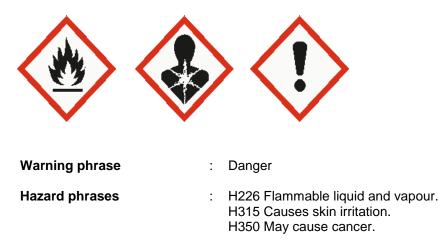
| Product name | STARDUR DF A | 475 GRAY N6,5 COMPONENT | Code | 12241903 |
|-----------------------------|-----------------|---|------------------|--------------|
| Last revision: | 31.08.2017 | | Page: 1 o | of 13 |
| | 1. PROD | UCT AND COMPANY IDENTIFIC | ATION | |
| Product name | : | STARDUR DF 475 GRAY N6,5 | COMPONE | NT A |
| Code | : | 12241903 | | |
| Main recommende | ed uses : | Coating for maintenance sec | tor | |
| Address | : | Rodovia BR 280 - km 50 CEP 89270-000, Guaramirim | - SC | |
| Telephone | : | +55 47 3276-4000 | | |
| Emergency telepho number | one : | 0800 720 8000 | | |
| E-mail / site | : | tintas@weg.net www.weg. | net | |

2. HAZARD IDENTIFICATION

| : | Category 3 |
|---|-------------|
| : | Category 2 |
| : | Category 1B |
| | : |

Classification according to NBR 14725-2/2009

Labelling Elements



| | | | /5 | | | |
|-----------------|------------|---|-------------------|-----------------------|----|--|
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| | А | | | | | |
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| Caution Phrases | : | Prevention: P201 Obtain special instructio | ons before us | Se. | | |
| | | P202 Do not handle until all s and understood. | afety precau | utions have been read | | |
| | | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. | | | | |
| | | P233 Keep container tightly closed. | | | | |
| | | P240 Ground/bond container | and receivin | g equipment. | | |
| | | Reaction: P303+P361+P353 IF ON SK all contaminated clothing. Rins | | | | |
| | | P308+P313 IF exposed or con | ncerned: Ca | ll a doctor. | | |
| | | P362+P364 Take off contami reuse. | nated clothi | ng and wash it before | | |
| | | P370+P378 In case of fire: extinguish. | Use as ch | apter 5 of MSDS to | | |
| | | Storage: P403+P235 Store in a well ve | ntilated plac | e. Keep cool. | | |
| | | Treatmentand disposal of w P501 Dispose of contents/o MSDS. | | s chapter 13 of the | | |
| Other hazard | : | When heated above its flash 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 | CAS No. | Risck classification | Concentration [%] |
|-------------------------|------------|--|-------------------|
| SOLVENT ALKYLBENZENE | 64742-95-6 | Flammable liquids , Category 3 Aspiration hazard , Category 1 Specific target organ toxicity - Single exposure , Category 3 Skin Corrosion/irritation , | >= 0,1 - < 1 |

STARDUR DF 475 GRAY N6,5 COMPONENT Code

Product name



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|---------------------------|---|
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| | Category 3 Germ cell mutagenicity , Category 2 Carcinogenicity , Category 1B Hazardous to the aquatic environment - Acute , Category 2 Acute toxicity Ingestion, Category 5 Specific target organ toxicity - Repeated exposure , Category 2 Aspiration hazard , Category 1 |

4. FIRST AID MEASURES

| Inhalation : | Take the victim to fresh air, keeping them rested and warm. If breathing is irregular or has stopped, apply artificial respiration. Do not give anything orally. Seek medical assistance immediately, bringing the product label whenever possible. |
|---|--|
| Contact with the skin : | Remove the product with vegetal oil (cooking oil) and then wash the skin thoroughly with plenty of water. Do not use solvents or thinners. Seek medical attention in case of any irritation or other symptoms. |
| Contact with the eyes : | Remove contact lenses, if wearing any. Flush the eyes with running water for at least 15 minutes, holding the eyelids apart. Seek medical assistance immediately, bringing the product label with you. |
| Ingestion : | Do not provoke vomiting. Consult with a doctor immediately. |
| Most important symptoms : and effects, both acute and delayed | Headaches, dizziness, fatigue and in extreme cases, loss of consciousness. |
| 2 | Treat symptomatically. Do not induce vomiting because of risk of aspiration of gastric contents into the lungs. Gastric lavage is recommended when the patient ingests large quantities, more than 5ml of the substance in its pure form. The toxic potential of the quantity consumed must be evaluated in relation to the risk of aspiration during gastric lavage. Activated coal in solution could be useful. However, in some cases the coal induces vomiting. |

