



ATISOL INFORMATION SHEET

- **Commercial name: ATISOL**
- **General information:** Atisol is a highly insulating coating product for metal smelting. From a natural highly pure product (biogenous silica), it is produced and marketed by IDROBLINS srl particularly for applications in steel industry smelting departments.
- **Chemical and physical properties:** See technical data sheet
- **Action:** Atisol forms a compact film on the molten steel bath in order to minimize the absorption of oxygen and nitrogen, bind the alumina precipitates and prevent the formation of lumps effectively. As it is produced in spheroidal granules there is no formation of dust in the air both during the processing phase and the application in the steel bath in compliance with the standards set by law decrees. 626. The smelting interval of Atisol is regulated in the best way over the thin smelting film. The product has a stable shape and therefore keeps its highly insulating property unaltered. It ensures the best thermal insulation with limited consumption. Atisol has a minimum carbon content. This allows it to be used also in ULC steel smelting processes.
- **Applications:** Atisol is a quality product. Its base is a highly pure natural matter. A controlled and delicate annealing process from biogenous silica produces a highly insulating coating material for the iron and steel industry. Further constant and continuous processing operations produce spheroidal granules. This eliminates dust completely and allows for an optimal sliding of the insulating product on the steel bath. These parameters maintain a high product quality.
- **Transportation and storage:** The Atisol structure is very porous and granular. Packing in plastic bags and loading in stable cardboard boxes keep the structure unaffected even on long runs. When loading the boxes make sure they do not slide in order to prevent damage to packaging and material.
- **Environment and health:** The product has been atomized and this has allowed to avoid the formation of dust in the air completely and removed the possibility for the operator to inhale dust in compliance with the standards of the EC directive. 91/155
- **Disposal:** Atisol is a natural product. It can simply be disposed of in compliance with the current regulations. Cenisol is disposed of together with the relevant slag after use.





TECHNICAL CARD OF THE PRODUCT

Commercial name: ATISOL

Cod. N.C.: 26219000

Raw material: Silicic acid

Mineralogical composition: Amorphous silicic acid

Application: Insulating material for steel bath coating in BASKET AND LADLE

Colour: Black

Product condition: In hole spheroidal granules, dry

Humidity: < 1%

PHYSICAL PROPERTIES

Specific weight: ca 0.39 ÷ 0.55 t/m³

Sintering point: 1500 °C

Punto di fusione: 1600 °C

Melting point: final loss at CARBITEC test after 15 minutes

(FINAL INSULATING VALUE) 13 Kcal

Insulating power: mm 0	÷ 0.106	= 0.1%
mm 0.106	÷ 0.212	= 2 %
mm 0.212	÷ 0.300	= 8 %
mm 0.300	÷ 0.425	= 26 %
mm > 425		= 64 %

CHEMICAL PROPERTIES

SiO₂: 85 ÷ 90%

Al₂O₃: ~1.5%

NaO + K₂O + Mg + CaO: residues

Total C: 5 ÷ 10%

Calcination loss: ~12%



SAFETY CARD

EC dir 91 /155

Date of issue: January 2006

Commercial name: **ATISOL**

1) IDENTIFICATION OF THE SUBSTANCE/PRODUCT AND OF THE MANUFACTURER

- 1.1 Supplier: IDROBLINS
- 1.2 Address: I-13040 CROVA (Vc) c/so XXI Aprile ,43
- 1.3 Telephone: +39.0161-979012
- 1.4 Telefax: +39.0161-979935
- 1.5 E-mail: info@idroblins.it
- 1.6 Contact number: +39.0161.979012
- 1.7 Emergency phone nr.: +39.335.6236171

2) COMPOSITION/INFORMATION ABOUT THE INGREDIENTS

- 2.1 Chemical description: Refractory inorganic covering powder
- 2.1.2

CAS Nr	Chemical description	Content in %	Danger symbol	Composition
7631-86-9	Amorphous silicic acid	<90	na	na
7631-86-9	Car	5÷10	na	na

3) IDENTIFICATION OF THE RISKS

- 3.1 Risks for health: No specific risks.
- 3.2 Risks for safety: No specific risks.
- 3.3 Risks for the environment: No specific risks.

