| Product name | STARDUR HE | 3/HS 470 GRAY 5GY 6/1 г а | Code | 15341870 | ШЕ | |
|---------------------------------------|------------|---|-----------------------------|------------|----|--|
| Last revision: | 17.02.2020 | | Page: 1 of 13 | | | |
| 1. PRODUCT AND COMPANY IDENTIFICATION | | | | | | |
| Product name | : | STARDUR HB/HS 470 GRA | Y 5GY 6/1 CON | /IPONENT A | | |
| Code | : | 15341870 | | | | |
| Main recommende | ed uses : | Coating for maintenance se | ector | | | |
| Address | : | Rodovia BR 280 - km 50 CEP 89270-000, Guaramirii | m - SC | | | |
| | | | | | | |
| Telephone | : | +55 47 3276-4000 | | | | |
| Emergency telepho number | one : | 0800 720 8000 | | | | |
| E-mail / site | : | tintas@weg.net www.we | eg.net | | | |

2. HAZARD IDENTIFICATION

| Mixture classification Flammable liquids | : | Category 3 | | | |
|--|---|------------|--|--|--|
| Acute toxicity (Inhalation) | : | Category 5 | | | |
| Acute toxicity (Dermal) | : | Category 5 | | | |
| Skin Corrosion/irritation | : | Category 2 | | | |
| Classification according to NBR 14725-2/2019 | | | | | |

Labelling Elements



Warning phrase : Warning

| | IVIAIERIA | AL SAFETT DATA SHEET - IVIS | 5 | | |
|-----------------|-------------|--|-------------------|----------------------|------|
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| | COMPONENT | A | | | |
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| Hazard phrases | : | H226 Flammable liquid and v H333 May be harmful if inhal H313 May be harmful in cont H315 Causes skin irritation. | ed. | | |
| Caution Phrases | : | | | | |
| | | Prevention: P210 Keep away from heat, and other ignition sources. N | | s, sparks, open flan | nes |
| | | P233 Keep container tightly of | closed. | | |
| | | P240 Ground/bond container | and receivi | ng equipment. | |
| | | Reaction: P303+P361+P353 IF ON Sk all contaminated clothing. Rir | | | tely |
| | | P304+P312 IF INHALED: doctor/physician if you feel u | | OISON CENTER | or |
| | | P312 Call a POISON CENTE | R/ doctor/if | you feel unwell. | |
| | | P362+P364 Take off contam reuse. | inated cloth | ing and wash it bef | ore |
| | | P370+P378 In case of fire extinguish. | : Use as cl | hapter 5 of MSDS | to |
| | | Storage: P403+P235 Store in a well ve | entilated place | ce. Keep cool. | |
| | | Treatmentand disposal of v P501 Dispose of contents/ MSDS. | | is chapter 13 of | the |
| Other hazard | : | When heated above its flas toxic vapors and flames, and to an ignition source. | | | |

3. COMPOSITION AND INFORMATION ABOUT THE INGRENDIENTS

Product type:

: Mixture

Ingrendients that contribute to danger:

| Product name | name CAS No. | | Concentration [%] |
|--------------------|--------------|--|-------------------|
| SOLVENT XYLENE (S) | 1330-20-7 | Flammable liquids , Category 3 Acute toxicity Dermal, Category 4 Acute toxicity Inhalation, Category 4 | >= 20 - < 30 |

Product name STARDUR HB/HS 470 GRAY 5GY 6/1 Code 15341870 COMPONENT A Last revision: 17.02.2020 Page: 3 of 13 Skin Corrosion/irritation , Category 2

| | | Category 2 | |
|--------------------------|----------|--|------------|
| CYCLOHEXANONE SOLVENT | 108-94-1 | Flammable liquids , Category 3 Acute toxicity Inhalation, Category 4 | >= 1 - < 5 |

