



## VEILIGHEIDSINFORMATIEBLAD

volgens Verordening (EG) Nr. 1907/2006  
Versie 2.0 Herzieningsdatum 06.02.2019

### 1. PRODUCT IDENTIFICATION

**Trade Name (as labeled):** Nitinol paperclip, L 50 x B 14 mm  
**Chemical Name/Classification:** Nickel Titanium

**U.N. Number:** N/A  
**U.N. Dangerous Goods Classification:** N/A

**Use:** Demonstration & experimental  
**Manufacturer/Supplier Name:** Antonides CV - Interchema  
**Manufacturer/Supplier Address:** Beukenlaan 3 - 8536 TK Oosterzee  
**Manufacturer/Supplier Telephone Number:** +31(0)514564488  
**Emergency Contact Telephone Number:** 112 (Alarmnummer)  
030-2748888 Uitsluitend bestemd om professionele hulpverleners informeren bij acute vergiftigingen

### 2. HAZARD(S) IDENTIFICATION

**Hazard/Danger Classification:**

Health	Environmental	Physical
N/A	N/A	N/A

**Associated Hazards:**

Hazard Statements	Precautionary Statements
N/A	N/A

EU Risk (R) and Safety (S) Phrases: N/A

Refer to Section 16 for the full text of the EU Classifications and R Phrases.

EU Classification: N/A

Information concerning particular hazards for human and environment:

The product does not have to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Components	C.A.S. # EINECS:	IUPAC Name	Substance Classification	WT %
Titanium	7440-32-6 231-142-3	Titanium	F; R 15-17	25-50%
Nickel	7440-02-0 231-111-4	Nickel	Carc. Cat. 3; T, Xi; R 40-43-48/23	50-75%

Refer to Section 16 for the full text of the GHS and H phrases and EU Classifications and R Phrases.





### 4. FIRST-AID MEASURES

Routes of Exposure	First Aid Instructions
Eye	Seek immediate medical attention
Skin	Generally the product does not irritate the skin.
Inhalation	Supply fresh air; consult a doctor in case of complaints.
Ingestion	It is a choking hazard if ingestion, seek medical attention immediately.
Most important symptoms of exposure	N/A
Other	N/A
Note to Physicians (Treatment, Testing, and Monitoring) N/A	

## 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media:</b>	CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
<b>Fire Fighting Procedures:</b>	No special measures required
<b>Specific Hazards Arising from the Chemical:</b>	No special measures required.
<b>Precautions for Fire Fighters:</b>	No special measures required.

### Recommended Protective Equipment for Fire Fighters:

EYES/FACE	SKIN	RESPIRATORY	THERMAL
			




## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, PPE and Emergency Procedures:** Eye/face protection, gloves, face mask.

**Environmental Precautions:** Do not allow to enter sewers/ surface or ground water.

**Methods and Materials for Containment and Clean-up:** Placed in suitable containers for disposal by local, state, or federal waste disposal regulations.

### Recommended Personal Protective Equipment for Containment and Clean-up:

EYES/FACE	SKIN	RESPIRATORY	
			

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** No special measures required.

**Conditions for Safe Storage:** No special requirements.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational Exposure Limits:** N/A

**Biological Exposure Limits:** N/A

**Appropriate Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

**Individual Protection Measures (PPE)**




**Specific Eye/face Protection:** Surgical mask and eye protection

**Specific Skin Protection:** Gloves, material must be impermeable and resistant to the component

**Specific Respiratory Protection:** N/A

**Specific Thermal Hazards:** N/A

### Recommended Personal Protective Equipment

EYES/FACE	SKIN	RESPIRATORY	
			

**Environmental Exposure Controls:** Not applicable

**General Hygiene Considerations and Work Practices:** Not applicable

**Protective Measures During Repair and Maintenance of Contaminated Equipment:** Not applicable

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Metallic	<b>Explosive limits:</b>	N/A.
<b>Odor:</b>	Odorless	<b>Vapor pressure:</b>	Not applicable.
<b>Odor threshold:</b>	N/A	<b>Vapor density:</b>	Not applicable.
<b>pH:</b>	N/A	<b>Relative density:</b>	.234 lb./in <sup>3</sup>
<b>Melting/freezing point:</b>	Melting 2390 F/ Freezing N/A	<b>Solubility:</b>	Insoluble

<b>Initial boiling point and range:</b>	N/A	<b>Partition coefficient: n-octanol/water:</b>	N/A
<b>Flash point:</b>	N/A	<b>Auto-ignition temperature:</b>	N/A
<b>Evaporation rate:</b>	N/A	<b>Decomposition temperature:</b>	N/A
<b>Flammability:</b>	N/A	<b>Viscosity:</b>	N/A
<b>Explosive Properties:</b>	N/A	<b>Oxidizing Properties:</b>	proprietary

