

# SAFETY DATA SHEET

info@deffner-johann.de | +49 (0)9723 9350-0

Die in diesem Produktdatenblatt genannten Spezifikationen dienen nur zur Produktbeschreibung und beziehen sich auf den Zeitpunkt unmittelbar nach der Produktion bzw. Import des Produktes. Sie entsprechen den Angaben des Herstellers. Eine rechtsverbindliche Zusicherung bestimmter Eigenschaften oder der Eignung für einen bestimmten Einsatzzweck kann hieraus nicht abgeleitet werden. Durch unsachgemäßen Transport und / oder unsachgemäße Lagerung können sich Änderungen ergeben. Die Angaben in diesem Produktdatenblatt entbinden den Verarbeiter nicht von eigener Prüfung der Eigenschaften des Produktes und dessen Eignung für die vorgesehene Verwendung.

ade name: Nickeltitange	lb	Print date: 04.03.20
	Version: 4 / DE	Date revised: 04.03.2
	Replaces Version: 3 / DE	
CTION 1: Identification o	f the substance/mixture and of the company/und	dertaking
1.1. Product identifier		-
Nickeltitangelb		
Registration no. EC No.:	232-353-3	
Registration no.	01-2119491302-44-XXXX	
CAS No.	8007-18-9	
1.2. Relevant identified us	es of the substance or mixture and uses advised aga	linst
Use of the substance/prep	paration	
Colourant		
1.3. Details of the supplier	of the safety data sheet	
Adresse:		
Deffner & Johann Gm	bH	
Mühläckerstraße 13		
D-97520 Röthlein		
Tel.:	+49 (0) 9723 9350-0	
Fax:	+49 (0) 9723 9350-25	
E-Mail-Adresse:	info@deffner-johann.de	
1.4 Notfall-Nummer:	+49 (0) 9723 9350-0 (Mo. – Fr. 7:30 – 15:00 Uh	r)
CTION 2: Hazards identif	ication	
2.1. Classification of the s	ubstance or mixture	
	tion following the Safety Data Sheet format	
This product is not classif	ied hazardous in accordance with Regulation (EC) No 12	72/2008.
2.2. Label elements		
Labelling according to r	egulation (EC) No 1272/2008	
The product does not requ	uire a hazard warning label in accordance with Regulation	n (EC) No 1272/2008.
2.3. Other hazards		
Dust loading		
ECTION 3: Composition/in	formation on ingredients	
3.1. Substances		
Chemical characterization		
Antimony nickel titanium o XXXX	oxide yellow; CAS-No.: 8007-18-9; EC-No: 232-353-3; RE	EACH-RegNo.: 01-2119491302-44-
ECTION 4: First aid measu	ires	
4.1. Description of first aid	Imeasures	
General information In case of persistent symp	otoms consult doctor.	
-	fresh air and keep him calm. In the event of symptoms ta	ake medical treatment.
-	n soap and water. Consult a doctor if skin irritation persist	ts.
After eye contact Rinse cautiously with wate Seek medical advice imm	er for several minutes. Remove contact lenses, if present	and easy to do. Continue rinsing.

After ingestion

Safety data she	eet in accordance with regula	ation (EC) No 1907/2006	
Trade name:	Nickeltitangelb		Print date: 04.03.20
		Version: 4 / DE	Date revised: 04.03.2020
		Replaces Version: 3 / D	E
Rinse mou	Ith thoroughly with water. Call in a	physician immediately and show hin	n the Safety Data Sheet.
Adhere to p	ersonal protective measures where the second		
4.2. Most im	portant symptoms and effects,	both acute and delayed	
Until now r	no symptoms known so far.		
4.3. Indicati	on of any immediate medical at	tention and special treatment need	ded
	e physician / treatment ptomatically		
SECTION 5: Fin	refighting measures		
5.1. Extingu	ishing media		
Suitable ext Dry powde	<b>inguishing media</b> er, Foam		
Non suitable Carbon die	e extinguishing media oxide		
5.2. Special	hazards arising from the substa	ance or mixture	
In the ever	nt of fire the following can be relea	ased: Irritant and harmful combustior	n products.
5.3. Advice	for firefighters		
	tective equipment for fire-fightir		
Other inform Fire residu		water must be disposed of in accord	lance with the local regulations.
SECTION 6: Ac	cidental release measures		
6.1. Persona	al precautions, protective equip	ment and emergency procedures	
ventilation		. High risk of slipping due to leakage/	vapours/dust/aerosol. Ensure adequate /spillage of product. Refer to protective
6.2. Environ	mental precautions		
	charge into the drains/surface wat nated wash water.	ters/groundwater. Do not discharge ir	nto the subsoil/soil. Retain and dispose
6.3. Method	s and material for containment	and cleaning up	
Avoid raisi	ng dust. Pick up mechanically. WI	hen picked up, treat material as prese	cribed under Section 13 "Disposal".
6.4. Referen	ce to other sections		
	n regarding Safe handling, see Se n regarding waste disposal, see S		nal protective measures, see Section 8.