4) FIRST AID MEASURES

- 4.1 Symptoms and effects: None.
- 4.2 First aid INHALING: No specific measures.
- 4.3 First aid SKIN: Wash the parts that have come in touch with the product.
- 4.4 First aid EYES: Rinse the person's eyes with abundant water.
- 4.5 First aid INGESTION : No specific measures.
- 4.6 Recommendations to the doctor: None.

5) FIRE FIGHTING MEASURES

- 5.1 Suitable fire-fighting materials: No limits
- 5.2 Specific dangers for the products developing in case of a fire: Probable development of CO and CO₂
- 5.3 Specific protection equipment: Not necessary.



6) MEASURES IN CASE OF AN ACCIDENTAL SPILLAGE

- 6.1 Individual precautions: None
- 6.2 Individual precautions: None
- 6.3 Cleaning methods: Bind the product with water and prevent dust from developing

7) HANDLING AND STORAGE

- 7.1 Handling: No limits
- 7.2 Storage: Store in a dry place

8) EXPOSURE CONTROL / INDIVIDUAL PROTECTION

- 8.1 Limit concentration value for the product at work: 10 mg/m³ TVL-TWA
- 8.2 Protection of the respiratory tract: In badly aired places wear the half mask
- 8.3 Hand protection: we recommend you wear common work gloves
- 8.4 Eye protection: we recommend you wear common work goggles
- 8.5 Body protection: we recommend you wear common work clothing

9) PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Physical state: Granular
 - 9.1.1 Colour: Black
 - 9.1.3 Odour: Neuter
- 9.2 Melting point: 1650°C
 - 9.2.2 Boiling point: Na
- 9.3 Flash point: Na
- 9.4 Flammability (solid - gaseous) Not flammable
- 9.5 Ignition temperature: Na
- 9.6 Self-combustion: Na
- 9.7 Danger of explosion: Not explosive
- 9.8 Solubility in water: Not soluble
- 9.9 pH valuea 20°C: Ca 10
- 9.10 Further indications: None

10) STABILITY/REACTIVITY

- 10.1 Stability: Stable
- 10.2 Conditions to avoid: None
- 10.3 Material to avoid: None
- 10.4 Dangerous decomposition products: None

11) TOXICOLOGICAL INFORMATION

- 11.1 Amorphous silicic acid LC50 3160mg/m₃ oral (mice)
- 11.2 Carbonio LC50 440mg/Kg intravenous (mice)





12) ECOLOGICAL INFORMATION

- 12.1 **Mobility:** It sinks in water
- 12.2 **Persistence/Degradability:** Persistence
- 12.3 **Environmental behaviour:** None
- 12.4 **Ecological effects:** None
- 12.5 **Further informaton:** The product that can no longer be used can be disposed of in a dump according to the local regulations in force

13) CONSIDERATIONS ABOUT DISPOSAL

- 13.1 **Product disposal:** In a dumpa C.E.R. nr. 100103
- 13.2 **Packaging material disposal:** In a separate collection dump

14) TRANSPORT INFORMATION

- 14.1 **Land transportation:** None
- 14.2 **River transportation:** None
- 14.3 **Sea transportation:** None
- 14.4 **Air transportation:** None

15) INFORMATION ABOUT THE STANDARDS AND RULES

- 15.1 **EC classification:** Refractory inorganic powder
- 15.2 **EC safety phrases:**
 - S20 Avoid contact while eating
 - S22 Avoid breathing the powder
 - S24 Avoid skin contact
 - S25 Avoid eye contact
 - S26 In case of eye contact rinse
 - S51 Use in well-aired rooms

16) FURTHER INFORMATION

- 16.1 **ISSUED ON** 01/01/2006
- 16.2 **EDITOR** IDROBLINS - CROVA - Vc
- 16.3 **The formulation does not include any "dangerous matters" for which a special label would be required or included in the 27th adaptation of EC directive 67/548 21/08/01**
- 16.4 **Revision**

This product must be stored, handled and used in conformity with a suitable industrial hygiene praxis and with the current laws.

The information given is based on our present state of knowledge and is intended to give instructions about safety norms.