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| | | AL SAFETY DATA SHEET - IVIS | | |
|---|-----------------|---|--|--|
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| | 51.00.2017 | | 1 age. 4 01 | 15 |
| | | 5. FIRE-FIGHTING MEASURES | | |
| | | | | |
| Suitable extingui methods | ishing : | Water in mist form Carbon dioxide (CO2) Foam alcohol resistent Dry chemical powder | | |
| Extinguishing more the second | ethods not : | Direct water jet. | | |
| Specific dangers | ; : | Flammable liquid and vapour. heat or ignition source. Expos rupture due to the increased p subsequent explosion. The va and spread close to the groun source and provoke fire or bac accumulation of vapours in de manholes, basement etc. The finely divided (spray) may form In case of burning of the produc compounds. The inhalation of damage to health. | ed packagin pressure with pours are ha d and it can ckspace of th pressions of vapours and n explosive r uct, it forms | g to the fire may n risk of a avier than the air move to the ignition he flames. Avoid the n the ground, d/or the particles mixtures with the air. carbon and nitrogen |
| Protective measu fire fighting team | | The personnel involved in contained breathing apparatu protection clothes. | | |
| Specific methods | S : | Evacuate and isolate the area your back. Fight the fire to a s packaging of the product from with safety. Chill sideways wit closed packaging near the fire from fire fighting reaches drain contain this water and elimina regulations. | ecure distant the fire areat h water in fo a. Avoid that hs or waterw | ce. Remove the a if this can be made rm of fog all the the resulting water vays. 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 - |

STARDUR DF 475 GRAY N6,5 COMPONENT

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| | | 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. | | | |
| Environmental p | recautions | Prevent the product or the waterways, channels, drains, or galleries. spi lled liquid with inert material s approprieate, use absorbent materials such etc. | In case of s uch as sand | significant spill, retain d or earth. In | |

Carla

12244002

Methods and materials for containment and cleaning

- Large spills / leaks : Understand the dangers leaked/spilled of products.Approaching the site with the wind from behind.Stop leak if this can be done safely. Prevent from entering holes / depressions in the floor. If this happens to provide ventilation. Confine the spill in a dike away from the leak point for later disposal. Remove local packaging from the spills site. Use anti sparkling tools and explosion-proof equipment to collect the product. All equipment used when handling the product must be electrically grounded. Soak up with an inert dry material (sand, vermiculite) placing the same in a suitable container for later disposal - see chapter 13.
- Small spills / leaks
 Stop the leak if this can be done safely.Cover up spillage in a tarp to prevent the spread by wind or rain. Use antifaiscantes tools and explosion-proof equipment properly grounded to collect the product. Place the material collected in dry, clean and properly identified containers. Cap the container loosened so removing them from the spill site. Avoid formation of dust. Remove the packaging from the spill site. If there is product disposal need refer to chapter 13

Contain and collect the material of the leak with absorbent materials and non-combustible, such as sand, earth, vermiculite, calcined diatomite, etc. in a waste container in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Instructions for safe

: Use individual protective equipment. Emergency showers and



| Product name | STARDUR DF | 475 GRAY N6,5 COMPONENT Code 12241903 |
|-------------------------------|-----------------|---|
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| treatment | | eye wash basins must be installed in locations of use and storage. |
| Precautions for handling | safe : | 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 installation. Use anti-sparking tools when handling the product; In transfer operations, metal containers must be used and all containers 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 condition | ons | |
| Substances to b | e avoid : | Keep away from oxidising agents, strong acid solutions and strong alkaline solutions. |
| Storage conditi | ions : | 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 sto conditions | brage : | Store the material in covered, dry, well ventilated and identified areasKeep out of direct sunlight.Store in a closed container. |
| Inappropriate s conditions | torage : | Exposed to elevated temperatures, sun and rain.Close to oxidizing agents.Close to food.Close to sources of heat and ignition. |

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|-------------------------|-----------------|--|------------------|--------------|----|
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| Materials to avo | id : | Do not store with explosive gases, oxidizing, corrosive s generate spontaneous combi | ubstances, | | |
| Secure packagin | g materials | | | | |
| Recommended materials | packaging : | Amber type glass. Metal packaging | | | |
| Packaging mate avoided | rials 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 | 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 | 64742-95-6 | 50 ppm | | | ACGIH |
| ALKYLBENZENE | | | | | |

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

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

| Personal protective equipment Respiratory protection | required 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). |
|---|---|
| Hand protection : | Use nitrilic gloves associated with the use of the adequate protection cream |