## **SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

## Advice on safe handling

Avoid the formation and deposition of dust. Provide exhaust ventilation if dust is formed. Ensure adequate ventilation. Handle and open container with care. Provide suitable exhaust ventilation at the processing machines. Use breathing apparatus when transferring large quantities without exhaust ventilation facilities. If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Observe the usual precautions for handling chemicals.

#### Advice on protection against fire and explosion

No special measures required.

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

### Hints on storage assembly

Do not store together with foodstuffs.

Storage class according to TRGS 510 Storage class according to TRGS 13

Non- combustible solids

Yersion: xł /PE       Data revised: x4, Replaces Version: 3 / DE         510       Further information on storage conditions         Kasp container tightly closed and dry in a cool, well-ventilated place. Protect from direct sunlight. Protect from extra heat and cold.         SECTION 8: Exposure controls/personal protection         8.1. Control parameters         Exposure limit value:         Antimony nickel titanium oxide yellow         Antimony nickel titanium oxide yellow         Maximum limit value: 8(II): Skin recorption / sensibilisation: Sh: Pregnancy group: Y: Status: 05/2018: Remark         Nickel und Nickelverbindungen (als Ni) einatembare Fraktion, AGS, 24         Other information         TRCS 900: Oberserve the general dust threshold.         Derived NofMinnial Effect Level (DNEL)         Antimony nickel titanium oxide yellow         Reference group       Derived No Effect Level (DNEL)         Reference group       Consentration         Wode of action       Local effects         Concentration       Literature value         Protect NoEffect Concentration (HeEC)         Antimony nickel titanium oxide yellow         Type of value       Antimony nickel titanium oxide yellow         Rote of exposure       Long term         Rote of exposure       Long term         Rote of exposure       Initiative	ade name: Nickeltitangelb				Print date: 04.03.20
510         Further information on storage conditions         Keep container tightly closed and dry in a cool, well-ventilated place. Protect from direct sunlight. Protect from exit heat and cod.         SECTION 3: Exposure controls/personal protection         8.1. Control parameters         Exposure limit values         Controls/personal protection         Autimory nickel titanium oxide yellow         Value         Out of the parameters         Exposure limit value: 3(II): Skin resorption / sensibilisation: Sh; Pregnancy group: Y; Status: 05/2018; Remark         Navimum limit value: 3(II): Skin resorption / sensibilisation: Sh; Pregnancy group: Y; Status: 05/2018; Remark         Other information         TRGS 900: Conserve the general dust threshold.         Derived No/Minimal Effect Levels (DNEL/DMEL)         Antimony nickel titanium oxide yellow         Tege of value         Rolt of exposure         Long term         Route of exposure         Long term         Route of exposure         Long term         Route of exposure         Duration of exposure       Long term		Versie	on: 4/DE	Ξ	Date revised: 04.03.202
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Reference substance       Antimony nickel titanium oxide yellow         Type of value       PNEC         Type       Freshwater         Concentration       to 0,1 mg/l         Source       Literature value         Antimony nickel titanium oxide yellow         Type of value       PNEC         Type of value       PNEC         Type Concentration       Antimony nickel titanium oxide yellow         Type of value       PNEC         Type Concentration       to 0,01 mg/l         Antimony nickel titanium oxide yellow         Type of value       PNEC         Concentration       to 0,01 mg/l         Antimony nickel titanium oxide yellow         Type of value       PNEC         Concentration       to 1 mg/m³         Source       Literature value         Antimony nickel titanium oxide yellow       PNEC         Type of value       Antimony nickel titanium oxide yellow         PNEC       Type of value         Type of value       Antimony nickel titanium oxide yellow         PNEC       Sewage treatment plant (STP)         Concentration       to 568 mg/l					
Type       Freshwater         Concentration       to       0,1       mg/l         Source       Literature value       Antimony nickel titanium oxide yellow         Type of value       Antimony nickel titanium oxide yellow       PNEC         Type       Saltwater       to       0,01       mg/l         Concentration       to       0,01       mg/l         Type of value       Antimony nickel titanium oxide yellow       PNEC         Conditions       Intermittend       o       1       mg/m³         Concentration       to       1       mg/m³         Type of value       Antimony nickel titanium oxide yellow       PNEC         Concentration       to       1       mg/m³         Source       Literature value       Antimony nickel titanium oxide yellow         Type of value       Type of value       Sewage treatment plant (STP)       Sewage treatment plant (STP)         Concentration       to       568       mg/l	Reference substance	Antimony nickel tit	anium oxid	e yellow	
