighters : Exposure to decomposition products may be a hazard to health. Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Evacuate personnel to safe areas. Stop spill/release if it can be done with minimal risk. Do not allow run-off from fire fighting to enter drains or water courses.



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Wear suitable protective equipment.

6.2. Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Clean contaminated floors and objects thoroughly while observing environmental regulations.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Contain spill. Soak up with inert absorbent material. Collect and contain contaminated absorbent and dike material for disposal. Keep in suitable, closed containers for disposal. Ventilate the area. Clean contaminated floors and objects thoroughly while observing environmental regulations.

Other information : Dispose of in accordance with local regulations.

6.4. Reference to other sections

For personal protection see section 8.
For disposal instructions see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Avoid inhalation, ingestion and contact with skin and eyes. Do not use in areas without adequate ventilation. For personal protection see section 8.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a cool, well-ventilated place. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Do not reuse empty container.

Other data : Stable under normal conditions.

7.3. Specific end use(s)

no data available



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

If sub-section is empty then no values are applicable.

8.2. Exposure controls

- Engineering measures : Ensure adequate ventilation. Maintain air concentrations below occupational exposure standards. General mechanical ventilation is normally adequate but use local exhaust where necessary to maintain exposures below acceptable limits.
- Eye protection : Wear safety glasses or coverall chemical splash goggles.
- Hand protection : Material: Protective gloves complying with EN 374.
Gloves must be inspected prior to use. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Lightweight protective clothing and safety shoes are recommended.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Use with adequate ventilation. Keep container closed. Keep away from food and drink. Wash hands before eating, drinking, or smoking. Remove contaminated clothing and protective equipment before entering eating areas. Wash contaminated clothing before re-use.
- Respiratory protection : No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form : liquid

Colour : clear



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

Odour	: odourless
pH	: 5.9
Boiling point	: no data available
Flash point	: > 93.3 °C , Method: closed cup
Relative density	: ca. 1
Water solubility	: miscible

9.2. Other information

Phys.-chem./other information : No other data to be specially mentioned.

SECTION 10: Stability and reactivity

10.1. Reactivity	: No dangerous reaction known under conditions of normal use.
10.2. Chemical stability	: The product is chemically stable under recommended conditions of storage, use and temperature.
10.3. Possibility of hazardous reactions	: None reasonably foreseeable. Stable at normal temperatures and storage conditions.
10.4. Conditions to avoid	: Avoid extreme heat. Do not freeze.
10.5. Incompatible materials	: Acids, bases and strong oxidizing agents
10.6. Hazardous decomposition products	: No decomposition if stored and applied as directed. Under fire conditions: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity

- Calcium chloride
LD50 / Rat : 2,301 mg/kg
Method: OECD Test Guideline 401
- 1,2-Benzisothiazol-3(2H)-one
LD50 / Rat : 670 mg/kg
Central nervous system effects



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

Acute dermal toxicity

- Calcium chloride
LD50 / Rabbit : > 5,000 mg/kg
- 1,2-Benzisothiazol-3(2H)-one
LD50 / Rabbit : > 2,000 mg/kg

Skin irritation

- Calcium chloride
Rabbit
Classification: No skin irritation
Result: No skin irritation
Method: OECD Test Guideline 404
- 1,2-Benzisothiazol-3(2H)-one
Rabbit
Classification: Irritating to skin.
Result: Skin irritation
Information given is based on data obtained from similar substances.

Eye irritation

- 1,2-Benzisothiazol-3(2H)-one
Rabbit
Classification: Risk of serious damage to eyes.
Result: Severe eye irritation
Information given is based on data obtained from similar substances.

Sensitisation

- Calcium chloride
Guinea pig
Classification: Does not cause skin sensitisation.
Result: Does not cause skin sensitisation.
- 1,2-Benzisothiazol-3(2H)-one
Mouse Local lymph node test
Classification: May cause sensitisation by skin contact.
Result: Causes sensitisation.

human
Classification: May cause sensitisation by skin contact.
Result: Positive in human patch test.

Repeated dose toxicity

- Calcium chloride
Ingestion Rat
Exposure time: 60 d



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

NOAEL: > 1,000 mg/kg

No toxicologically significant effects were found.

- 1,2-Benzisothiazol-3(2H)-one

Oral Rat

No toxicologically significant effects were found.

Mutagenicity assessment

- Calcium chloride

Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Overall weight of evidence indicates that the substance is not mutagenic.

- 1,2-Benzisothiazol-3(2H)-one

Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Animal testing did not show any mutagenic effects.

Carcinogenicity assessment

- Calcium chloride

Weight of evidence does not support classification as a carcinogen Overall weight of evidence indicates that the substance is not carcinogenic.

