SAFETY DATA SHEET
STAY/STEEL LN 35

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: STAY/STEEL LN 35
Product code: 022232BF0

Manufacturer or supplier's details
Company name of supplier: ECKART GmbH
Address: Guentersthal 4
Hartenstein 91235
Telephone: +499152770
Telefax: +499152777008
Emergency telephone: 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
Not a hazardous substance or mixture.

GHS label elements
Not a hazardous substance or mixture.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium</td>
<td>7440-47-3</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Manganese</td>
<td>7439-96-5</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

General advice: Take the victim into fresh air. No hazards which require special first aid measures.

If inhaled: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact: Wash off immediately with soap and plenty of water.

In case of eye contact: Remove contact lenses. 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. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry sand
Special powder against metal fire

Unsuitable extinguishing media: ABC powder
Carbon dioxide (CO2)
Water
Foam

Specific hazards during fire fighting: Contact with water liberates extremely flammable gas (hydrogen).

Specific extinguishing methods: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
- Use personal protective equipment.
- Evacuate personnel to safe areas.
- Avoid dust formation.

Methods and materials for containment and cleaning up:
- Use mechanical handling equipment.
- Do not use a vacuum cleaner.
- Pick up and arrange disposal without creating dust.
- Sweep up and shovel.
- Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion:
- Use explosion-proof equipment.
- During processing, dust may form explosive mixture in air.
- Take measures to prevent the build up of electrostatic charge.
- When transferring from one container to another apply earthing measures and use conductive hose material.
- Normal measures for preventive fire protection.

Advice on safe handling:
- Avoid creating dust.
- Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
- Store away from heat.
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.

Hygiene measures:
- General industrial hygiene practice.

Conditions for safe storage:
- Earthing of containers and apparatuses is essential.
- Reaction with water liberates extremely flammable gas (hydrogen).
- Use explosion-proof equipment.
- Store in original container.
- Keep containers tightly closed in a cool, well-ventilated place.
- Keep away from sources of ignition - No smoking.
- Keep container closed when not in use.
- Electrical installations / working materials must comply with
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.

No materials to be especially mentioned.

Further information on storage stability: Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</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>Chromium</td>
<td>7440-47-3</td>
<td>LMPE-PPT</td>
<td>0.5 mg/m³</td>
<td>MX OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VLE-PPT</td>
<td>0.5 mg/m³ (chromium)</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.5 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.5 mg/m³ (chromium)</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Manganese</td>
<td>7439-96-5</td>
<td>LMPE-PPT</td>
<td>1 mg/m³ (Manganese)</td>
<td>MX OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LMPE-CT</td>
<td>3 mg/m³ (Manganese)</td>
<td>MX OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VLE-PPT</td>
<td>0.2 mg/m³ (Manganese)</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Inhalable fraction)</td>
<td>0.1 mg/m³ (Manganese)</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable fraction)</td>
<td>0.02 mg/m³ (Manganese)</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>7439-98-7</td>
<td>VLE-PPT (Inhalable)</td>
<td>10 mg/m³ (Molybdenum)</td>
<td>NOM-010-STPS-2014</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

STAY/STEEL LN 35

<table>
<thead>
<tr>
<th>VLE-PPT (Respirable fraction)</th>
<th>TWA (Inhalable fraction)</th>
<th>TWA (Respirable fraction)</th>
<th>TWA (Inhalable fraction)</th>
<th>TWA (Respirable fraction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 mg/m3 (Molybdenum)</td>
<td>10 mg/m3 (Molybdenum)</td>
<td>3 mg/m3 (Molybdenum)</td>
<td>10 mg/m3 (Molybdenum)</td>
<td>3 mg/m3 (Molybdenum)</td>
</tr>
</tbody>
</table>

**Personal protective equipment**

Respiratory protection : Use suitable breathing protection if workplace concentration requires. Breathing apparatus with filter. P1 filter

Hand protection

  **Material** : Leather
  **Glove length** : Long sleeve gloves

Remarks : Leather gloves The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.

Eye protection : Face-shield

  **Safety glasses**

Skin and body protection : Anti-static and fire resistant protective clothing. DIN EN 11612; EN 533; EN 1149-1; Anti-static safety shoes

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

  **Appearance** : powder
  **Color** : silver
  **Odor** : odorless
  **Odor Threshold** : No data available
  **pH** : No data available
  **Melting point/range** : 660 °C
Boiling point/boiling range : > 999 °C
Flash point : No data available
Evaporation rate : No data available
Flammability (solid, gas) : The product is not flammable.
Upper explosion limit / Upper flammability limit : No data available
Lower explosion limit / Lower flammability limit : 30 g/m3
Vapor pressure : No data available
Relative density : No data available
Solubility(ies) : No data available
Partition coefficient: n-octanol/water : No data available
Autoignition temperature : No data available
Decomposition temperature : No data available
Viscosity : No data available

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 : Contact with acids and alkalis may release hydrogen. Stable under recommended storage conditions. Dust may form explosive mixture in air.
Conditions to avoid : No data available
Incompatible materials : Acids
Bases
Oxidizing agents
Water

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not classified based on available information.

Ingredients:

Chromium:
Acute oral toxicity : LD50 Oral: > 5,000 mg/kg
Acute inhalation toxicity: LC50: > 5.41 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Manganese:
Acute oral toxicity: LD50 Oral: > 2,000 mg/kg
Acute inhalation toxicity: LC50: 5.14 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Molybdenum:
Acute oral toxicity: LD50 Oral: > 2,000 mg/kg
Acute inhalation toxicity: LC50: ca. 2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitization
Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
Not classified based on available information.
STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Further information

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

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 : In accordance with local and national regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal. In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations
Remarks : Not classified as dangerous in the meaning of transport regulations.

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

Domestic regulation

Special precautions for user
Remarks : Not classified as dangerous in the meaning of transport regulations.
SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

NOM-165-SEMARNAT-2013, Norm establishing a list of substances subject to report for the Registry of Emissions and Pollutant Transfer

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>MPU (kg/year)</th>
<th>Transfer/Release (kg/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium</td>
<td>7440-47-3</td>
<td>5 kg/year</td>
<td>1 kg/year</td>
</tr>
<tr>
<td>Nickel</td>
<td>7440-02-0</td>
<td>5 kg/year</td>
<td>1 kg/year</td>
</tr>
</tbody>
</table>

MPU: Applicable reporting threshold when the substance, pure or in mixture in a composition of more than 1% by weight, is used for industrial activities at facilities that are subject to report or are produced by them

Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills.

The ingredients 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)
- **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
- **MX OEL / LMPE-PPT**: Time weighted average
- **MX OEL / LMPE-CT**: Short term exposure limit
- **NOM-010-STPS-2014 / VLE-PPT**: Time weighted average limit value

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the
Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Revision Date: 03/27/2018

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

MX / Z8