

**SAFETY DATA SHEET (EC 1907/2006)****StarLoy soft**

|               |               |               |                   |
|---------------|---------------|---------------|-------------------|
| Material no.  |               | Version       | <b>2.0 / GB</b>   |
| Specification | <b>156458</b> | Revision date | <b>19.01.2012</b> |
| VA-Nr         |               | Print Date    | <b>20.01.2012</b> |
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**DeguDent**  
A Dentsply Company

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

|                            |   |
|----------------------------|---|
| Trade name                 | StarLoy soft                                    |
| Company                    | DeguDent GmbH<br>Postfach 1364<br>D-63403 Hanau |
| Telephone                  | +49 (0)6181/59-5767                             |
| Telefax                    | +49 (0)6181/59-5879                             |
| Email address              | SDB@degudent.de                                 |
| Emergency telephone number | +49 (0)180 / 23 24-555                          |

Use of the Substance / Preparation For dental use only.

REACH Registration No.: if available listed in Chapter. 3

**2. HAZARDS IDENTIFICATION****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

|   |            |      |
|---|------------|------|
| Respiratory sensitization                             | Category 1 | H334 |
| Skin Sensitisation                                    | Category 1 | H317 |
| Hazardous to the aquatic environment - Chronic Hazard | Category 4 | H413 |

**GHS-Labeling****hazard-defining component(s) (GHS)**

- cobalt

Symbol(s)



Signal word **Danger**

Hazard statement  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 - May cause an allergic skin reaction.  
H413 - May cause long lasting harmful effects to aquatic life.

Precautionary statement P280 - Wear protective gloves/protective clothing/eye protection.

Precautionary statement: Prevention  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P273 - Avoid release to the environment.  
P285 - In case of inadequate ventilation wear respiratory protection.

Precautionary statement: Reaction  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.  
P304 + P341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.  
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
P363 - Wash contaminated clothing before reuse.

**Supplemental hazard / labelling elements (EU):**

May react forming chromium(VI) compounds when processing thermally.

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**Classification as per Directive 67/548/EC or Directive 1999/45/EC**

In accordance with Directive 1999/45/EC, the product does not need to be classified nor labelled.

**Other Hazards**

May react forming chromium(VI) compounds when processing thermally.  
May release metal vapours when melting.

cobalt - vapour is released during processing.  
Limited evidence of a carcinogenic effect.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Information on ingredients / Hazardous components As per EU-CLP Ordinance (EC) No. 1272/2008**

|                    |   |        |           |       |            |      |
|--------------------|---|--------|-----------|-------|------------|------|
| <b>• cobalt</b>    |   |        |           | 54.1% |            |      |
| CAS-No.            | 7440-48-4   | EC-No. | 231-158-0 |       |            |      |
|                    | Respiratory sensitization                             |        |           |       | Category 1 | H334 |
|                    | Skin Sensitisation                                    |        |           |       | Category 1 | H317 |
|                    | Hazardous to the aquatic environment - Chronic Hazard |        |           |       | Category 4 | H413 |
| <b>• chromium</b>  |   |        |           | 20.0% |            |      |
| CAS-No.            | 7440-47-3   | EC-No. | 231-157-5 |       |            |      |
| <b>• tungsten</b>  |   |        |           | 16.4% |            |      |
| CAS-No.            | 7440-33-7   | EC-No. | 231-143-9 |       |            |      |
| <b>• Niobium</b>   |   |        |           | 0.2%  |            |      |
| CAS-No.            | 7440-03-1   | EC-No. | 231-113-5 |       |            |      |
| <b>• iron</b>      |   |        |           | 7.5%  |            |      |
| CAS-No.            | 7439-89-6   | EC-No. | 231-096-4 |       |            |      |
| <b>• Silicium</b>  |   |        |           | 1.5%  |            |      |
| CAS-No.            | 7440-21-3   | EC-No. | 215-609-9 |       |            |      |
| <b>• manganese</b> |   |        |           | 0.3%  |            |      |
| CAS-No.            | 7439-96-5   | EC-No. | 231-105-1 |       |            |      |

