

MATERIAL SAFETY DATA SHEET

in accordance with Directive 91/155 EU



1. Product and Company Identification

Products: BÖHLER A220, A500, L331, L334, T504, T505, T552, T560, T656, T671, T700, V124SC

Manufacturer: BÖHLER EDELSTAHL GmbH & Co KG
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2. Composition / Component information

Alloys in solid condition.

Chemical

composition	C	Si	Mn	Cr	Mo	Ni	Others
(Maximum values in %):							
A220	0,03	0,30	1,70	17,5	2,8	14,5	0,07 N
A500	0,05	0,50	1,40	18,5		9,5	0,07 N
L331	0,05	0,05	0,05	21,0	8,5	63,9	3,4 Nb
L334	0,03	0,35	0,30	19,0	3,1	53,0	0,95Ti 0,55 Al
T504	0,23	0,35	0,70	11,6	1,0	0,75	0,25 V 1,0 W
T505	0,12	0,12	0,45	10,5	1,1	0,75	0,2 V 1,0 W 0,05 N
T552	0,12	0,20	0,80	11,7	1,7	2,7	0,3 V 0,04 N
T560	0,17	0,35	0,70	11,1	0,6	0,55	0,3 V 0,05 N 0,3 Nb
T656	0,14	0,35	0,50	12,0	0,2	0,5	0,03 Al 0,04 N 0,18 Nb
T671	0,04	0,40	0,65	14,5	0,7	6,5	0,32 Nb
T700	0,04	0,25	0,40	15,4	0,25	4,4	3,3 Cu
V124SC	0,42	0,30	0,80	0,85	0,30	1,9	0,03 Al

Remainder: Fe, special alloying elements and trace elements.

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3. Hazards identification

Nickel

Hazard category: Xn, low toxic

Risks to persons or Environment

Nickel

R40 Irreversible damage possible.

R43 Sensitization on skin contact possible

S22 Dust not to be inhaled.

S36 Appropriate protective clothing to be worn when working.

4. First aid measures

Ingestion: If swallowed, seek medical advice.

Inhalation: not applicable (no inhalation possible)

Eyes: not applicable

Skin: not applicable

Wounds: Clean carefully and remove all remaining alloy particles.

5. Fire fighting measures

not applicable (material is not flammable)

6. Accidental release measures

Person related precautions: not applicable

Environmental precautions: not applicable

Cleaning/absorption

procedures: not applicable

7. Handling and storage

Handling: No protective measures required in the delivered condition.
Perform dust creating processes only with preventive measures.
(Personal/ Environmental protection.)

Storage: No protective measures required in the delivered condition.

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8. Exposure controls / Personal protection

During dust creating processes adequate ventilation should be provided.

Components with workplace related limits:

Nickel CAS-Nr. 7440-02-0 TRK-value: 0,5 mg/m³

Respiratory protection: Respirators (if limit is exceeded.)

Hand protection: Avoid repeated and continuous skin contact, use suitable gloves or skin protection, to avoid sensitization.

Eye protection: not applicable. Use safety goggles when performing grinding operations.

Personal hygiene: Wash skin thoroughly.

9. Physical and chemical properties

Shape: Bar, wire, parts.
Color: metallic
Density at 20°C: 7,65-7,85 g/cm³
Smell: odourless
Melting range: 1300-1500°C
Explosivity: not applicable
Solubility in water: insoluble

10. Stability and reactivity

Thermal decomposition: No decomposition at specified use.

Hazardous reactions: On contact with acids, hydrogen can be generated and form explosive gas mixtures.

Hazardous

decomposition products: Not applicable.

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11. Toxicological information

Acute hazards

- Ingestion: Vomiting and diarrhoea, digestive tract irritation.
- Inhalation: Nickel in form of breathable dusts can cause respiratory irritation.
- Skin contact: No toxic hazard.

Chronic hazards

- Inhalation: Nickel in form of breathable dusts is classified as causing cancer in category 3. That means that this substance is a cause for concern due to possible cancerous effects for humans.
- Skin contact: Repeated and continuous skin contact with metallic Nickel can cause sensitization and allergic reactions.

12. Ecological information

No special measurements required.

13. Disposal considerations

Alloy residues normally should be recycled.

14. Transport information

ADR/RID and

- GGVS/GGVE : No dangerous goods in the sense of the mentioned regulations.
- IMDG/GGVSee: No dangerous goods in the sense of the mentioned regulations.
- ICAO/TI und IATA-DRG: No dangerous goods in the sense of the mentioned regulations.
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15. Regulatory information

Classification in accordance with EU- regulations:

Xn low toxic

Risk phrases:

R40 Irreversible damage possible.

R43 Sensitization on skin contact possible

Safety phrases:

S22 Dust not to be inhaled.

S36 Appropriate protective clothing to be worn when working.

Identification: No identification required.

No obligation for identification exists for these alloys, because there is no acute health hazard for humans in the delivered condition and at specified use.

16. Other information

The informations and data in this safety data sheet are based upon our current knowledge. They shall not be binding and shall, in case of contract conclusion, not be regarded as warranted.

These data shall merely constitute average values that become binding only if explicitly specified in a contract concluded with us.

The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.

Our company has certificates according to ISO 9001 and ISO 14001.

Issued: 05/2002

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