Concentration Source       to       0,1       mg/l         Literature value       Antimony nickel titanium oxide yellow PNEC Saltwater       PNEC Saltwater       Saltwater         Type of value Concentration       to       0,01       mg/l         Type of value Conditions       Antimony nickel titanium oxide yellow PNEC       Mathematical Science         Concentration       Antimony nickel titanium oxide yellow PNEC       Mathematical Science         Concentration       Intermittend       Mathematical Science         Source       Literature value       Mathematical Science         Type of value Type of value Type of value       Antimony nickel titanium oxide yellow PNEC       Mathematical Science         Type of value Type       Antimony nickel titanium oxide yellow PNEC       Mathematical Science       Mathematical Science         Type of value Type       Mathematical Science       Science       Science       Science         Type of value Type       Type of value Type       Science       Science       Science       Science         Type of value Type       Type of value Type       Science       Science       Science       Science         Type of value Type       Type of value       Science       Science       Science       Science         Type of value Type       Type of value <td></td> <td></td> <td></td> <td></td> <td></td>					
Source     Literature value       Type of value Type     Antimony nickel titanium oxide yellow PNEC Saltwater       Concentration     to       Type of value Conditions     Natimony nickel titanium oxide yellow PNEC Intermittend       Concentration     to       Type of value Concentration     Intermittend       Concentration     to     1       Type of value Concentration     to     1       Type of value Type of value Type     Antimony nickel titanium oxide yellow Literature value       Type of value Type     Antimony nickel titanium oxide yellow PNEC Sewage treatment plant (STP) Concentration		Freshwater			
Type of value Type       PNEC Saltwater         Concentration       to       0,01       mg/l         Antimony nickel titanium oxide yellow       PNEC       NEC       Network         Conditions       Intermittend       mg/m³       Network         Concentration       to       1       mg/m³         Source       Literature value       Antimony nickel titanium oxide yellow       PNEC         Type of value       Antimony nickel titanium oxide yellow       PNEC         Type of value       Sewage treatment plant (STP)       To       568       mg/l		Literature value	tO	0,1	mg/I
Type of value Type       PNEC Saltwater         Concentration       to       0,01       mg/l         Antimony nickel titanium oxide yellow       PNEC       NEC       Network         Conditions       Intermittend       mg/m³       Network         Concentration       to       1       mg/m³         Source       Literature value       Antimony nickel titanium oxide yellow       PNEC         Type of value       Antimony nickel titanium oxide yellow       PNEC         Type of value       Sewage treatment plant (STP)       To       568       mg/l		Antimony nickel tit	anium oxid	e vellow	
Type     Saltwater       Concentration     to     0,01     mg/l       Antimony nickel titanium oxide yellow     PNEC       Conditions     Intermittend       Concentration     to     1       Source     Literature value       Type of value     Antimony nickel titanium oxide yellow       Type     Sewage treatment plant (STP)       Concentration     to     568	Type of value			c yenow	
Concentration       to       0,01       mg/l         Type of value       Antimony nickel titanium oxide yellow       PNEC         Conditions       Intermittend       mg/m³         Concentration       to       1       mg/m³         Source       Literature value       Matimony nickel titanium oxide yellow       PNEC         Type of value       Antimony nickel titanium oxide yellow       PNEC         Type of value       PNEC       Sewage treatment plant (STP)         Concentration       to       568       mg/l					
Type of value     PNEC       Conditions     Intermittend       Concentration     to 1       Source     Literature value       Antimony nickel titanium oxide yellow       Type of value       Type       Type       Sewage treatment plant (STP)       Concentration       to     568			to	0,01	mg/l
Conditions       Intermittend         Concentration       to       1       mg/m³         Source       Literature value       Antimony nickel titanium oxide yellow         Type of value       PNEC         Type       Sewage treatment plant (STP)         Concentration       to       568			anium oxid	e yellow	
Concentrationto1mg/m³SourceLiterature valueAntimony nickel titanium oxide yellowType of valuePNECTypeSewage treatment plant (STP)Concentrationto568mg/l		-			
Source     Literature value       Antimony nickel titanium oxide yellow       Type of value       PNEC       Type       Sewage treatment plant (STP)       Concentration       to     568		Intermittend		4	
Type of valuePNECTypeSewage treatment plant (STP)Concentrationto568mg/l		Literature value	to	1	mg/m³
Type Sewage treatment plant (STP) Concentration to 568 mg/l			tanium oxid	e yellow	
Concentration to 568 mg/l					
•		Sewage treatment			~~~ /
Source Literature Value			tO	568	mg/i
		Literature value	tO	568	mg/i

