

# SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830



## AIRCAT Ti50

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

#### 1.1. Product identifier

Product name : AIRCAT Ti50  
Registration number REACH : Not applicable (mixture)  
Product type REACH : Mixture

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

##### 1.2.1 Relevant identified uses

Photocatalyst for surface protection

##### 1.2.2 Uses advised against

No uses advised against known

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier of the safety data sheet

Novatio\*  
Industrielaan 5B  
B-2250 Olen  
☎ +32 14 25 76 40  
☎ +32 14 22 02 66  
info@novatio.be  
\*NOVATIO is a registered trademark of Novatech International  
Industrielaan 5B

##### Manufacturer of the product

Novatech International N.V.  
Industrielaan 5B  
B-2250 Olen  
☎ +32 14 85 97 37  
☎ +32 14 85 97 38  
info@tec7.be

#### 1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):  
+32 14 58 45 45 (BIG)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

#### 2.2. Label elements

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

#### 2.3. Other hazards

No other hazards known

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
titanium dioxide	13463-67-7 236-675-5	C=10 %		(2)	Constituent
water	7732-18-5 231-791-2				

(2) Substance with a Community workplace exposure limit

### SECTION 4: First aid measures

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)  
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<http://www.big.be>  
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134-16239-473-en

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## 4.1. Description of first aid measures

### General:

If you feel unwell, seek medical advice.

### After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

### After skin contact:

Rinse with water. Take victim to a doctor if irritation persists.

### After eye contact:

Rinse with water. Take victim to an ophthalmologist if irritation persists.

### After ingestion:

Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

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

### 4.2.1 Acute symptoms

#### After inhalation:

No effects known.

#### After skin contact:

No effects known.

#### After eye contact:

No effects known.

#### After ingestion:

No effects known.

### 4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### 5.1.1 Suitable extinguishing media:

Adapt extinguishing media to the environment.

#### 5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

### 5.2. Special hazards arising from the substance or mixture

On burning: formation of metallic fumes.

### 5.3. Advice for firefighters

#### 5.3.1 Instructions:

No specific fire-fighting instructions required.

#### 5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

#### 6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

#### 6.1.2 Protective equipment for emergency responders

Gloves. Protective clothing.

Suitable protective clothing

See heading 8.2

### 6.2. Environmental precautions

Contain leaking substance. Use appropriate containment to avoid environmental contamination.

### 6.3. Methods and material for containment and cleaning up

Take up liquid spill into inert absorbent material. Scoop absorbed substance into closing containers. Clean contaminated surfaces with a soap solution. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

See heading 13.

## SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

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## 7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed.

## 7.2. Conditions for safe storage, including any incompatibilities

### 7.2.1 Safe storage requirements:

Storage temperature: 5-35 °C. Store in a dark area. Meet the legal requirements. Max. storage time: 12 month(s).

### 7.2.2 Keep away from:

Heat sources.

### 7.2.3 Suitable packaging material:

Synthetic material.

### 7.2.4 Non suitable packaging material:

No data available

## 7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 Occupational exposure

##### a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

##### The Netherlands

Titaandioxide	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	10 mg/m <sup>3</sup>
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##### Belgium

Titane (dioxyde de)	Time-weighted average exposure limit 8 h	10 mg/m <sup>3</sup>
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##### USA (TLV-ACGIH)

Titanium dioxide	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	10 mg/m <sup>3</sup>
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##### France

Titane (dioxyde de), en Ti	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	10 mg/m <sup>3</sup>
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##### UK

Titanium dioxide respirable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m <sup>3</sup>
Titanium dioxide total inhalable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m <sup>3</sup>

##### b) National biological limit values

If limit values are applicable and available these will be listed below.

#### 8.1.2 Sampling methods

If applicable and available it will be listed below.

Titanium Dioxide	NIOSH	3(S385)
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#### 8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

#### 8.1.4 DNEL/PNEC values

##### DNEL/DMEL - Workers

###### titanium dioxide

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	10 mg/m <sup>3</sup>	

##### DNEL/DMEL - General population

###### titanium dioxide

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects oral	700 mg/kg bw/day	

##### PNEC

###### titanium dioxide

Compartments	Value	Remark
Fresh water	0.184 mg/l	
Marine water	0.0184 mg/l	
Aqua (intermittent releases)	0.193 mg/l	
Fresh water	100 mg/l	
Fresh water sediment	1000 mg/kg sediment dw	
Marine water sediment	100 mg/kg sediment dw	
Soil	100 mg/kg soil dw	

#### 8.1.5 Control banding

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If applicable and available it will be listed below.