**Information on ingredients / Hazardous components as per Directive 67/548/EC or Directive 1999/45/EC**

|                   |           |        |           |       |  |  |
|-------------------|-----------|--------|-----------|-------|--|--|
| <b>• cobalt</b>   |           |        |           | 54.1% |  |  |
| CAS-No.           | 7440-48-4 | EC-No. | 231-158-0 |       |  |  |
|                   | R42/43    |        |           |       |  |  |
|                   | R53       |        |           |       |  |  |
| <b>• chromium</b> |           |        |           | 20.0% |  |  |
| CAS-No.           | 7440-47-3 | EC-No. | 231-157-5 |       |  |  |
| <b>• tungsten</b> |           |        |           | 16.4% |  |  |
| CAS-No.           | 7440-33-7 | EC-No. | 231-143-9 |       |  |  |
| <b>• Niobium</b>  |           |        |           | 0.2%  |  |  |
| CAS-No.           | 7440-03-1 | EC-No. | 231-113-5 |       |  |  |
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|                    |           |        |           |
|--------------------|-----------|--------|-----------|
| • <b>Silicium</b>  |           |        | 1.5%      |
| CAS-No.            | 7440-21-3 | EC-No. | 215-609-9 |
| • <b>manganese</b> |           |        | 0.3%      |
| CAS-No.            | 7439-96-5 | EC-No. | 231-105-1 |

Texts of H phrases, see in Chapter 16  
See chapter 16 for text of risk phrases

#### 4. FIRST AID MEASURES

##### Inhalation

Remove to fresh air.  
If symptoms persist, call a physician.

##### Skin contact

Wash off with soap and water.  
In the case of skin irritation or allergic reactions see a physician.

##### Eye contact

Rinse with plenty of water.  
If eye irritation persists, consult a specialist.

##### Ingestion

Clean mouth with water and drink afterwards plenty of water.  
Consult a physician immediately.

#### 5. FIRE-FIGHTING MEASURES

##### Suitable extinguishing media

special powder against metal fire, quenching powder, dry sand, common salt

##### Unsuitable extinguishing media

water, carbon dioxide (CO<sub>2</sub>)

##### Special hazards arising from the substance or mixture

May be released in case of fire: cobalt oxide.

##### Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

##### Advice for firefighters

Prevent fire extinguishing water from contaminating surface water or the ground water system.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

Avoid dust formation.  
Avoid breathing dust.  
In case of dust being formed, provide for adequate extraction.  
Ensure suitable suction/aeration at the work place and with operational machinery.

##### Environmental precautions

Do not flush into surface water or sanitary sewer system.

##### Methods and material for containment and cleaning up

Use mechanical handling equipment.  
Avoid dust formation.  
Fill into marked, sealable containers.

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**7. HANDLING AND STORAGE****Handling****Precautions for safe handling**

When melting, soldering and grinding:

Local ventilation.

Avoid dust formation.

If occurs dust / vapour: Wear personal protective equipment

Do not breathe Dusts and vapours:.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

|                    |                        |        |   |
|--------------------|------------------------|--------|---|
| <b>• cobalt</b>    |                        |        |   |
| CAS-No.            | 7440-48-4              | EC-No. | 231-158-0                                   |
| Control parameters | 0.1 mg/m <sup>3</sup>  |        | Time Weighted Average (TWA):(EH40 WEL)      |
| <b>• chromium</b>  |                        |        |   |
| CAS-No.            | 7440-47-3              | EC-No. | 231-157-5                                   |
| Control parameters | 0.5 mg/m <sup>3</sup>  |        | Time Weighted Average (TWA):(EH40 OES)      |
| Control parameters | 0.05 mg/m <sup>3</sup> |        | Time Weighted Average (TWA):(EH40 MEL)      |
| Control parameters | 4 mg/m <sup>3</sup>    |        | Time Weighted Average (TWA):(EH40 (UK))     |
| type of exposition | Respirable dust.       |        |   |
| Control parameters | 10 mg/m <sup>3</sup>   |        | Time Weighted Average (TWA):(EH40 (UK))     |
| type of exposition | Total inhalable dust.  |        |   |
| Control parameters | 0.5 mg/m <sup>3</sup>  |        | Time Weighted Average (TWA):(EH40 WEL)      |
| Control parameters | 2 mg/m <sup>3</sup>    |        | Time Weighted Average (TWA):(EU ELV)        |
|                    | Indicative             |        |   |
| <b>• tungsten</b>  |                        |        |   |
| CAS-No.            | 7440-33-7              | EC-No. | 231-143-9                                   |
| Control parameters | 4 mg/m <sup>3</sup>    |        | Time Weighted Average (TWA):(EH40 (UK))     |
| type of exposition | Respirable dust.       |        |   |
| Control parameters | 10 mg/m <sup>3</sup>   |        | Time Weighted Average (TWA):(EH40 (UK))     |
| type of exposition | Total inhalable dust.  |        |   |
| Control parameters | 5 mg/m <sup>3</sup>    |        | Time Weighted Average (TWA):(EH40 WEL)      |
| Control parameters | 10 mg/m <sup>3</sup>   |        | Short Term Exposure Limit (STEL):(EH40 WEL) |
| <b>• Niobium</b>   |                        |        |   |
| CAS-No.            | 7440-03-1              | EC-No. | 231-113-5                                   |
| Control parameters | 4 mg/m <sup>3</sup>    |        | Time Weighted Average (TWA):(EH40 (UK))     |
| type of exposition | Respirable dust.       |        |   |
| Control parameters | 10 mg/m <sup>3</sup>   |        | Time Weighted Average (TWA):(EH40 (UK))     |
| type of exposition | Total inhalable dust.  |        |   |
| <b>• Silicium</b>  |                        |        |   |
| CAS-No.            | 7440-21-3              | EC-No. | 215-609-9                                   |
| Control parameters | 4 mg/m <sup>3</sup>    |        | Time Weighted Average (TWA):(EH40 (UK))     |
| type of exposition | Respirable dust.       |        |   |
| Control parameters | 10 mg/m <sup>3</sup>   |        | Time Weighted Average (TWA):(EH40 (UK))     |
| type of exposition | Total inhalable dust.  |        |   |