| | 4. FIRST AID MEASURES | |
|---|---|--|
| Inhalation | Take the victim to fresh air, keeping them rested and w breathing is irregular or has stopped, apply a respiration. Do not give anything orally. Seek m assistance immediately, bringing the product label who possible. | rtificial nedical |
| Contact with the skin | Remove the product with vegetal oil (cooking oil) and wash the skin thoroughly with plenty of water. Do n solvents or thinners. Seek medical attention in case irritation or other symptoms. | ot use |
| Contact with the eyes | Remove contact lenses, if wearing any. Flush the eye running water for at least 15 minutes, holding the e apart. Seek medical assistance immediately, bringin product label with you. | eyelids |
| Ingestion | Do not provoke vomiting. Consult with a doctor immedia | tely. |
| Most important symptoms and effects, both acute and delayed | Headaches, dizziness, fatigue and in extreme cases, l consciousness. | loss of |
| Notes for the doctor | Treat symptomatically. Do not induce vomiting because of aspiration of gastric contents into the lungs. Gastric is recommended when the patient ingests large qua more than 5ml of the substance in its pure form. The potential of the quantity consumed must be evalua relation to the risk of aspiration during gastric la Activated coal in solution could be useful. However, in cases the coal induces vomiting. | lavage ntities, e toxic ated in avage. |

5. FIRE-FIGHTING MEASURES

Extinguishing methods not : Direct water jet.



| | MATERI | IAL SAFETY DATA SHEET - | MSDS | |
|--|------------|---|---|--|
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| | COMPONEN | ТА | | |
| Last revision: | 17.02.2020 | | Page: 4 o | of 13 |
| recommended | | | | |
| Specific dangers | | Flammable liquid and vap heat or ignition source. Ex rupture due to the increas subsequent explosion. Th and spread close to the g source and provoke fire of accumulation of vapours manholes, basement etc. finely divided (spray) may In case of burning of the p compounds. The inhalation damage to health. | posed packagi ed pressure wi round and it can r backspace of n depressions The vapours an form explosive product, it forms | ng to the fire may th risk of a navier than the air n move to the ignition the flames. Avoid the on the ground, nd/or the particles mixtures with the air. s carbon and nitrogen |
| Protective measu fire fighting team | | The personnel involved contained breathing appa protection clothes. | | |
| Specific methods | | Evacuate and isolate the your back. Fight the fire to packaging of the product with safety. Chill sideway closed packaging near th from fire fighting reaches contain this water and elin regulations. | o a secure dista from the fire are s with water in f e fire. Avoid tha drains or water | nce. Remove the ea if this can be made form of fog all the t the resulting water ways. Use dikes to |

6. SPILL / LEAK CONTROL PROCEDURES

Personal precautions, protective equipment and emergency procedures

| For the emergency service staff | : | If specialized clothing is needed to combat the leak/spillage, Section 8 should be consulted. All precautions described in the following section must be followed. |
|---|---|--|
| For staff who are not part of the emergency services | : | No action should be taken that may generate danger to people without adequate training and qualifications.Understand the dangers of leaked/spilled products. Use appropriate personal protective equipment - see section 8. Evacuate surrounding areas. Isolate area and keep onlookers away. Do not touch or walk through spilled material. Eliminate all sources of ignition.Avoid breathing vapor or mist. Provide adequate ventilation if possible. Wear appropriate respiratory mask when ventilation is inadequate.In accordance with characteristics of the location and/or area and in relation to the amount of spilled/leaked product, additional emergency measures may be taken under the supervision of a trained professional. |

| Product name | MATERIAL SAFETY DATA SHEET - MSDS Product name STARDUR HB/HS 470 GRAY 5GY 6/1 Code 15341870 | | | | | |
|-----------------------------|--|---|---|--|------------------|--|
| Last revision: | COMPONENT 17.02.2020 | | Page: 5 c | of 12 | | |
| | 17.02.2020 | | Fage. J | // 13 | | |
| Environmental precautions : | | Prevent the product or the water used in the service reaches waterways, channels, drains, or galleries. In case of significant spill, retain spi lled liquid with inert material such as sand or earth. In | | | | |
| | | approprieate, use absorbent materials such | as rags, ve | ermiculites, etc. | | |
| Methods and mate | erials for conta | ainment and cleaning | | | | |
| Large spills / leał | (s : | Understand the dangers Approaching the site with the this can be done safely. Conf the leak point for later disposa the spills site. Preferably use product. All equipment used be electrically grounded. Soa (sand, vermiculite) placing the later disposal - see chapter 13 | wind from ine the spil al. Remove anti sparkli when hand ak up with same in a | Il in a dike away from local packaging from ng tools to collect the ling the product must an inert dry material | f I I I | |
| Small spills / leaks : | | Stop the leak if this can be do tarp to prevent the spread by tools and explosion-proof equ collect the product. Place the and properly identified contain so removing them from the sp Remove the packaging from the disposal need refer to chapter | wind or rain ipment prop material co hers. Cap th ill site. Avo he spill site | Use antifaiscantes berly grounded to llected in dry, clean he container loosened id formation of dust. | | |
| | | Contain and collect the materi materials and non-combustible vermiculite, calcined diatomite accordance with local regulation | e, such as s e, etc. in a v | sand, earth, | | |