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8.2. Exposi	ire controls					
Do not inl away fron		void contact with skin Wash hands before b	oreaks a	nd after wo	rk. Use barı	smoke during work time. Keep rier skin cream. Observe the
lf workpla	<pre>/ protection ce limits are exceeded, a re hing apparatus in dust-lade</pre>		pproved	for this par	ticular job n	nust be worn. Particle filter P2;
Hand prote Protective Observe t requireme	e gloves he information of the glove	manufacturers on per	meability	and break	through tim	es and other workplace
Eye protec Safety gla	t <b>ion</b> Isses with side protection sh	ield				
Body prote Clothing a	<b>ction</b> as usual in the chemical indu	ustry.				
ECTION 9: P	nysical and chemical pr	operties ***				
	ation on basic physical an	d chemical properti	es			
Form Colour		Powder see tradename				
Odour		characteristic				
Odour thre Remarks	shold	not determined				
<b>pH value</b> Value		7	to	8		
Concentra		50	g/l	-		
Temperat Source	ure	20 Literature value	°C			
Melting poi	nt					
Value		> 1000			°C	
Source	sint	Literature value				
Freezing po Remarks	Jint	not determined				
	ng point and boiling range					
Remarks		Not applicable				
Flash point Remarks		Not applicable				
Evaporatio	n rate					
Remarks		Not applicable				
Evaporatio Remarks	n rate (ether = 1) :	not determined				
Not ignita	<b>ty (solid, gas)</b> ble					
Source Upper/lowe Remarks	r flammability or explosiv		vant for f		n and lohal	ing
Vapour pre Remarks	ssure	For solids not rele Not applicable	vant iUI (	າລວວາກບັດເປັ	anu iadel	"'y.
Vapour der Remarks	isity	Not applicable				
Density		,,				
Value		4,61 20	°C		g/cm³	
Temperat Source		20 Literature value				
Solubility in	n water					
Remarks		insoluble				