Toxicity to reproduction assessment

- 1,2-Benzisothiazol-3(2H)-one

No toxicity to reproduction Animal testing showed effects on reproduction at levels equal to or above those causing parental toxicity.

Assessment teratogenicity

- Calcium chloride

Animal testing showed no developmental toxicity. Information given is based on data obtained from similar substances.

- 1,2-Benzisothiazol-3(2H)-one

Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Further information

No data is available on the product itself. Information given is based on data on the components.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish

- Calcium chloride



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

LC50 / 96 h / Pimephales promelas (fathead minnow): 4,630 mg/l

- 1,2-Benzisothiazol-3(2H)-one
LC50 / 96 h / Oncorhynchus mykiss (rainbow trout): 1.6 mg/l

Toxicity to aquatic plants

- Calcium chloride
ErC50 / 72 h / Pseudokirchneriella subcapitata (green algae): 27,000 mg/l
Method: OECD Test Guideline 201
- 1,2-Benzisothiazol-3(2H)-one
EC50 / 72 h / Algae: 0.15 mg/l

Toxicity to aquatic invertebrates

- Calcium chloride
EC50 / 48 h / Daphnia magna (Water flea): 2,400 mg/l
Method: OECD Test Guideline 202
- 1,2-Benzisothiazol-3(2H)-one
EC50 / 48 h / Aquatic invertebrates: 0.047 mg/l

Chronic toxicity to aquatic Invertebrates

- Calcium chloride
EC50 / 21 d / Daphnia magna (Water flea): 610 mg/l

12.2. Persistence and degradability

Biodegradability

- 1,2-Benzisothiazol-3(2H)-one
Readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation

- 1,2-Benzisothiazol-3(2H)-one
Bioaccumulation is unlikely.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

Additional ecological information

No data is available on the product itself. Information given is based on data on the components.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product : Dispose of in accordance with the European Directives on waste and hazardous waste. Never place unused product down any indoor or out door drain.

Contaminated packaging : Do not reuse empty container. Contaminated/not cleaned containers should be treated/handled like product waste. Dispose of container properly. Refer to applicable Local, State/Provincial, and Federal Regulations, as well as industry Standards.

SECTION 14: Transport information

ADR

14.1. UN number: Not applicable
14.2. UN proper shipping name: Not applicable
14.3. Transport hazard class(es): Not applicable
14.4. Packing group: Not applicable
14.5. Environmental hazards: none

14.6. Special precautions for user:
Not classified as dangerous in the meaning of transport regulations.

IATA_C

14.1. UN number: Not applicable
14.2. UN proper shipping name: Not applicable
14.3. Transport hazard class(es): Not applicable
14.4. Packing group: Not applicable
14.5. Environmental hazards: none

14.6. Special precautions for user:
Not classified as dangerous in the meaning of transport regulations.

IMDG

14.1. UN number: Not applicable
14.2. UN proper shipping name: Not applicable
14.3. Transport hazard class(es): Not applicable
14.4. Packing group: Not applicable
14.5. Environmental hazards: none

14.6. Special precautions for user:
Not classified as dangerous in the meaning of transport regulations.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

SECTION 15: Regulatory information

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

Other regulations : Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.
Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.
Take note of Dir 94/33/EC on the protection of young people at work.

15.2. Chemical safety assessment

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

SECTION 16: Other information

Full text of H-Statements referred to under section 3.

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-No.	Chemical Abstracts Service number
CLP	Classification, Labelling and Packaging
EbC50	Concentration at which 50% reduction of biomass is observed
EC50	Median effective concentration
EN	European Norm
EPA	Environmental Protection Agency
ErC50	Concentration at which a 50% inhibition of growth rate is observed
EyC50	Concentration at which 50 % inhibition of yield is observed
IATA_C	International Air Transport Association (Cargo)
IBC	International Bulk Chemical Code
ICAO	International Civil Aviation Organization
ISO	International Standard Organization
IMDG	International Maritime Dangerous Goods
LC50	Median Lethal Concentration
LD50	Median Lethal Dose
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration



ARTISTRI® P5001 PIGMENT PRETREATMENT SOLUTION

Version 5.0 (replaces: Version 4.0)

Revision Date 15.06.2016

Ref. 130000129460

NOAEL	No observed adverse effect level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
OECD	Organisation for Economic Co-operation and Development
OPPTS	Office of Prevention, Pesticides and Toxic Substances
PBT	Persistent, Bioaccumulative and Toxic
STEL	Short term exposure limit
TWA	Time Weighted Average (TWA):
vPvB	very Persistent and very Bioaccumulative

Further information

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Significant change from previous version is denoted with a double bar.

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