



AOI Vision SUS304 H-TA

Jan-2018

MATERIAL SAFETY DATA SHEET (MSDS)

1. CHEMICAL, PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME	AOI VISION ACE SUS304 H-TA
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2. COMPOSITION / INFORMATION ON INGREDIENTS

- 1) Single product or mixture: Mixture(alloy); solid
- 2) Primary components:

Component	Component range (% by weight)	CAS No.	Industrial Safety and Health Law Cabinet Order No.	PRTR Law Class/Cabinet Order No.
Chromium [Cr]	10-26%	7440-47-3	143	1/68
Nickel [Ni]	0-22%	7440-02-0	417	1/231
Manganese [Mn]	0-2%	7439-96-5	548	1/311
Molybdenum [Mo]	0-3%	7439-98-7	601	1/346
Copper [Cu]	0-4%	7440-50-8	378	-
Iron [Fe]	Remaining	7439-89-6	-	-

Notes;

- 1) The above ranges of component values vary depending on the steel-type standard.
- 2) Depending on the use, trace amounts of carbon [C], silicon [Si], phosphorous [P], sulfur[S], niobium [Nb], titanium [Ti], aluminum [Al], nitrogen [N], or other elements may be included.
- 3) Typical components conforming to PRTR Law are shown on the attached table.

3. HAZARDS IDENTIFICATION

- 1) Classification: Classification standards not applicable (no acute toxicity, explosive nature combustible nature, etc.).
- 2) Hazard/toxicity: There is currently no usable data regarding hazard/toxicity in ordinary environments.
However, when performing welding, fusing, grinding, or other processes on this product, metal dust and fumes and metal oxides may be created and may irritate respiratory organs and eyes. In addition, arcing may cause burns.

4. EMERGENCY MEASURES

After performing the necessary first aid, seek medical attention if needed. Some examples are listed below.



- If fumes or other causes result in breathing difficulty, provide respiration assistance and immediately seek medical attention.
- If arcing or other causes result in a burn, cool the affected area and seek medical attention if needed.
- If fumes or metal particles result in eye irritation, rinse eyes with water and immediately seek medical attention.

5. ACTION IN CASE OF FIRE

This material is not combustible. In case of nearby fires, there are no restrictions on the use of water, fire extinguishers, or other equipment. However, the packaging materials are combustible materials which include wood and paper.

6. ACTION IN CASE OF LEAKAGE

Because this material is in solid form, it does not leak.

7. PRECAUTIONS FOR HANDLING AND STORAGE

- 1) Keep away from unnecessary wetness, contact with acids, and high-temperature high-humidity environments.
- 2) For heavy objects, take care against falling over, collapsing from piling, dropping, or similar accidents.
- 3) The cut edge of a steel surface and the cutting particles are as sharp as a knife blade and can cause cuts. Caution is required.
- 4) For coiled products, the coil end may jump suddenly when the binding band is cut. Caution is required.

8. EXPOSURE-PREVENTION AND PROTECTION MEASURES

Because this product is in solid form, this item does not apply. However, when welding, fusing, grinding, cutting, or polishing, pay attention to ventilation and the danger of burns. Protective gear such as masks, glasses, and gloves should be worn to prevent irritation of nasal and other membranes by dust and fumes, and adverse effect from arcing, grinding particles, and other causes.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 1) Physical properties:
Shape; Solid sheet or cylinder shape Color; Silver-gray Odor; None
Density; 7.64-8.06 Kg/cm³ Melting point; 1455-1535°C
- 2) Chemical properties:
 - Not soluble in water; Anticorrosive against weak acid and alkali.
 - Slightly soluble in strong acid (hydrochloric acid, sulfuric acid, etc.) and high temperature alkali. Passive film is developed by oxide acid (nitric acid).
 - Fine powder created by grinding or other processes may be combustible and/or explosive.

10. STABILITY AND REACTIVITY

This product is chemically stable under ordinary conditions. Its reactivity is small. However, metallic compounds are formed during welding, fusing, and similar processes.

11. TOXICOLOGICAL INFORMATION

Currently there is no usable epidemiological information regarding toxicity of steel materials for humans. However, a portion of the alloy components may be considered toxic as single-elements at concentrations at or above exposure limits (threshold limits) for such processing work as listed in the precaution in item 8. (For example, it is considered that fumes of manganese compounds cause the acute and/or chronic toxicity by the inhalation or the oral absorption.) Toxicity information can be obtained from the Statement of Reason for Proposed Threshold Concentration (Japan Society for Occupational Health).



12. ENVIRONMENTAL EFFECTS

There is currently no usable information regarding environmental effects.

13. DISPOSITION CONSIDERATION

This product can be recycled as industrial waste material (metal scrap).

14. TRANSPORT INFORMATION

There are no applicable items. However, when transporting heavy objects, take precautions to avoid the collapse of piled objects. The product should be covered with a plastic sheet or other protection in order to prevent infiltration of rainwater.

15. REGULATORY INFORMATION

None in particular.

16. ADDITIONAL INFORMATION

This data sheet has been prepared in accordance with JIS Z 7250:2000-Material Safety Data Sheet (MSDS) - Section 1, Order of Contents and Items". This data sheet is offered as reference information to ensure safe use of the product for workers who handle our company's products. It is based on materials available at the time it was prepared. It is the responsibility of the operators who handle the product to refer to this sheet and to take safety measures which are appropriate for the specific use and usage method for the product. This data sheet should be used with the following understanding. This data sheet does not constitute a guarantee of product safety. There is the possibility of danger our company is not aware of and which is not described in this data sheet.

AOI VISION PTE LTD (SINGAPORE)