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Source	Literature value	
Solubility(ies)		
Remarks Partition coefficient: n-octanol/water	not determined	
Remarks	not determined	
Ignition temperature		
Remarks	not determined	
Auto-ignition temperature Remarks	not self-flammable	
Source	Literature value	
Decomposition temperature		
Remarks	No decomposition if used as prescribed.	
Viscosity Remarks	not determined	
	not determined	
Explosive properties evaluation	no	
Oxidising properties		
Remarks	not known	
Source	Literature value	
9.2. Other information		
Bulk density Value	appr. 800 kg/m <sup>3</sup>	
Source	appr. 800 kg/m <sup>3</sup> Literature value	
Other information		
CTION 10: Stability and reactivity		
10.1. Reactivity	and bandlad according to proparihad instructions	
No hazardous reactions when stored	and handled according to prescribed instructions.	
No hazardous reactions when stored <b>10.2. Chemical stability</b>	and handled according to prescribed instructions. and handling conditions (see section 7).	
No hazardous reactions when stored <b>10.2. Chemical stability</b>	and handling conditions (see section 7).	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a	and handling conditions (see section 7).	
No hazardous reactions when stored 10.2. Chemical stability Stable under recommended storage a 10.3. Possibility of hazardous reaction	and handling conditions (see section 7).	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a <b>10.3. Possibility of hazardous reaction</b> When used as recommended, no haz	and handling conditions (see section 7).	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a <b>10.3. Possibility of hazardous reactioned</b> When used as recommended, no haze <b>10.4. Conditions to avoid</b> Avoid creating dusty conditions. <b>Decomposition temperature</b>	and handling conditions (see section 7). Ins cardous reactions are expected.	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a <b>10.3. Possibility of hazardous reaction</b> When used as recommended, no haz <b>10.4. Conditions to avoid</b> Avoid creating dusty conditions. <b>Decomposition temperature</b> Remarks	and handling conditions (see section 7).	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a <b>10.3. Possibility of hazardous reaction</b> When used as recommended, no haz <b>10.4. Conditions to avoid</b> Avoid creating dusty conditions. <b>Decomposition temperature</b> Remarks <b>10.5. Incompatible materials</b>	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed.	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a <b>10.3. Possibility of hazardous reactioned</b> When used as recommended, no haze <b>10.4. Conditions to avoid</b> Avoid creating dusty conditions. <b>Decomposition temperature</b> Remarks <b>10.5. Incompatible materials</b> No hazardous reactions when stored	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed. and handled according to prescribed instructions.	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a <b>10.3. Possibility of hazardous reaction</b> When used as recommended, no haze <b>10.4. Conditions to avoid</b> Avoid creating dusty conditions. <b>Decomposition temperature</b> Remarks <b>10.5. Incompatible materials</b> No hazardous reactions when stored <b>10.6. Hazardous decomposition prod</b>	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed. and handled according to prescribed instructions. lucts	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a <b>10.3. Possibility of hazardous reactioned</b> When used as recommended, no haze <b>10.4. Conditions to avoid</b> Avoid creating dusty conditions. <b>Decomposition temperature</b> Remarks <b>10.5. Incompatible materials</b> No hazardous reactions when stored	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed. and handled according to prescribed instructions. lucts	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a <b>10.3. Possibility of hazardous reaction</b> When used as recommended, no haze <b>10.4. Conditions to avoid</b> Avoid creating dusty conditions. <b>Decomposition temperature</b> Remarks <b>10.5. Incompatible materials</b> No hazardous reactions when stored <b>10.6. Hazardous decomposition prod</b>	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed. and handled according to prescribed instructions. lucts ts known.	
No hazardous reactions when stored <b>10.2. Chemical stability</b> Stable under recommended storage a <b>10.3. Possibility of hazardous reaction</b> When used as recommended, no haz <b>10.4. Conditions to avoid</b> Avoid creating dusty conditions. <b>Decomposition temperature</b> Remarks <b>10.5. Incompatible materials</b> No hazardous reactions when stored <b>10.6. Hazardous decomposition prod</b> No hazardous decomposition product	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed. and handled according to prescribed instructions. lucts ts known. on ***	
No hazardous reactions when stored 10.2. Chemical stability Stable under recommended storage a 10.3. Possibility of hazardous reaction When used as recommended, no haz 10.4. Conditions to avoid Avoid creating dusty conditions. Decomposition temperature Remarks 10.5. Incompatible materials No hazardous reactions when stored 10.6. Hazardous decomposition product No hazardous decomposition product ECTION 11: Toxicological information 11.1. Information on toxicological eff Acute oral toxicity	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed. and handled according to prescribed instructions. lucts ts known. on ***	
No hazardous reactions when stored 10.2. Chemical stability Stable under recommended storage a 10.3. Possibility of hazardous reaction When used as recommended, no haz 10.4. Conditions to avoid Avoid creating dusty conditions. Decomposition temperature Remarks 10.5. Incompatible materials No hazardous reactions when stored 10.6. Hazardous decomposition product No hazardous decomposition product ECTION 11: Toxicological information 11.1. Information on toxicological eff Acute oral toxicity Species	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed. and handled according to prescribed instructions. lucts is known. on *** ects rat	
No hazardous reactions when stored 10.2. Chemical stability Stable under recommended storage a 10.3. Possibility of hazardous reaction When used as recommended, no haz 10.4. Conditions to avoid Avoid creating dusty conditions. Decomposition temperature Remarks 10.5. Incompatible materials No hazardous reactions when stored 10.6. Hazardous decomposition product No hazardous decomposition product ECTION 11: Toxicological information 11.1. Information on toxicological eff Acute oral toxicity Species LD50	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed. and handled according to prescribed instructions. lucts ts known. on *** ects rat > 1000 mg/kg	
No hazardous reactions when stored 10.2. Chemical stability Stable under recommended storage a 10.3. Possibility of hazardous reaction When used as recommended, no haz 10.4. Conditions to avoid Avoid creating dusty conditions. Decomposition temperature Remarks 10.5. Incompatible materials No hazardous reactions when stored 10.6. Hazardous decomposition product No hazardous decomposition product ECTION 11: Toxicological information 11.1. Information on toxicological eff Acute oral toxicity Species LD50 Source	and handling conditions (see section 7). ons cardous reactions are expected. No decomposition if used as prescribed. and handled according to prescribed instructions. lucts is known. on *** ects rat	
No hazardous reactions when stored 10.2. Chemical stability Stable under recommended storage a 10.3. Possibility of hazardous reaction When used as recommended, no hazen 10.4. Conditions to avoid Avoid creating dusty conditions. Decomposition temperature Remarks 10.5. Incompatible materials No hazardous reactions when stored 10.6. Hazardous decomposition product No hazardous decomposition product ECTION 11: Toxicological information 11.1. Information on toxicological effect Acute oral toxicity Species LD50 Source Acute dermal toxicity	and handling conditions (see section 7).	
No hazardous reactions when stored 10.2. Chemical stability Stable under recommended storage a 10.3. Possibility of hazardous reaction When used as recommended, no haz 10.4. Conditions to avoid Avoid creating dusty conditions. Decomposition temperature Remarks 10.5. Incompatible materials No hazardous reactions when stored 10.6. Hazardous decomposition product No hazardous decomposition product ECTION 11: Toxicological information 11.1. Information on toxicological eff Acute oral toxicity Species LD50 Source Source Acute dermal toxicity Remarks	and handling conditions (see section 7).	
No hazardous reactions when stored 10.2. Chemical stability Stable under recommended storage a 10.3. Possibility of hazardous reaction When used as recommended, no haz 10.4. Conditions to avoid Avoid creating dusty conditions. Decomposition temperature Remarks 10.5. Incompatible materials No hazardous reactions when stored 10.6. Hazardous decomposition prod No hazardous decomposition prod No hazardous decomposition prod CTION 11: Toxicological information 11.1. Information on toxicological eff Acute oral toxicity Species LD50 Source Acute dermal toxicity Remarks Acute inhalational toxicity	and handling conditions (see section 7).	

