1 - PRODUCT AND COMPANY IDENTIFICATION

Product: AGREGADO "C" P/ POLIDURA

RECOMMENDED USE: Corrosion Protection.

Manufacturer's name: RENNER HERRMANN S.A.
Av. Juscelino K. de Oliveira, 12453 - CIC
81170-300 - Curitiba - Paraná - Brazil
Phone: (+ 55) (41) 3341.3400
Emergency Phone Number: CSR Ç* Renner Solutions Center; (+5541) 3341 3400
www.rennercoatings.com

2 - HAZARD IDENTIFICATION

Chemical product classification: Substance

The ingredients were classified according to ABNT NBR 14725-2.

WORD OF WARNING: Beware

FRASES DE PERIGO:

PRECAUTIONARY PHRASES:
P102 - Keep out of the reach of children.
P270 - Keep away from food, drink and animal feedingstuffs.
P270 - When using do not eat or drink.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P273 - Do not empty into drains.
P501 - This material and its container must be disposed of in a safe way.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P280 - Wear eye and face protection.

EFFECTS OF OVEREXPOSURE:

INGESTION:
Toxicity of a single oral dose is considered low. The accidental ingestion of small quantities related to the handling of the product is not expected to cause any harm. It might be dangerous if paint film or dry paint film is chewed or swallowed.
EYES: In case of prolonged exposure, it may cause severe eye irritation, redness, burning sensation, visual disturbances and itching.
SKIN: Dryness, lesion, irritation, and contact dermatitis.
INHALATION:
Continuous exposure to sanding dust may also lead to respiratory and skin problems.

3 - COMPOSITION / INFORMATION ON INGREDIENTS

PRODUCT TYPE: Mix

Hazardous ingredients:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Concentration Range (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>80.0 - 100.0</td>
</tr>
</tbody>
</table>

CLASSIFICATION SYSTEM:
The ingredients were classified according to Guideline 67/548/EEC.

4 - FIRST AID MEASURES

INHALATION:
If inhaled, move to fresh air. Aid in breathing (mouth-to-mouth respiration), if necessary, and get medical attention.
SKIN CONTACT:
Remove contaminated clothing; wash affected skin with flowing water and soap. If the product adheres to skin and it is difficult to remove it with water, use vaseline, mineral oil or vegetal oil. If symptoms persist.

EYE CONTACT:
Flush eyes with large amounts of water, for at least 15 minutes, maintaining the eyelids open. Get urgent medical attention.

INGESTION:
Do not induce vomiting. If the victim is unconscious, and vomiting occurs involuntarily, turn the victim sideways, and see that he/she rests. Get urgent medical attention. If swallowed large quantity of liquid or solid material, it may be necessary to proceed with gastric washing up. Drink water or milk.

ACTIONS TO BE AVOIDED:
Skin contact.

PROTECTION OF FIRST AID APPOINTED PERSON:
In case of accidents of great proportions, the first aid provider shall have full protective equipment available. Remove contaminated clothing.

INFORMATION FOR PHYSICIANS:
Gastric wash up is necessary, especially in children, when large quantities ingestion.
Gastric decontamination is indicated when dry paint is swallowed.

SYMPTOMATIC TREATMENT:
If possible, contact a Toxicological Center.

5 - FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:
Dry chemical, carbon dioxide or foam. Water spraying may also be used, although not so effective. Besides, water spraying may be used to cool the container.

UNSUITABLE EXTINGUISHING MEDIA:
Water jetting.

SPECIFIC HAZARDS:
In case of fire, water spraying may be used to cool the containers. Keep containers closed when not used.

SPECIAL METHODS:
Cool containers that are close to the fire with water spraying.

FIREFIGHTER PROTECTION:
Wear appropriate individual protective equipment and respirator.

6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:
Non-flammable product. Special care unnecessary, but it is advisable to turn off energized network equipment if it is in contact with the product. Putting people safe. Avoid direct contact with the product.

DUST CONTROL:
Unnecessary as it is viscous.

