



## Safety Data Sheet

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Version Data 5.20

### Product Description

TITANIUM BASE ALLOY

### REF NUMBER

#### Restrictions to use:

For use only by dental professionals.

**Manufacturer** : International Orthodontic Services  
**Address** : 12811 Capricorn St. Stafford, TX 77477 USA  
**Phone No,** : 1888-IOS-8882 ( 1888-461-8882)  
**Emergency Phone No,** : +1 832 342 9487

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## HAZARDOUS INGREDIENTS

This section covers ingredients contained in the product as shipped and is applicable to cutting and grinding. Fumes and gases from welding are covered in section \IL

INGREDIENT	CASNO.	PEL (OSHA) mg/m <sup>3</sup>	TLV (ACGIH) mg/m <sup>3</sup> ..
*** Aluminu m (AD)	7429- 90- 5	15	15
Molvbdenum (Mo)	7439-98-7	5	5
Tin (Sn)	7440-31-5	2	2
Titanium (Ti)	7440-32-6	10	10
Vanadium (V)	7440-62-2	.05	.05
Zirconium (Zr)	7440-67-2	5	5
Silicon (Si)	7440-21-3	15	10
*** Chromium (Cr)	7440-47-3	1	.5
<b>Weld Fume Total</b>		10	5

\*\*\*THE INDtCATED INGREDfENTS OF THIS PRODUCT ARE CLASSIFIED AS TOXIC BY EPA IN 40 CFR 372.65 AND SUBJECT TO REPORTING REQUIREMENTS OF SARA TITLE III SECT10N 313 AND 40 CFR 372.45.

## TRADENAME AND NOMINAL COMPOSITION

PRODUCT NAME	Al	Mo	Sn	Ti	V	Zr	Si	Cr
30, 40, 55, 70				100				
3, 2, 5	3			94	3			
6, 6, 2	6		2	86	6			
5, 2, 5	5		3	92				
8, 1, 1	8	1		90	1			
6-4	6			90	4			
6-4 ELI	6			90	4			
6-2-4-2	6		2	86	2	4		
6-2-4-6	6		2	82	6	4		
12-6-4 (Beta 3)		12	4	88		6		
6-2222	6	2	2	86		2	0.15	2

\*\*\* THE INDICATED INGREDIENTS OF THIS PRODUCT ARE CLASSIFIED AS TOXIC BY EPA IN 40 CFR 372.65 AND SUBJECT TO REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 AND 40 CFR 372.45.

## PHYSICAL DATA

Titanium base alloy products are shipped as solid metal forms.

## FIRE AND EXPLOSION DATA

Nonflammable, however. grindings and turnings from machining are flammable.

## HEALTH HAZARD INFORMATION

**Exposure Limits:** Section II lists specific ingredients and exposure limits. IMPORTANT - Determine actual exposure by industrial hygiene monitoring.

Primary routes of entry-inhalation, ingestion, and skin absorption.

POSSIBLE SIGNS AND SYMPTOMS OF EXPOSURE TO DUST, WELDING FUMES AND GASES.

**SHORT TERM EXPOSURE:** Metallic taste; nausea; tightness of chest; fever; irritation of eyes, nose, throat and skin; loss of consciousness/death due to welding gases or lack of oxygen.

**LONG TERM EXPOSURE:** Adverse effects may result from long term exposure to welding fumes, gases, or dusts. These effects may include skin sensitization, neurological damage, and respiratory disease such as bronchial asthma, lung fibrosis or pneumoconiosis. Nickel and Chromium have been determined by the IARC to be suspected carcinogens.

Aggravation of preexisting respiratory or allergic conditions may occur in some workers.

**EMERGENCY AND FIRST AID:** Remove victim from exposure and obtain prompt medical attention. If victim is unconscious, administer oxygen. If not breathing, resuscitate immediately.

## REACTIVITY INFORMATION

Metal products themselves are not reactive, however, caution must be taken when welding due to fumes and gases.

## SPILL AND LEAK PROCEDURES

Residue from cutting or grinding should be swept or vacuumed and placed in suitable containers for disposal by local, state, or federal waste disposal regulations.

## **SPECIAL PROTECTION INFORMATION**

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**RESPIRATORY PROTECTION:** When exposure limits are exceeded, use proper approved

**respirator. VENTILATION:** Use local exhaust when cutting, grinding, or welding.

**EYE PROTECTION AND PROTECTIVE CLOTHING:** Should be used when cutting, grinding, or welding.

## **SPECIAL PRECAUTIONS**

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PEL/TLV exposures should be kept below recommendations by OSHA and ACGIH to insure proper health protection of worker.