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Skin corrosion/irritation					
Species	rabbit				
evaluation	non-irritant				
Source	Literature value				
Source	experimental/calculated data	een eeure elvis initetien			
Remarks	Frequent persistent contact with the skin	can cause skin imitation.			
Serious eye damage/irritation Species	rabbit				
evaluation	non-irritant				
Source	Literature value				
Source	experimental/calculated data				
Remarks	Eye contact with the product may lead to	o irritation.			
Sensitization ***					
Species	guinea pig				
evaluation	non-sensitizing				
Method Remarks	OECD 406	atamant has been derived from the			
	properties of the individual components.				
Source	Literature value				
Mutagenicity					
evaluation Source	No experimental information on genotoxi Literature value	icity in vitro available.			
Reproductive toxicity Remarks	Indications of toxic offects are available	from reproduction studies in animals			
Source	Indications of toxic effects are available t Literature value	nom reproduction studies in animals.			
Carcinogenicity					
Remarks	not determined				
Specific Target Organ Toxicity (ST					
evaluation	No indications of STOT effects are available	able.			
Source	Literature value				
ECTION 12: Ecological informatio	n				
12.1. Toxicity					
General information					
Avoid entry in the environment.					
	golden orfe (Leuciscus idus)				
Avoid entry in the environment. Fish toxicity Species LC50	golden orfe (Leuciscus idus) > 10000	mg/l			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure	> 10000 96 h	mg/l			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method	> 10000 96 h DIN 38412 / Part 15				
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks	> 10000 96 h DIN 38412 / Part 15 The details of the toxic effect relate to the	e nominal concentration.			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks Remarks	<ul> <li>&gt; 10000</li> <li>96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim</li> </ul>	e nominal concentration.			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks Remarks Source	> 10000 96 h DIN 38412 / Part 15 The details of the toxic effect relate to the	e nominal concentration.			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks Remarks Source <b>Daphnia toxicity</b>	<ul> <li>&gt; 10000</li> <li>96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the toxic effect relate to the toxic was tested above its maximum Literature value</li> </ul>	e nominal concentration.			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks Remarks Source <b>Daphnia toxicity</b> Species EC50	<ul> <li>&gt; 10000</li> <li>96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim</li> </ul>	e nominal concentration.			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks Remarks Source <b>Daphnia toxicity</b> Species EC50 Duration of exposure	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim Literature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> </ul>	e nominal concentration. um solubility.			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks Remarks Source <b>Daphnia toxicity</b> Species EC50 Duration of exposure Method	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim Literature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> </ul>	e nominal concentration. ium solubility. mg/l			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks Remarks Source <b>Daphnia toxicity</b> Species EC50 Duration of exposure Method Remarks	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim Literature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> <li>The product is slightly soluble in the test</li> </ul>	e nominal concentration. ium solubility. mg/l medium. An eluate was tested.			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks Remarks Source <b>Daphnia toxicity</b> Species EC50 Duration of exposure Method Remarks Remarks Remarks Remarks Remarks Remarks	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim Literature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> <li>The product is slightly soluble in the test The details of the toxic effect relate to the</li> </ul>	e nominal concentration. ium solubility. mg/l medium. An eluate was tested.			
Avoid entry in the environment. <b>Fish toxicity</b> Species LC50 Duration of exposure Method Remarks Remarks Source <b>Daphnia toxicity</b> Species EC50 Duration of exposure Method Remarks Remarks Remarks Source	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim Literature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> <li>The product is slightly soluble in the test</li> </ul>	e nominal concentration. ium solubility. mg/l medium. An eluate was tested.			
Avoid entry in the environment. Fish toxicity Species LC50 Duration of exposure Method Remarks Remarks Source Daphnia toxicity Species EC50 Duration of exposure Method Remarks Remarks Remarks Source Method Remarks Remarks Source Method Remarks Remarks Remarks Source	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim Literature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> <li>The product is slightly soluble in the test The details of the toxic effect relate to the Literature value</li> </ul>	e nominal concentration. ium solubility. mg/l medium. An eluate was tested. e nominal concentration.			
Avoid entry in the environment. Fish toxicity Species LC50 Duration of exposure Method Remarks Remarks Source Daphnia toxicity Species EC50 Duration of exposure Method Remarks Remarks Remarks Source Algae toxicity EC50	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the the product was tested above its maximulaterature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> <li>The product is slightly soluble in the test the details of the toxic effect relate to the Literature value</li> <li>&gt; 100</li> </ul>	e nominal concentration. ium solubility. mg/l medium. An eluate was tested.			
Avoid entry in the environment. Fish toxicity Species LC50 Duration of exposure Method Remarks Remarks Source Daphnia toxicity Species EC50 Duration of exposure Method Remarks Remarks Remarks Source Method Remarks Remarks Source Method Remarks Remarks Remarks Source	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim Literature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> <li>The product is slightly soluble in the test The details of the toxic effect relate to the Literature value</li> </ul>	e nominal concentration. ium solubility. mg/l medium. An eluate was tested. e nominal concentration.			
Avoid entry in the environment. Fish toxicity Species LC50 Duration of exposure Method Remarks Remarks Source Daphnia toxicity Species EC50 Duration of exposure Method Remarks Remarks Remarks Source Algae toxicity EC50 Duration of exposure	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the toxic effect relate to the toxic above its maximulation.</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> <li>The product is slightly soluble in the test the details of the toxic effect relate to the Literature value</li> <li>&gt; 100 72 h</li> </ul>	e nominal concentration. um solubility. mg/l medium. An eluate was tested. e nominal concentration. mg/l			
Avoid entry in the environment. Fish toxicity Species LC50 Duration of exposure Method Remarks Remarks Source Daphnia toxicity Species EC50 Duration of exposure Method Remarks Remarks Source Algae toxicity EC50 Duration of exposure Method Remarks Source	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim Literature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> <li>The product is slightly soluble in the test The details of the toxic effect relate to the Literature value</li> <li>&gt; 100 72 h</li> <li>OECD 201</li> <li>The product is slightly soluble in the test Spezies: Desmodesmus subspicatus</li> </ul>	e nominal concentration. um solubility. mg/l medium. An eluate was tested. e nominal concentration. mg/l medium. An eluate was tested.			
Avoid entry in the environment. Fish toxicity Species LC50 Duration of exposure Method Remarks Remarks Source Daphnia toxicity Species EC50 Duration of exposure Method Remarks Remarks Source Algae toxicity EC50 Duration of exposure Method Remarks Source	<ul> <li>&gt; 10000 96 h</li> <li>DIN 38412 / Part 15</li> <li>The details of the toxic effect relate to the The product was tested above its maxim Literature value</li> <li>Daphnia magna</li> <li>&gt; 100 48 h</li> <li>OECD 202</li> <li>The product is slightly soluble in the test The details of the toxic effect relate to the Literature value</li> <li>&gt; 100 72 h</li> <li>OECD 201</li> <li>The product is slightly soluble in the test</li> </ul>	e nominal concentration. um solubility. mg/l medium. An eluate was tested. e nominal concentration. mg/l medium. An eluate was tested.			