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|                    |                      |  |
|--------------------|----------------------|--|
| Control parameters | 10 mg/m <sup>3</sup> | Time Weighted Average (TWA):(EH40 WEL) |
| type of exposition | Inhalable dust.      |  |
| Control parameters | 4 mg/m <sup>3</sup>  | Time Weighted Average (TWA):(EH40 WEL) |
| type of exposition | Respirable dust.     |  |

|                    |                       |        |  |
|--------------------|-----------------------|--------|--|
| <b>• manganese</b> |                       |        |  |
| CAS-No.            | 7439-96-5             | EC-No. | 231-105-1                              |
| Control parameters | 0.5 mg/m <sup>3</sup> |        | Time Weighted Average (TWA):(EH40 WEL) |

**Engineering measures**

cobalt - vapour is released during processing.  
Ensure that there is suitable air extraction / ventilation at the workplace or at the working machines.  
Extractor suction on specific objects.

**Personal protective equipment****Respiratory protection**

When working without/without sufficient suction of objects:  
Respirator with P3 particle filter

**Hand protection**

protective gloves

Glove material butyl-rubber, nitrile rubber, Natural Rubber/Natural latex (NR)

**Eye protection**

Safety glasses with side-shields  
If fumes, dust occurs: basket-shaped glasses

**Skin and body protection**

If cobalt - vapour occurs: Change contaminated clothing.  
Use suitable skin protective agents before handling product. Cleanse and apply cream to skin after work.  
Preventive skin protection recommended.

**Hygiene measures**

If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.  
No eating, drinking, smoking, or snuffing tobacco at work. Wash face and/or hands before break and end of work.  
Do not inhale fumes, dust, vapour.  
If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

|        |           |
|--------|-----------|
| Form   | solid     |
| Colour | white     |
| Odour  | odourless |

**Information on basic physical and chemical properties**

|                     |                       |
|---------------------|-----------------------|
| Melting point/range | 1390 - 1410 °C        |
| Density             | 9.1 g/cm <sup>3</sup> |

**10. STABILITY AND REACTIVITY**

|                        |            |
|------------------------|------------|
| Conditions to avoid    | None known |
| Incompatible materials | None known |

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Hazardous decomposition products    decomposition products if heated above melting point.  
Metallic vapours

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**11. TOXICOLOGICAL INFORMATION**

|                           |   |
|---------------------------|---|
| Acute oral toxicity       | no data available   |
| Acute inhalation toxicity | no data available   |
| Acute dermal toxicity     | no data available   |
| Skin irritation           | no data available   |
| Eye irritation            | no data available   |
| Sensitization             | no data available   |
| Repeated dose toxicity    | no data available   |
| Mutagenicity assessment   | no data available   |
| Carcinogenicity           | No data available   |
| Toxicity to reproduction  | No data available   |
| Human experience          | To date handling this product has not been known to cause any detrimental effects.  |
| Further information       | No dangerous reactions are known to occur with correct handling and storage.<br>Cobalt (dusts and vapours):<br>Clues to possible carcinogenic effects in animal experiments. literature |

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**12. ECOLOGICAL INFORMATION****Further information on ecology**

|                     |   |
|---------------------|---|
| Further Information | Dusts and water soluble alloy types:<br>Prevent penetration into soil, stretches of water and drainage systems. |
|---------------------|---|

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**13. DISPOSAL CONSIDERATIONS****Product**

Disposal according to local authority regulations.

