

SSAB MEROX AB  
OXELÖSUND/BORLÄNGE

Utförande datum: 2000-05-30

Version: 1/1999

Productname: **Merox Ferric Oxide**

## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

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Commercial product name:

Chemical name:

Application/use:

**Merox Ferric Oxide**

Raw material in different products.

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

Dangerous components:	CAS-nr	Content %	Classification / R-phrases
Other components:			
Ferric oxide	Fe <sub>2</sub> O <sub>3</sub>	1309-37-1	>99

**PRE-  
CAUTIONARY  
INFORMATION**

**R66**

Traces of other elements, se separate specifications.

### 3. HAZARDS IDENTIFICATION

Inhalation of dust can cause mild irritation. Repeated inhalation of dust in high concentrations during a long period may cause changes to the lungs. High concentration of dust in combination with, silicon, radon, nickel, and benzpyrenes may eventually cause lung fibros and/or lung cancer. Skin contact may cause mild irritation. Dust in eyes may irritate.

### 4. FIRST-AID MEASURES

Inhalation: Fresh air. If needed, rinse nose/mouth with water.

Skin contact: Wash with soap and water. Restore skin moisture with skin cream.

Eye contact: Rinse particles away with water. If particles remain contact medical care.

Ingestion: Drink water.

### 5. FIRE-FIGHTING MEASURES

Non-combustible substance.

## MATERIAL SAFETY DATA SHEET

### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions: In case of heavy dust use tight-fitting protective goggles and air purifying respirator (gas mask) with high-efficiency particulate filter.
- Methods for cleaning up: Use vacuum cleaner to avoid dust release.

### 7. HANDLING AND STORAGE

- Handling: Prevent dust emissions by using self-contained handling equipment and/or satisfactory ventilation or evacuation.
- Storage: In well sealed bags/containers, in a dry place.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Technical equipment: Mechanical exhaust ventilation may be needed.
- Restricted exposure: Actions to prevent dust origin, see 7.
- Exposure limit values: Exposure limit values such as MAK(Maximale Arbeitsplatz-koncentrationen) and TLV(Threshold Limit Values) exists for the substance. See your own country's regulations.

Hygienic limit Sweden:	Iron Oxide (as Fe): CAS nr:[1309-37-1] Respiratory* dust (NGV**): 3,5 mg/m <sup>3</sup>	Dust: Total dust (NGV**): 10 mg/m <sup>3</sup> Respiratory* dust (NGV**): 5 mg/m <sup>3</sup>
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\*When the dust particle is able to enter the smallest part of the lung. \*\*(Level limit value, (Nivågränsvärden) (NGV) according to Swedens "National board of occupational safety and health", (Arbetarskyddsstyrelsens) standard (normer) AFS 1996:2)

- Personal protective equipment: Use air purifying respirator (gas mask) with high-efficiency particulate filter (in Sweden type P2), when the dust concentration is above the Hygienic limit and when needed. Tight-fitting protective goggles and gloves and barrier cream is recommended. Good hygiene, use skin cream.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: Fine powder
- Colour: Red to brown
- Particle size: ≈100% passing 60µm sieve, ≈60% passing 5µm sieve, ≈50% passing 3,5 µm sieve, ≈30% passing 1µm sieve
- Specific weight: ≈5150 kg/m<sup>3</sup>
- Bulk weight: ≈0,6-1,4 ton/m<sup>3</sup>
- Melting point: ≈1565°C

## MATERIAL SAFETY DATA SHEET

### 10. STABILITY AND REACTIVITY

Stability: Stable substance  
Materials and chemical products to be avoided: Can react violently with Aluminium powder, Calciumhypochlorite, Hydrazin or Ethylen oxide.

### 11. TOXICOLOGICAL INFORMATION

#### Moderate health hazard

(As classified in Sweden)

Inhalation: Can irritate respiratory system and cause irritation. Respiratory dust can gather in the lungs and possibly affect the lung function after repeated inhalation during a long period.

Skin contact: Can cause irritation because of drying effect.

Eye contact: Can cause mechanical irritation.

Ingestion: Probably no toxic reaction, as absorption is poor.

### 12. ECOLOGICAL INFORMATION

Not readily biodegradable. Aquatic toxicity: 96 h LC50 > 1000 ppm.  
No information available regarding ecotoxicology. As the product can be seen as pure iron oxide in different forms, it should not be especially toxic to animals or the environment.

### 13. DISPOSAL CONSIDERATIONS

Deposit according to local, regional and national regulations.

### 14. TRANSPORT INFORMATION

No International transport classification. The product is cleared from ADR class 4.2 16(c) "used ferrous oxide", "lightly self combustible". Identification Number 1376, Dangerous Number 40.

### 15. REGULATORY INFORMATION

The Swedish "National board of occupational safety and health" have specified hygienic limits for the substance. See 8.

No classification and labelling according to directive 67/548/EEC and 88/379/EEC.

#### Classification/labelling in Sweden:

Danger class: Moderate health hazard  
Danger symbol: Precautionary information  
Risk phrase: R66 - Repeated exposure may cause skin dryness or cracking  
Protective phrase: S22 - Do not breathe dust

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### 16. OTHER INFORMATION

Dangerous Properties of Industrial Chemicals 5 ed 1979/ N.Irving Sax. Documentation of the Threshold Limit Values and Biological Exposure Indices, 6 ed 1991/ ACGIH. Patty's Industrial Hygiene and Toxicology, 3 ed 1981/ Clayton & Clayton. Registry of toxic Effects of Chemical Substances, okt 1995.