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Species	Pseudomo	onas putida			
EC50	> 1	0000	mg/l		
Method Remarks	DIN 38412 The produ		in the test medium	An eluate was tested.	
Remarks			relate to the nominal		
Source	Literature	value			
12.2. Persistence and degra	adability				
Biodegradability					
Remarks	Slightly wa plant.	iter-soluble, it can b	e removed to a large	extent in a chemical p	urification
12.3. Bioaccumulative pote	•				
General information					
The product has not been t likely.		ne product's consist	encyand lack of solu	bility in water bioavaila	bility is not
Partition coefficient: n-octa Remarks		ermined			
12.4. Mobility in soil					
General information not determined					
12.5. Results of PBT and vF	PvB assessment				
General information Not applicable					
12.6. Other adverse effects					
Behaviour in sewers [waste When low concentrations a degradation activity of activ sewage treatment plants.	are discharged correct				
General information / ecolo The prouct contains: antime therefore not bioavailable.	ony, nickel. The proc				
ECTION 13: Disposal consid	derations				
13.1. Waste treatment meth	ods				
Disposal recommendations Product should be taken to necessary after consultation	a suitable and author				ons and if
Disposal recommendations Packaging that cannot be o Uncontaminated packaging	s for packaging cleaned should be di	sposed off as produ	·		
ECTION 14: Transport infor					
Land transport ADR/RID					
The product does not const	titute a hazardous su	ubstance in land tra	nsport.		
Marine transport IMDG/GG					
-	titute a hazardous su	ubstance in sea trar	nsport.		
Air transport ICAO/IATA					