7. HANDLING AND STORAGE

Precautions for safe handling

| Instructions for safe : treatment | Use individual protective equipment. Emergency showers and eye wash basins must be installed in locations of use and storage. |
|--------------------------------------|---|
| Precautions for safe : handling | Use appropriate personal protective equipment - see section 8; The product handling should occur in places with good natural ventilation or with the presence of local exhaust ventilation; The electrical installations must comply with the International Electrical Commission Standards (IEC), ABNT Standards (Brazilian Association of Technical Standards), taking into account the results of the classification area study for the local and/or product instalation. Use anti-sparking tools when handling the product; In transfer operations, metal containers must be used and all containers |

| MATERIAL | SAFFTY | δάτα | SHEET - | |
|------------|--------|------|---------|--|
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| Product name | | /HS 470 GRAY 5GY 6/1 Code 15341870 | | |
|--------------------------------|-------------------------|--|--|--|
| | COMPONENT 17.02.2020 | A Page: 6 of 13 | | |
| Last revision: 1 | 17.02.2020 | Page: 6 or 13 must be properly grounded to avoid sparkling by the accumulation of static energy; Handle and use away from hot surfaces, sparks, open flames, and other sources of ignition. Do not smoke;Do not ingest. Avoid inhalation of vapors or smoke as well as avoid contact with eyes, skin and clothing; Eating and drinking should be prohibited in the area where the material is handled, stored and processed. Workers should wash their hands before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering food areas; After use keep the product in its original packaging, sealed; Empty containers may be hazardous and should be disposed of properly. Do not reuse the packaging;Emergency showers and eye washer should be installed in the use and storage places. Do not handle the product until you have read and understood all safety precautions contained in this document. | | |
| Fire protection | : | Only use in well-ventilated locations, to prevent accumulation of vapors in explosive concentrations.All conductive elements of the system, in contact with the product, must be electrically grounded Keep away from heat and sources of ignition.Tools that do not produce sparks should be used.Do not smoke. | | |
| Storage conditions | | | | |
| Substances to be av | void : | Keep away from oxidising agents, strong acid solutions and strong alkaline solutions. | | |
| Storage conditions | s : | The electrical installation must comply with NEC(National Electrical Code) or IEC (International Electrical Commission) standards and/or those of the ABNT (Brazilian Association of Technical Standards). The floor of the storage area must be impermeable, non-combustible and must have ditches that allow run off into the containment reservoir. Storage tanks must be surrounded by embankments and have drains in case of leakage. | | |
| Appropriate storag conditions | e : | Store the material in covered, dry, well ventilated and identified areasKeep out of direct sunlight.Store in a closed container. | | |
| Inappropriate stora conditions | age : | Exposed to elevated temperatures, sun and rain.Close to oxidizing agents.Close to food.Close to sources of heat and ignition. | | |
| Materials to avoid | : | Do not store with explosive materials, flammableand/or toxic gases, oxidizing, corrosive substances, or materials that may generate spontaneous combustion. | | |
| Secure packaging n | naterials | | | |
| Recommended pac materials | ckaging : | Amber type glass. Metal packaging | | |
| Packaging materia avoided | Is to be : | Certain plastic materials | | |

8. EXPOSURE CONTROL – PERSONAL PROTECTION

The information in this chapter contain general guidelines. Chapter 1 should be consulted for any information on the recommended use of this product in different scenarios of exposure.