## 8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Measure the concentration in the air regularly.

### 8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

#### a) Respiratory protection:

Respiratory protection not required in normal conditions.

#### b) Hand protection:

Gloves.

Materials	Breakthrough time	Thickness
nitrile rubber	>480 minutes	0.35 mm
latex	>480 minutes	0.5 mm
PVC	>480 minutes	0.5 mm

- materials (good resistance)

Rubber, PVC.

#### c) Eye protection:

Safety glasses.

#### d) Skin protection:

Protective clothing.

### 8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical form	Liquid
Odour	Odourless
Odour threshold	No data available
Colour	Colourless
Particle size	Not applicable (liquid)
Explosion limits	No data available
Flammability	Non combustible
Log Kow	Not applicable (mixture)
Dynamic viscosity	< 100 mPa.s
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available
Flash point	Not applicable
Evaporation rate	No data available
Relative vapour density	No data available
Vapour pressure	No data available
Solubility	No data available
Relative density	1.1 ; 20 °C
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	8 ; 20 °C

### 9.2. Other information

Absolute density	1100 kg/m <sup>3</sup> ; 20 °C
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No data available.

### 10.4. Conditions to avoid

Keep away from naked flames/heat.

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## 10.5. Incompatible materials

No data available.

## 10.6. Hazardous decomposition products

On burning: formation of metallic fumes.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### 11.1.1 Test results

##### Acute toxicity

###### AIRCAT Ti50

No (test) data on the mixture available

###### titanium dioxide

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 425	> 5000 mg/kg bw		Rat (female)	Experimental value	
Dermal						Data waiving	
Inhalation	LC50	Other	> 6.82 mg/l	4 h	Rat (male)	Experimental value	

Judgement is based on the relevant ingredients

##### Conclusion

Low acute toxicity by the oral route

Low acute toxicity by the dermal route

Low acute toxicity by the inhalation route

##### Corrosion/irritation

###### AIRCAT Ti50

No (test) data on the mixture available

###### titanium dioxide

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		1; 24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	Equivalent to OECD 404			Rabbit	Experimental value	

Judgement is based on the relevant ingredients

##### Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

Not classified as irritating to the respiratory system

##### Respiratory or skin sensitisation

###### AIRCAT Ti50

No (test) data on the mixture available

###### titanium dioxide

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 429			Mouse (female)	Experimental value	

Judgement is based on the relevant ingredients

##### Conclusion

Not classified as sensitizing for skin

##### Specific target organ toxicity

###### AIRCAT Ti50

No (test) data on the mixture available

###### titanium dioxide

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOEL	Equivalent to OECD 407	24000 mg/kg/d			29 day(s)	Rat (male)	Experimental value
Inhalation	NOEC	Other	50 mg/m <sup>3</sup> air				Rat (male/female)	Experimental value

Judgement is based on the relevant ingredients

##### Conclusion

Not classified for subchronic toxicity

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## Mutagenicity (in vitro)

### AIRCAT Ti50

No (test)data on the mixture available

#### titanium dioxide

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 473	Chinese hamster ovary (CHO)		Experimental value

## Mutagenicity (in vivo)

### AIRCAT Ti50

No (test)data on the mixture available

#### titanium dioxide

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474		Rat (male/female)		Experimental value

## Carcinogenicity

### AIRCAT Ti50

No (test)data on the mixture available

#### titanium dioxide

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation	NOAEC	OECD 453	5 mg/m <sup>3</sup> air	24 month(s)	Rat (male/female)			Experimental value

## Reproductive toxicity

### AIRCAT Ti50

No (test)data on the mixture available

Judgement is based on the relevant ingredients

#### Conclusion CMR

Not classified for carcinogenicity

Not classified for mutagenic or genotoxic toxicity

Not classified for reprotoxic or developmental toxicity

## Toxicity other effects

### AIRCAT Ti50

No (test)data on the mixture available

## Chronic effects from short and long-term exposure

### AIRCAT Ti50

No effects known.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### AIRCAT Ti50