INHALATION, CONTACT WITH SKIN, EYES AND MUCOUS PREVENTION:
Ventilate the area and avoid contact with skin, eyes and mucous.

ENVIRONMENT PRECAUTIONS:
If large quantity leaks, remove liquid using inert absorbing material, such as sand, vermiculite, etc. Avoid that the product gets in contact with soil, rivers and lakes.

ALARM SYSTEM:
If waters are contaminated, inform governmental local authorities.

METHOD FOR CONTAINMENT AND CLEANING:
DISPOSAL:
Consult a local expert for advice on the disposal of this material. Ensure that disposal is in compliance with local, national.
CONTAINMENT:
Remove contaminated diking material and transfer to an emergency tank. Store product in properly labeled emergency container (labeled) and closed for recycle or disposal.

PREVENTION FOR SECONDARY HAZARDS:
Containers shall not be reused. They must be disposed of or recycled according to local legislations.

7 - HANDLING AND STORAGE

HANDLING:

TECHNICAL MEASURES:
PERSONAL PROTECTION:
Handle the product only in well-ventilated area, and wear proper personal equipment (see item 8). Do not throw nor let the product container to drop. The container must be kept closed when not in use. After using the product, and before ingesting any type of food, smoking or using toilet, wash hands properly.

PRECAUTIONS FOR SAFE HANDLING:
Wear proper personal equipment.

RECOMMENDATION FOR SAFE HANDLING:
Avoid contact with skin, mucous and eyes.
Handle the product only in well-ventilated areas.
Do not reuse container.
Do not smoke, eat or drink in the handling area.

STORAGE

TECHNICAL MEASURES:
Keep containers well closed, protected from intense heat. Do not store near food. Keep children away from the product.

STORAGE CONDITIONS
Proper:
Sheltered, cool, dry and ventilated areas.

Conditions to avoid:
Avoid storing it where there is strainer or any other form of drainage nearby as it may infiltrate into wastewater drainage and / or sewers.

INCOMPATIBLE PRODUCTS AND MATERIALS:
Do not store it near corrosive and/or toxic products, organic peroxides, materials of spontaneous combustion and radioactive materials.

SAFE MATERIALS FOR PACKAGING:
Adequate: Metal containers.
Inadequate: Plastic containers

8 - EXPOSURE CONTROL / PERSONAL PROTECTION

SPECIFIC CONTROLS:
Occupational exposure limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TLV/TWA (mg/m3)</th>
<th>TLV/STEL (ppm)</th>
<th>NR 15 (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td>5mg/m3</td>
<td></td>
<td>ND</td>
</tr>
</tbody>
</table>

ENGINEERING CONTROLS:
The environment in which the product is to be applied should be well ventilated, and keeping door open for air circulation windows. Indoors should be provided with means of exhaust air.

MONITORING RECOMMENDED PROCEDURES:
Labor Ministry regulation standard nº 15, Fundacentro working neatness standards, procedures NIOSH or ACGIH.

PERSONAL PROTECTIVE EQUIPMENT:
RESPIRATORY PROTECTION:
Is not the natural or forced ventilation, wear respiratory mask.
Wear dust-filtering mask to sand the applied paint surface.

PROTECTION FOR HANDS:
Rubber gloves.

EYE PROTECTION:
Safety glasses or chemical goggles.

SKIN AND BODY PROTECTION:
Wear body protection to avoid contact with product.

9 - PHYSICAL - CHEMICAL PROPERTIES

Product:
Appearance: Fluid
Color:
Odor: Characteristic
pH: ND ND
Sólidos en peso (% peso): 100
Specific weight: 2,6300
Solubility: Water insoluble.
Specific temperatures or ranges in which physical changes occur:
Boiling point (760 mmHg): 320ºC
Melting point: not applicable
Flash point: Flash Point: ND
Explosion limits (% volume): Not Available.
Vapour pressure: not applicable
Vapor density (ar=1): 1,16@25ºC

10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY / REACTIVITY:
Stable under normal conditions of storage and use.
See instructions on sections 5 and 7 on fire hazards.

POSSIBILITY OF HAZARDOUS REACTIONS:
There won't be any dangerous reactions if product is stored, applied and processed correctly.