| Engineering control measures | Preferably use the product in adequate application cabin. In case it is not possible, provide exhaustion/ventilation enough to keep the concentration of the agents indicated |
|------------------------------|--|
| | in this section under the limits of tolerance (L.T.), |
| | otherwise, use adequate respiratory protection equipment. |
| | The engineering controls should keep the concentrations |
| | of gas/vapour under the limit of LEL - Lower Explosive |
| | Limit (see section 9). Use equipment explosion proof. |

Control parameters

Occupational Exposure Limits

| Name | CAS No. | TLV/TWA | TLV/STEL | TLV/TETO | Source |
|--------------------------|-----------|--|----------|----------|-----------|
| SOLVENT XYLENE (S) | 1330-20-7 | 78 ppm340 mg/m ³ 100 ppm | 150 ppm | | NR15ACGIH |
| CYCLOHEXANONE SOLVENT | 108-94-1 | 25 ppm | | | ACGIH |

*PPM - parts of vapour or gas per million of parts of contaminated air

**MG/m³ - miligrams per cubic meter of air.

| Personal protective equipmer Respiratory protection | | equired In case of the concentrations are above the indicated tolerance limits, the use of appropriated mask is necessary for this goal (half-face mask or full face mask with filter to organic vapors and acid gases). |
|--|---|--|
| Eye protection | : | Use hermetic goggles to protect against liquid splashes. |
| Body and skin protection | : | It is recommended the use of apron barber type to protecting upper limbs, trunk and lower limbs in case of splash. In case of risk of static electricity generation the cloth should be antistatic, includin the apron. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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|-----------------------------------|--------------------------------|-------------------------------|------------------|----------|-------|
| | STARDUR HB/HS 470 GRAY 5GY 6/1 | | Code | 15341870 | шец |
| | COMPONENT 17.02.2020 | A | Page: 8 o | of 13 | |
| Form | : | Liquid | 1 466. 0 0 | | _ |
| | • | | | | |
| State of matter | : | Liquid | | | |
| Color | : | Gray | | | |
| Odour | : | Distinctive | | | |
| Odour limit | : | Not applicable | | | |
| рН | : | Not applicable | | | |
| Melting point | : | Data not available. | | | |
| Boiling point | : | Data not available. | | | |
| Flash Point (Open | cup) : | 28 °C | | | |
| Evaporation rate | : | Data not available. | | | |
| Inflammation point | t : | Method: Data not available. | | | |
| | | | | | |
| Upper explosive li | mit : | | | | |
| | •. | Data not available. | | | |
| Lower explosive li | mit : | Data not available. | | | |
| Vapor pressure | | Data not available. | | | |
| Density | | 1,55 - 1,65 g/cm ³ | | | |
| Density | • | 1,00 - 1,00 g/cm | | | |
| Solubility(ies) | : | Water-insoluble | | | |
| | | | | | |
| N-octano /water pa coefficient | artition : | Data not available. | | | |
| Auto flammability | : | Data not available. | | | |
| Cinematic viscosit | y (25°C) ∶ | 115 - 125 UK (A+B) | | | |
| Vapor density | : | Data not available. | | | |
| | | | | | |
| Decomposition ten | nperature : | | | | |

10. STABILITY AND REACTIVITY

| Reactivity | : | Presents no reactivity at room temperature and under normal conditions of use. |
|---------------------------------------|---|--|
| Chemical stability | : | Stable at room temperature and under normal conditions of use. Unstable at temperatures above the flash point. |
| Possibility of dangerous reactions | : | Presents no reactivity at room temperature and under normal conditions of use. None when the product is stored, applied and processed |

| Product name | STARDUR COMPONI | | /HS 470 GRAY 5GY 6/1 | Code | 15341870 | 014 |
|---------------------------------|--------------------|---|---|-------------------------|--------------|-----|
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| | | | correctly. | | | |
| Need to add add inhibitors | litives and | : | Not necessary. | | | |
| Conditions to av | void | : | Extreme heat and open flam | e. | | |
| Incompatible ma | aterials | : | Do not store with explosive gases, oxidizing, corrosive s generate spontaneous comb Plastic materials soluble in X | substances, pustion. | | |
| Dangerous prod decomposition | lucts of | : | Produces noxious gases s carbon dioxide (CO2) and ni | | | , |