**Uncleaned packaging**

Disposal according to local authority regulations.

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**14. TRANSPORT INFORMATION****Transport/further information**

Not classified as dangerous in the meaning of transport regulations.

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**15. REGULATORY INFORMATION****National legislation**

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**16. OTHER INFORMATION****Risk phrase (R phrase) texts**

- **cobalt**

|        |   |
|--------|---|
| R42/43 | May cause sensitization by inhalation and skin contact.         |
| R53    | May cause long-term adverse effects in the aquatic environment. |

**Texts of the H-phrases**

- **cobalt**

|      |  |
|------|--|
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H317 | May cause an allergic skin reaction.                                       |
| H413 | May cause long lasting harmful effects to aquatic life.                    |

**Further information**

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this 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.

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**DeguDent**  
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|                  |  |
|------------------|--|
| <b>ADR</b>       | European Agreement concerning the International Carriage of Dangerous Goods by Road                                |
| <b>ADN</b>       | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways                    |
| <b>ASTM</b>      | American Society for Testing and Materials   |
| <b>ATP</b>       | Adaptation to Technical Progress   |
| <b>BCF</b>       | Bioconcentration Factor  |
| <b>BetrSichV</b> | German Ordinance on Industrial Safety and Health   |
| <b>c. c.</b>     | closed cup (geschlossenes Gefäß)   |
| <b>CAS</b>       | Chemical Abstract Services   |
| <b>CESIO</b>     | European Committee of Organic Surfactants and their Intermediates  |
| <b>ChemG</b>     | German Chemicals Act   |
| <b>CMR</b>       | Carcinogenic-Mutagenic-toxic for Reproduction  |
| <b>DIN</b>       | German Institute for Standardization   |
| <b>DNEL</b>      | Derived No Effect Level  |
| <b>EINECS</b>    | European Inventory of Existing Commercial Chemical Substances  |
| <b>GefStoffV</b> | German Ordinance on Hazardous Substances   |
| <b>GGVSEB</b>    | German ordinance for road, rail and inland waterway transportation of dangerous goods                              |
| <b>GGVSee</b>    | German ordinance for sea transportation of dangerous goods   |
| <b>GLP</b>       | Good Laboratory Practice.  |
| <b>GMO</b>       | Genetic Modified Organism  |
| <b>IATA DGR</b>  | International Air Transport Association – Dangerous Goods Regulations  |
| <b>ICAO-TI</b>   | International Civil Aviation Organisation - Technical Instructions   |
| <b>IMDG Code</b> | International Maritime Dangerous Goods Code  |
| <b>ISO</b>       | International Organization For Standardization   |
| <b>LOAEL</b>     | Lowest Observed Adverse Effect Level   |
| <b>LOEL</b>      | Lowest Observed Effect Level   |
| <b>NOAEL</b>     | No Observed Adverse Effect Level   |
| <b>NOEC</b>      | No Observed Effect Concentration   |
| <b>NOEL</b>      | No Observed Effect Level   |
| <b>o. c.</b>     | open cup (offenes Gefäß)   |
| <b>OECD</b>      | Organisation for Economic Cooperation and Development  |
| <b>OEL</b>       | Occupational Exposure Limit  |
| <b>PBT</b>       | Persistent, Bioaccumulative, Toxic   |
| <b>PEC</b>       | Predicted Effect Concentration   |
| <b>PNEC</b>      | Predicted No Effect Concentration  |
| <b>RID</b>       | Regulations concerning the International Carriage of Dangerous Goods by Rail                                       |
| <b>TA</b>        | Technical Instructions (German Ordinance)  |
| <b>TPR</b>       | Third Party Representative (Art. 4)  |
| <b>TRGS</b>      | Technical Rules for Hazardous Substances (German Regulations)  |
| <b>VCI</b>       | German "Verband der Chemischen Industrie e. V."  |
| <b>vPvB</b>      | Very Persistent, Very Bioaccumulative  |
| <b>VOC</b>       | Volatile Organic Compounds   |
| <b>VwVwS</b>     | German Administrative Regulation on the Classification of Substances Hazardous to Waters into Water Hazard Classes |
| <b>WGK</b>       | German Water Hazard Class  |
| <b>WHO</b>       | World Health Organization  |