CONDITIONS TO AVOID:
Avoid high temperatures and contact with oxidizing vehicles, heat and ignition sources.

INCOMPATIBLE MATERIALS OR SUBSTANCES:
Oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS:
Combustion releases toxic gases such as CO, CO2 and NOx.

11 - TOXICOLOGICAL INFORMATION

TOXICITY

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>DL50</th>
<th>CL50</th>
<th>Carcinogenicity</th>
<th>Teratogenicity</th>
<th>Mutagenicity</th>
<th>Toxic Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EFFECTS OF EXPOSURE:

INHALATION
Acute: not reported.
Chronic: not reported.

INGESTION
Acute: Irritation of digestive mucosa, nausea and vomit.
Chronic: The possible ingestion, mainly by children, may lead to intoxication.

SKIN IRRITATION
Acute: Moderate irritation.
Chronic: Contact for long period may cause dermatitis and skin dryness.

EYE IRRITATION
Acute: Accidents with splatters may result in serious eye irritation. Acute exposure to large quantities of sanding dust may irritate eye mucosa.
Chronic: There are not any available reports on the toxicity caused by the product.

ADDITIONAL INFORMATION FOR PHYSICIANS
Consult Toxicological Center.

12 - ECOLOGICAL INFORMATION

MOBILITY IN SOIL: All actions shall be taken to work according to local environmental regulations.

BIOACCUMULATION POTENTIAL: Not potentially Bioaccumulative.

ECOTOXICIDAD: Harmful to fauna and flora.

PERSISTENCE AND DEGRADABILITY: It is not completely degradable.

ENVIRONMENT EFFECTS: Water insoluble.

13 - TREATMENT AND DISPOSAL CONSIDERATIONS

RECOMMENDED PRACTICES FOR FINAL DESTINATION
PRODUCT: Co-processing, thermal decomposition or industrial earthwork, according to local regulations. Do not dispose of the material in sewerage systems, rivers, lakes and springs.
WASTE MATERIAL: the residue that will not be used anymore shall be disposed of according to local regulations.
USED CONTAINER: it shall not be used again.

14 - TRANSPORT INFORMATION

National and International Recommendation:

LAND:
UN Number: 1263
Hazard class: 3.0
Hazard number: 30
Packaging group: III
Proper shipping name: PAINT

WATERWAYS:
IMDG/GGVSEA/UN Number: 1263
Hazard class: 3.0
Hazard number: 30
Packaging group: III
Proper shipping name: PAINT

AIR TRANSPORT:
UN Number: 1263
Hazard class: 3.0
Hazard number: 30
Packaging group: III
Proper shipping name: PAINT

15 - REGULATORY INFORMATION
ENVIRONMENTAL HAZARD: In accordance with item 12. Labor Ministry act nº 3214 and its regulatory law nº 15 - amendments 11 and 12 (tolerance limits).
Regulatory law nº 7 - Program of Medical Biological Occupational Health (biological indicators).
IATA (International Aerial Transport Association - 41 ed. (classification of hazardous products for air transportation).
Regulatory law nº 26 - Labor Ministry.
Guideline 67/548/EEC.

16 - OTHER INFORMATION

Bibliographic references:
ABNT NBR 14725-4
ABNT NBR 14725-2
ABNT NBR 14725-3

Abbreviations:
CAS: Chemical Abstracts Service
LC50 - Lethal concentration with 50% mortality
LD50 - Lethal dose with 50% mortality
LCLo - Lowest lethal concentration.
LDLo - Lowest lethal dose
NA: Not available
NA: Not applicable

DEFINITIONS:
TERATOGENIC PRODUCT: In the case of chronic exposure may cause fetal abnormalities or threatened abortions.
MUTAGENIC PRODUCT: In the case of chronic exposure, can cause DNA changes.
PRODUCT CARCINOGENIC: In case of chronic exposure can be carcinogenic.

Note: the information contained herein is based on present experience and knowledge. We accept no responsibility if the information herein are not sufficient nor correct under all circumstances.