11. TOXICOLOGICAL INFORMATION

Components

| SOLVENT XYLENE (S) | | |
|---|---|--|
| Acute toxicity by oral use | : Test species DL50 Observations | Rat 4.300 mg/kg |
| Acute toxicity by inhalation | : Test species DL50 Observations | Rat 21,7 mg/l4 h |
| Acute toxicity by cutaneous use | : Test species DL50 Observations | Rabbit > 1.700 mg/kg Data not available. |
| Acute toxicity (other methods of administration) | : Test species DL50 LC50 Non-standard unit value | Data not available. |
| Corrosion/irritation of skin | : Category 2 | |
| Serious eye damage/eye irritation | : Data not available. | |
| Respiratory or dermal sensitivity | : Category 1 | |
| Mutageneses | : Data not available. | |
| Carcinogenicity | : Data not available. | |
| Toxic effects for reproduction | : Category 1C | |
| Specific target organ toxicity (STOT) - single exposure | : Data not available. | |

| | MATERI | AL | SAFETY DATA SHEET - MS | DS | | |
|--|------------------------|-----|---|------------------|---------------|-----|
| Product name STARDUR H | | 3/⊦ | IS 470 GRAY 5GY 6/1 | Code | 15341870 | шед |
| Last revision: | COMPONEN 17.02.2020 | ΓA | | Page: 10 | of 13 | |
| Specific targ toxicity (STO exposure | | : | Data not available. | | | _ |
| Aspiration haz | zard | : | Data not available. | | | |
| CYCLOHEXA | NONE SOLVE | EN' | г | | | |
| Acute toxicit use | y by oral | : | Test species DL50 Observations | Rat 1.530 m | ng/kg | |
| Acute toxicit | y by | : | Test species DL50 Observations | Rat 32,1 mg | g/I | |
| Acute toxicit cutaneous us | | : | Test species DL50 Observations | Rabbit 947 mg | /kg | |
| Acute toxicit methods of administratic | | : | Test species DL50 LC50 Non-standard unit value | Data no | ot available. | |
| Corrosion/irr skin | itation of | : | Data not available. | | | |
| Serious eye of irritation | damage/eye | : | Data not available. | | | |
| Respiratory o sensitivity | or dermal | : | Data not available. | | | |
| Mutageneses | 5 | : | Data not available. | | | |
| Carcinogenio | ity | : | Data not available. | | | |
| Toxic effects reproduction | - | : | Data not available. | | | |
| Specific targ toxicity (STO exposure | | : | Data not available. | | | |
| Specific targ toxicity (STO exposure | | : | Data not available. | | | |
| Aspiration haz | zard | : | Data not available. | | | |

12. ECOLOGICAL INFORMATION

Stability in soil

: The product easily infiltrates into the soil

| Product name | STARE | STARDUR HB/HS 470 GRAY 5GY 6/1 COMPONENT A 17.02.2020 | | | 15341870 | Uer |
|-----------------|-------|---|---|-----|------------------------------|-----|
| Last revision: | | | | | Page: 11 of 13 | |
| Other toxicolog | gical | : | Data not available. | | | |
| Ecotoxicity | | : | Contaminates the ground wate Detrimental to the fauna Detrimental to the flora. | ∍r. | | |

13. DIOSPOSAL AND TREATMENT CONSIDERATIONS

Recommended methods for final disposal

| Product | Class I Waste - Dispose of in industrial landfill or a facility authorized for recycling in accordance with federal, stateor local regulations |
|------------------|---|
| Waste | Class I Waste - Dispose of in industrial landfill or a facility authorized for recycling in accordance with federal, stateor local regulations |
| Used packaging : | Clean packaging should be sent for recycling. Packaging with class I waste should be disposed of in industrial landfill or a facility authorized for recycling in accordance with federal, state or local regulations. |

