SAFETY DATA SHEET

FERRICON 535 001

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : FERRICON 535 001
Product code : 053336G60

Manufacturer or supplier's details
Company name of supplier : ECKART GmbH
Address : Guentersthal 4
           Hartenstein  91235
Telephone : +499152770
Telefax : +499152777008
Emergency telephone number : CHEMTREC: 800-424-9300
                                CHEMTREC: 1-703-527-3387 (International)
GBK Gefahrgut Buero GmbH, Ingelheim, Germany:
From outside US: (001) 352-323-3500
(First call in English, response in your language is possible)
US & Canada (toll free):1-800-5355-053

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Flammable solids : Category 1
Acute toxicity (Oral) : Category 5
Acute toxicity (Dermal) : Category 5
Eye irritation : Category 2A
Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

GHS label elements
Hazard pictograms

Signal word: Danger

Hazard statements:
H228 Flammable solid.
H303 + H313 May be harmful if swallowed or in contact with skin.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements:

Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P370 + P378 In case of fire: Use for extinction: Special powder for metal fires.
P370 + P378 In case of fire: Use for extinction: Dry sand.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:
2-Propanol
Silica

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>67-63-0</td>
<td>&gt;= 50 - &lt; 70</td>
<td></td>
</tr>
<tr>
<td>Silica</td>
<td>7631-86-9</td>
<td>&gt;= 1 - &lt; 5</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice: Move the victim to fresh air.
Do not leave the victim unattended.
Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.

If inhaled: Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact: Wash off immediately with soap and plenty of water.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact: Immediately flush eye(s) with plenty of water.
Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear.
Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed: None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Dry sand
Special powder against metal fire
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media: Water
Foam
Carbon dioxide (CO2)
ABC powder
High volume water jet

Specific extinguishing methods: Use a water spray to cool fully closed containers.

Special protective equipment for firefighters: Use personal protective equipment.
Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Evacuate personnel to safe areas.
Use personal protective equipment.
Use personal protective equipment.
Avoid dust formation.
Remove all sources of ignition.

Environmental precautions: Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up:
- Use mechanical handling equipment.
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

**SECTION 7. HANDLING AND STORAGE**

**Advice on protection against fire and explosion**:
- Earthing of containers and apparatuses is essential.
- Take measures to prevent the build up of electrostatic charge.
- Use explosion-proof equipment.
- Avoid dust formation.
- Keep away from open flames, hot surfaces and sources of ignition.

**Advice on safe handling**:
- Keep away from heat and sources of ignition.
- Avoid dust formation.
- Ensure adequate ventilation.
- Avoid formation of respirable particles.
- Do not breathe vapours/dust.
- Avoid exposure - obtain special instructions before use.
- Avoid contact with skin and eyes.
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Dispose of rinse water in accordance with local and national regulations.

**Hygiene measures**:
- When using do not eat or drink.
- When using do not smoke.
- Wash hands before breaks and at the end of workday.

**Conditions for safe storage**:
- Store in original container.
- Keep containers tightly closed in a cool, well-ventilated place.
- Keep container closed when not in use.
- Keep away from sources of ignition - No smoking.
No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid: Do not store together with oxidizing and self-igniting products.
Never allow product to get in contact with water during storage.
Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Further information on storage stability: No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>67-63-0</td>
<td>VLE-PPT</td>
<td>200 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VLE-CT</td>
<td>400 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>400 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Silica</td>
<td>7631-86-9</td>
<td>LMPE-PPT (Respirable)</td>
<td>3 mg/m3</td>
<td>MX OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LMPE-PPT (Inhalable)</td>
<td>10 mg/m3</td>
<td>MX OEL</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Samplin g time</th>
<th>Permissible concentratio n</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>67-63-0</td>
<td>Acetone</td>
<td>Urine</td>
<td>End of shift at end of workweek</td>
<td>40 mg/l</td>
<td>MX BEI</td>
</tr>
</tbody>
</table>
personal protective equipment

Respiratory protection : Use suitable breathing protection if workplace concentration requires.

In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection Material : Solvent-resistant gloves (butyl-rubber)

Remarks : Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Recommended preventive skin protection Skin should be washed after contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Long sleeved clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Pasty solid
Colour : silver
## Odour
Odour Threshold: characteristic

## pH
pH: No data available

## Melting point/freezing point
Melting point/freezing point: No data available

## Boiling point/boiling range
Boiling point/boiling range: 82 °C

## Flash point
Flash point: 13 °C

## Evaporation rate
Evaporation rate: No data available

## Flammability (solid, gas)
Flammability (solid, gas): The substance or mixture is a flammable solid with the category 1.

Auto-flammability: not auto-flammable

Upper explosion limit / Upper flammability limit: No data available

Lower explosion limit / Lower flammability limit: No data available

Vapour pressure: No data available

Relative density: No data available

Density: 4.32 g/cm³

Solubility(ies): No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: Not explosive. Vapours may form explosive mixture with air.

### SECTION 10. STABILITY AND REACTIVITY

**Reactivity**
No decomposition if stored and applied as directed.

**Chemical stability**
No decomposition if stored and applied as directed.

**Possibility of hazardous reactions**
Reacts with alkalis, acids, halogenes and oxidizing agents.
Contact with acids and alkalis may release hydrogen.
Mixture reacts slowly with water resulting in evolution of hydrogen.
Vapours may form explosive mixture with air.
No decomposition if stored and applied as directed.

**Conditions to avoid**
Do not allow to dry.
Heat, flames and sparks.

**Incompatible materials**
Acids
SAFETY DATA SHEET
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SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

2-Propanol:
Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Silica:
Acute oral toxicity : LD50 (Rat): 5,000 mg/kg
(Mouse): 15,000 mg/kg
Acute inhalation toxicity : (Rat): 0.139 mg/l
Exposure time: 4 h
Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation
Serious eye damage/eye irritation

Further information

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Silica:
Toxicity to daphnia and other aquatic invertebrates : (Daphnia (water flea)): 7,600 mg/l
Toxicity to algae : (Chlorella pyrenoidosa (algae)): 440 mg/l

Persistence and degradability
No data available
Bioaccumulative potential
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
In accordance with local and national regulations.

Contaminated packaging: Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.
In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
UN/ID No.: UN 1325
Proper shipping name: Flammable solid, organic, n.o.s.
(Iron pigment paste)
Class: 4.1
Packing group: II
Labels: Flammable Solid
Packing instruction (cargo aircraft): 448
Packing instruction (passenger aircraft): 445

IMDG-Code
UN number: UN 1325
Proper shipping name: FLAMMABLE SOLID, ORGANIC, N.O.S.
(Iron pigment paste)
Class: 4.1
Packing group: II
Labels: 4.1
EmS Code: F-A, S-G
Marine pollutant: no
Remarks : IMDG Code segregation group 15 - Powdered metals

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

National Regulations

NOM-002-SCT
UN number : UN 1325
Proper shipping name : FLAMMABLE SOLID, ORGANIC, N.O.S.
(Iron pigment paste)
Class : 4.1
Packing group : II
Labels : 4.1

Special precautions for user
Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills.

The components of this product are reported in the following inventories:
DSL : All components of this product are on the Canadian DSL
TSCA : On TSCA Inventory

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)
MX BEI : Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for workers occupationally exposed to chemical agents
MX OEL : Mexico. Occupational Exposure Limits
NOM-010-STPS-2014 : Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting the Work Environment - Identification, Assessment and Control - Appendix 1 Occupational Exposure Limits
ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
MX OEL / LMPE-PPT : Time weighted average
NOM-010-STPS-2014 / VLE- : Time weighted average limit value
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