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

# Water Hazard Class (Germany) \*\*\* Water Hazard Class (Germany) Not

Not water hazardous

rade name: Nickelti	angelb		Print date: 04.03.20
		Version: 4 / DE	Date revised: 04.03.2020
		Replaces Version: 3 / DE	
Remarks	Classificati	on acc. §6 (4) AwSV	
15.2. Chemical safet	/ assessment		
For this substance	chemical safety assessme	nt has been carried out.	
SECTION 16: Other inf	ormation		
AGW: Arbeitsplatzg AwSV: Verordnung substances that are BGW: Biologischer CAS: Chemical Abs DNEL: Derived no of EINECS: European GGVSee: Gefahrgu IARC: International IATA: International ICAO: International IMDG: International IMDG: International LC: Lethal concentu LD: Lethal dose MAK: Maximale Art NOEC: No observal OECD: Organisatio OEL: Occupational PBT: Persistent, Bio PNEC: Predicted no RID: Règlement co TRGS: Technische VDI: Verein Deutsc	renzwert über Anlagen zum Umgang hazardous to water) Grenzwert tracts Service ffect level Inventory of Existing Comm List of Notified Chemical Su tverordnung See Agency for Research on Ca Air Transport Association Civil Aviation Organization Maritime Code for Dangero ation eitsplatz-Konzentration ble effect concentration le effect level n for Economic Co-operatior exposure limit accumulative and Toxic o effect concentration le effect levent n for Economic Co-operation exposure limit accumulative and Toxic o effect concentration le effect levent accumulative and Toxic o effect concentration cernant le transport internai Regeln für Gefahrstoffe	ercial Chemical Substances bstances ncer us Goods n and Development tional ferroviaire de marchandises	Ordinance on facilities for handling

# Supplemental information

These data is based on our present knowledge and experience respectively supplier-information. This safety data sheet describes the product in regard to the requirements of safety. The information does not represent a assurance for certain properties. Existing laws and regulations are to be observed by the recipient of our products in own responsibility. It is the responsibility of the user, to determine if the product is suitable for the deliberate operational area and the respective intended purpose. A liability for damages in connection with the use of this information is excluded. Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*