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|-----------------|--------------|--|----|
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| Eye protection | : | Use hermetic goggles to protect against liquid splashes. | |
| Body and skin p | 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

| Form | : | Liquid |
|---|---|---|
| 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 | : | Method: Data not available. |
| Upper explosive limit | : | Data not available. |
| Lower explosive limit | : | Data not available. |
| Vapor pressure | : | Data not available. |
| Density | : | 1,52 - 1,62 g/cm ³ |
| Solubility(ies) | : | Water-insoluble |
| N-octano /water partition coefficient | : | Data not available. |
| Auto flammability | : | Data not available. |
| Cinematic viscosity (25°C) Vapor density | : | 0 - 100 UK (A+B) Data not available. |

10. STABILITY AND REACTIVITY

| Product name | | DF 4 | 475 GRAY N6,5 COMPONENT | Code | 12241903 |
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| Reactivity | | : | Presents no reactivity at roon conditions of use. | n temperatu | re and under normal |
| Chemical stabilit | у | : | Stable at room temperature use. Unstable at temperatures | | |
| Possibility of dar reactions | ngerous | : | Presents no reactivity at roon conditions of use. None when the product is correctly. | | |
| Need to add addi inhibitors | tives and | : | Not necessary. | | |
| Conditions to ave | oid | : | Extreme heat and open flame | | |
| Incompatible mat | terials | : | Do not store with explosive r gases, oxidizing, corrosive su generate spontaneous combu Plastic materials soluble in Xy | ibstances, o stion. | |
| Dangerous produdecomposition | ucts of | : | Produces noxious gases su carbon dioxide (CO2) and nitr | | |

11. TOXICOLOGICAL INFORMATION

Components SOLVENT ALKYLBENZENE

| Acute toxicity by oral use | : | Test species DL50 Observations | Rat 2.908,7 mg/kg |
|--|---|---|--------------------------------|
| Acute toxicity by inhalation | : | Test species DL50 Observations | Rat Data not available. |
| Acute toxicity by cutaneous use | : | Test species DL50 Observations | Rabbit 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 3 | |
| Serious eye damage/eye irritation | : | Data not available. | |
| Respiratory or dermal sensitivity | : | Data not available. | |
| Mutageneses | : | Chemicals considered to induc | e heritable mutations in human |

| Product name | STARDUR DF | 4 | 75 GRAY N6,5 COMPONENT | Code | 12241903 |
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| | | | germ cells | | |
| Carcinogenie | city | : | Presumed to have carcinoge | enic potenti | al for humans. |
| Toxic effects reproduction | | : | Suspected of causing reproc development | luctive toxic | city or human |
| Specific targ toxicity (STC exposure | | : | Passengers effects on orgar alter human function for a sh | • | |
| Specific targ toxicity (STC exposure | - | : | Substance based on evidence animals can probably preser human health on repeated e | nt a potentia | • |

Not classified in terms of toxicity based on the data available.

12. ECOLOGICAL INFORMATION

| Stability in soil | : | The product easily infiltrates into the soil |
|----------------------------------|---|---|
| Other toxicological observations | : | Data not available. |
| Ecotoxicity | : | Contaminates the ground water. Detrimental to the fauna Detrimental to the flora. |

13. DIOSPOSAL AND TREATMENT CONSIDERATIONS

| Recommended methods for final disposal | Recommended | methods | for fi | inal | 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. |

MATERIAL SAFETY DATA SHEET - MSDS STARDUR DF 475 GRAY N6,5 COMPONENT Product name Code 12241903 А Last revision: 31.08.2017 Page: 11 of 13 **14. TRANSPORTATION INFORMATION** Land ONU : 1263 3 **Class of risk** : **Risk number** : 30 Packaging group : 111 Name Tinta Shipping ONU : 1263 **Class of risk** : 3 Packaging group : 111 EmS F-E MFAG 310 Appropriate name for Tinta dispatch Air transport ONU : 1263

15. REGULATORY INFORMATION

: 3

: 111

Tinta

Class of risk

dispatch

Packaging group

Appropriate name for

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

| | Federal Decree No. 2657, July 3rd , 1998. |
|-------------------|--|
| Chemical Product. | Law No. 12305, August 2nd 2010 (Solid Waste National Policy). |
| | Decree No. 7404, December 23rd , 2010. |
| | Ordinance No. 229, May 24th, 2011 - Changes to Regulatory Standard No. 26. |
| | ABNT NBR 14725: 2014. |

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16. ADDITIONAL INFORMATION

Acronyms Used:

Product name

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 |
| 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 + component 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.

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

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