14. TRANSPORTATION INFORMATION

| fLand | | |
|----------------------------------|---|---|
| ONU | : | 1263 |
| Class of risk | : | 3 |
| Risk number | : | 30 |
| Packaging group | : | III |
| Name | | Paint (including coats, lacquers, enamels, colorant, gum- lacquers, varnishes, polishes, liquid fillers and liquid lacquers) |
| Shipping ONU | : | 1263 |
| Class of risk | : | 3 |
| Packaging group | : | III |
| EmS | | F-E |
| MFAG | | 310 |
| Appropriate name for dispatch | | Paint (including coats, lacquers, enamels, colorant, gum- lacquers, varnishes, polishes, liquid fillers and liquid lacquers) |

| | MATERI | AL | . SAFETY DATA SHEET - MS | DS | | |
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| Product name | STARDUR HE | 3/⊦ | IS 470 GRAY 5GY 6/1 | Code | 15341870 | Ш |
| | COMPONENT | ΓA | L | | | |
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| | | | | | | |
| Air transport ONU | | | 1263 | | | |
| | | · | 1205 | | | |
| Class of risk | | : | 3 | | | |
| Packaging g | roup | : | III | | | |
| Appropriate dispatch | name for | | Paint (including coats, lacqu lacquers, varnishes, polishe | | | s) |

15. REGULATORY INFORMATION

This MSDS (Material Safety Data Sheet) was generated according to the criteria of NBR 14725/2014. (Brazilian standard that defines the GHS).

| Specific Regulations for the | Federal Decree No. 2657, July 3rd, 1998. |
|------------------------------|--|
| Chemical Product. | Ordinance No. 229, May 24th, 2011 - Changes to Regulatory Standard No. 26. |
| | ABNT NBR 14725: 2014 - valid from 19/12/2014 - |
| | Amendment 1 (19/11/2014). |
| | Law No. 12305, August 2nd 2010 (Solid Waste National Policy). |
| | Decree No. 7404, December 23rd , 2010. |
| | Resolution ANTT N° 5.232, December 14th 2016. |

16. ADDITIONAL INFORMATION

Acronyms Used:

Legenda:

| CAS | Chemical Abstract Service |
|-------|---|
| VO | Organic Vapors |
| NEC | National Eletrical code/Código Nacional de Eletricidade |
| IEC: | International Eletrical Commision |
| ABNT | Brazilian Association of Technical Standards |
| ACGIH | American Conference of Governmental Industrial Hygienists |

PAUMAR S.A. INDÚSTRIA E COMÉRCIO – GRUPO WEG

| | MATERIAL SAFETY DATA SHEET - I | VI2D2 | |
|---------------|---|-----------------|----------------|
| Product nam | ne STARDUR HB/HS 470 GRAY 5GY 6/1 | Code | 15341870 |
| | COMPONENT A | | |
| Last revision | : 17.02.2020 | Page: 13 | 6 of 13 |
| TLV | Threshold Limit Values | | |
| TLV/TWA | Time Weighted Average | | |
| TLV/STEL | Short Term Exposure Limit | | |
| TLC/C: | Tolerance Limit - Ceiling Value | | |
| EPI: | Individual Protective Equipment | | |
| CA | Approval Certificate | | |
| PPRA | Environmental Risk Prevention Program | | |
| NR | Regulatory Standard | | |
| NFPA | National Fire Protection Agency | | |
| mmHg | Millimeters of mercury - pressure unit | | |
| DL50 | Lethal Dose average | | |
| CL50 | Lethal Concentration average | | |
| ppm | Parts per million | | |
| N.d | Not available | | |
| A+B | Viscosity of the mixture of component A + com | ponent B | |
| | | | |

Important information, but not specifically described in the previous sections: This MSDS was prepared based on current knowledge about the handling of the product under normal conditions of use, according to the application specified on the packaging and recommended usage in Section 1 of this MSDS. Any other use of the product involving its combination with other materials, as well as forms of use different from those indicated, are the user's responsibility. The company advises that the handling of any chemical substance requires prior knowledge of its hazards by the user. In the workplace it is responsibility of the company user of the product to provide training of its employees and contractors about the possible risks arising from exposure to the chemical.

We reserve the right to change the information contained in this document without prior notice, due to the improvement and continuous evolution of the product and technical knowledge.

References

: Data not available.

Vertical lines in the left hand margin indicate changes from the current version