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b> N/A
<b>Chemical Stability:</b> Nitinol alloys are stable
<b>Possibility of Hazardous Reactions:</b> N/A
<b>Conditions to Avoid:</b> N/A
<b>Incompatible materials:</b> Acids, bases, and oxidizers
<b>Hazardous Decomposition Products:</b> N/A

## 11. TOXICOLOGICAL INFORMATION

<b>Signs and Symptoms of Overexposure:</b> Nitinol in the solid form is not considered a health hazard. For prolonged exposure to dust during the manufacturing process: Metallic taste, nausea, tightness of chest, fever, irritation of eyes, nose, throat and skin; loss of consciousness or death due to welding gases or lack of oxygen may occur.							
<b>Emergency Overview:</b> The Nitinol product is supplied in the solid form.							
<b>Additional toxicological information:</b> The product is not subject to classification according to the calculation method of the General EU. Classification Guidelines for Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects to our Experience and the information provided to us.							
Likely Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)	LD50 Testing Data (as applicable)	LC50 Testing Data (as applicable)
<b>Eye:</b>	Irritation	N/A	N/A	N/A	None known	N/A	N/A
<b>Skin:</b>	N/A	N/A	N/A	N/A	None known	N/A	N/A
<b>Inhalation:</b>	N/A	N/A	N/A	N/A	None known	N/A	N/A
<b>Ingestion:</b>	N/A	N/A	N/A	N/A	None known	N/A	N/A
<b>Other:</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Medical Conditions Aggravated by Exposure:** None known

**Carcinogenicity:** Not carcinogenic in the solid form

## 12. ECOLOGICAL INFORMATION

**Toxicity:** No hazards

**Persistence and Degradability:** Stable

**Bio-accumulative Potential:** N/A

**Mobility in Soil:** N/A

**Other Adverse Effects:** N/A

**Results of PBT/vPvB Assessment:** N/A

## 13. DISPOSAL CONSIDERATIONS

**Regulations:** Dispose of in accordance with applicable federal, state, and local regulations

**Properties (Physical/Chemical) Affecting Disposal:** N/A

**Waste Treatment Recommendations:** N/A

## 14. TRANSPORT INFORMATION

**UN Identification Number:** N/A

**UN Proper Shipping Name:** N/A

**Transport hazard class(es):** N/A

**Packing Group:** N/A

**Special precautions for user:** N/A

## 15. REGULATORY INFORMATION

### U.S. Federal Regulations

**Comprehensive Environmental Response and Liability Act of 1980 (CERCLA):** Not regulated

**Toxic Substances Control Act (TSCA):** Not regulated

**Clean Water Act (CWA):** Not regulated

**Clean Air Act (CAA):** Not regulated

**Superfund Amendments and Reauthorization Act (SARA) Title III Information:** No components are listed as extremely hazardous substances. Product (dust and fume) is categorized as an immediate (acute) health hazard and a delayed (chronic) health hazard.

**SARA Section 311/312 (40 CFR 370) Hazard Categories:** Not hazardous unless processing creates dusts or Fumes.

<b>Immediate Hazard:</b>	None	<b>Pressure Hazard:</b>	None
<b>Delayed Hazard:</b>	None	<b>Reactivity Hazard:</b>	None
<b>Fire Hazard:</b>	None		

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

Components	C.A.S. #	WT %
Nickel	7440-02-0 231-111-4	50-75%
Titanium	7440-32-6 231-142-3	25-50%

### State Regulations

**California:** This product contains the following chemicals(s) known to the State of California to cause cancer, birth defects or reproductive harm:

Components	C.A.S. #	WT %
Titanium	7440-32-6 231-142-3	25-50%
Nickel	7440-02-0 231-111-4	50-75%

### International Regulations

**Canadian Environmental Protection Act:** This product is a medical device and not subject to chemical notification requirements.

**Canadian Workplace Hazardous Materials Information System (WHMIS):** Medical devices are not subject to WHMIS



**European Inventory of Existing Chemicals (EINECS):** This product is a medical device and not subject to chemical notification requirements.

## 16. OTHER INFORMATION

Full text of Classification abbreviations used in Section 2 and: None

Date of SDS DPreparation/Revision: 06-02-2019 - Mutations: Header & DISCLAIMER

Data Sources: Supplier

Bovenstaande informatie wordt verondersteld juist te zijn maar maakt geen aanspraak op volledigheid en dient uitsluitend als richtlijn te worden gebruikt. Interchema en/of Antonides CV - Oosterzee, zal niet aansprakelijk zijn voor eventuele schade die voortkomt uit hantering van of contact met bovenstaand product. Zie onze website [www.antonides.com](http://www.antonides.com) voor verdere verkoopvoorwaarden.