No (test)data on the mixture available

#### titanium dioxide

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	Equivalent to OECD 203	> 100 mg/l	96 h	Oncorhynchus mykiss	Static system		Experimental value
Acute toxicity invertebrates	LC50	Equivalent to OECD 202	> 100 mg/l	48 h	Daphnia magna	Static system	Fresh water	Weight of evidence
Toxicity algae and other aquatic plants	EC50	EPA 600/9-78-018	16 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value
Long-term toxicity aquatic invertebrates	NOEC	OECD 211	≥ 2.92 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Weight of evidence; GLP

Judgement is based on the relevant ingredients

#### Conclusion

pH shift

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

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## 12.2. Persistence and degradability

Readily biodegradable in water

## 12.3. Bioaccumulative potential

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Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

titanium dioxide

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

**Conclusion**

Does not contain bioaccumulative component(s)

## 12.4. Mobility in soil

Contains component(s) that adsorb(s) into the soil

## 12.5. Results of PBT and vPvB assessment

The criteria of PBT and vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006 do not apply to inorganic substances.

## 12.6. Other adverse effects

AIRCAT Ti50

**Global warming potential (GWP)**

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

**Ozone-depleting potential (ODP)**

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

titanium dioxide

**Global warming potential (GWP)**

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

## SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 13.1. Waste treatment methods

#### 13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

16 08 03 (spent catalysts: spent catalysts containing transition metals or transition metal compounds not otherwise specified). Depending on branch of industry and production process, also other waste codes may be applicable. Can be considered as non hazardous waste according to Directive 2008/98/EC.

#### 13.1.2 Disposal methods

Recycle/reuse. Remove waste in accordance with local and/or national regulations. Remove to an authorized waste treatment plant. Should not be landfilled with household waste.

#### 13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).

15 01 02 (plastic packaging).

## SECTION 14: Transport information

### Road (ADR)

#### 14.1. UN number

Transport	Not subject
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#### 14.2. UN proper shipping name

#### 14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

#### 14.4. Packing group

Packing group	
Labels	

#### 14.5. Environmental hazards

Environmentally hazardous substance mark	no
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#### 14.6. Special precautions for user

Special provisions	
Limited quantities	

### Rail (RID)

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14.1. UN number	Transport	Not subject
14.2. UN proper shipping name		
14.3. Transport hazard class(es)		
	Hazard identification number	
	Class	
	Classification code	
14.4. Packing group		
	Packing group	
	Labels	
14.5. Environmental hazards		
	Environmentally hazardous substance mark	no
14.6. Special precautions for user		
	Special provisions	
	Limited quantities	

## Inland waterways (ADN)

14.1. UN number	Transport	Not subject
14.2. UN proper shipping name		
14.3. Transport hazard class(es)		
	Class	
	Classification code	
14.4. Packing group		
	Packing group	
	Labels	
14.5. Environmental hazards		
	Environmentally hazardous substance mark	no
14.6. Special precautions for user		
	Special provisions	
	Limited quantities	

## Sea (IMDG/IMSBC)

14.1. UN number	Transport	Not subject
14.2. UN proper shipping name		
14.3. Transport hazard class(es)		
	Class	
14.4. Packing group		
	Packing group	
	Labels	
14.5. Environmental hazards		
	Marine pollutant	-
	Environmentally hazardous substance mark	no
14.6. Special precautions for user		
	Special provisions	
	Limited quantities	
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code		
	Annex II of MARPOL 73/78	

## Air (ICAO-TI/IATA-DGR)

14.1. UN number	Transport	Not subject
14.2. UN proper shipping name		
14.3. Transport hazard class(es)		
	Class	
14.4. Packing group		
	Packing group	
	Labels	
14.5. Environmental hazards		
	Environmentally hazardous substance mark	no
14.6. Special precautions for user		
	Special provisions	
	Passenger and cargo transport: limited quantities: maximum net quantity per packaging	

## SECTION 15: Regulatory information

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

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## European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
	Insufficient data

## National legislation The Netherlands

### AIRCAT Ti50

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 03
Waterbezwaarlijkheid	11

## National legislation Germany

### AIRCAT Ti50

WGK	nwg; Classification non-water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)
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### titanium dioxide

MAK - Krebserzeugend Kategorie	3A
TA-Luft	5.2.1

## National legislation France

### AIRCAT Ti50

No data available

## National legislation Belgium

### AIRCAT Ti50

No data available

## Other relevant data

### AIRCAT Ti50

No data available

### titanium dioxide

TLV - Carcinogen	Titanium dioxide; A4
IARC - classification	2B; Titanium dioxide

## 15.2. Chemical safety assessment

No chemical safety assessment is required.

## SECTION 16: Other information

(\*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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