

SAFETY DATA SHEET

Chartek 2218 Grey Part A

Section 1. Identification

Chartek 2218 Grey Part A HCA022

: GHS product identifier

: Product code

| Reason : Supplier's details : Emergency telephone number (with hours of operation) |
|--|
| Supplier's details Emergency telephone number (with hours of |
| : Emergency telephone number (with hours of |
| : Emergency telephone number (with hours of |
| number (with hours of |
| number (with hours of |
| operation) |
| : <u>National advisory body/</u> <u>Poison Centre (For use only</u> <u>by licensed medical</u> <u>professionals.)</u> |
| : e-mail address of person responsible for this SDS |
| |
| : Classification of the substance or mixture |
| : Hazard pictograms |
| : Signal word |
| : Hazard statements |
| |
| |

| Collect spillage. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. | | Response |
|--|---|--------------------------------|
| Store in a well-ventilated place. Keep container tightly closed. | : | Storage |
| Dispose of contents and container in accordance with all local, regional, national and international regulations. | : | Disposal |
| Wear appropriate respirator when ventilation is inadequate. | | Supplemental label elements |
| None known. | : | Other hazards which do not |

Section 3. Composition/information on ingredients

Mixture

: Substance/mixture

result in classification

XInternational

| Classification | CAS number | % by weight | Ingredient name |
|-------------------------|------------|-------------|--|
| Skin Irrit. 2, H315 | 25068-38-6 | ≥25 - <50 | reaction product: bisphenol-A-(epichlorhydrin); epoxy resin |
| Eye Irrit. 2A, H319 | | | |
| Skin Sens. 1, H317 | | | |
| Aquatic Chronic 2, H411 | | | |
| Aquatic Chronic 1, H410 | 115-86-6 | ≥1 - <3 | triphenyl phosphate |

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

event of any complaints or symptoms, avoid further exposure. Wash clothing

Section 4. First-aid measures

Description of necessary first aid measures

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower : Eye contact eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. Remove victim to fresh air and keep at rest in a position comfortable for breathing. : Inhalation If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. : Skin contact Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the

Section 2. Hazards identification

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before reuse. Clean shoes thoroughly before reuse.

K.International.

| Section 4. First-aid measures | |
|--|------------------------------|
| Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. | : Ingestion |
| Most important symptoms/effects, acute and delayed | |
| Potential acute health effects | |
| Causes serious eye irritation. | : Eye contact |
| Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. | : Inhalation |
| Causes skin irritation. May cause an allergic skin reaction. | : Skin contact |
| Irritating to mouth, throat and stomach. | : Ingestion |
| Over-exposure signs/symptoms | |
| Adverse symptoms may include the following: pain or irritation watering redness | : Eye contact |
| No specific data. | : Inhalation |
| Adverse symptoms may include the following: irritation redness | : Skin contact |
| No specific data. | : Ingestion |
| Indication of immediate medical attention and special treatment needed, if nece | ssary |
| In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. | : Notes to physician |
| No specific treatment. | : Specific treatments |
| No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear | : Protection of first-aiders |

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

None known.

gloves.

This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

: 10/06/2016

- : Suitable extinguishing media
- : Unsuitable extinguishing media
- : Specific hazards arising from the chemical



Section 5. Fire-fighting measures

| Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides halogenated compounds metal oxide/oxides | : | Hazardous thermal decomposition products |
|---|---|--|
| Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. | : | Special protective actions for fire-fighters |
| Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. | : | Special protective equipment for fire-fighters |
| Section 6. Accidental release measures | | |
| Personal precautions, protective equipment and emergency procedures | | |
| No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. | : | For non-emergency personnel |
| If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". | : | For emergency responders |
| Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage. | : | Environmental precautions |
| Methods and material for containment and cleaning up | | |
| Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. | : | Small spill |
| Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. | : | Large spill |

Section 7. Handling and storage

Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

: Protective measures



Section 7. Handling and storage

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Exposure limits | Ingredient name |
|---|---------------------|
| ACGIH TLV (United States, 3/2015). TWA: 3 mg/m ³ 8 hours. | triphenyl phosphate |

Good general ventilation should be sufficient to control worker exposure to airborne : Appropriate engineering contaminants.

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Wash hands, forearms and face thoroughly after handling chemical products, before : Hygiene measures eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Safety evewear complying with an approved standard should be used when a risk : Eye/face protection assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Use chemical resistant gloves classified under Standard EN 374: Protective gloves against chemicals and micro-organisms. Recommended: Viton® or Nitrile gloves. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/ puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

- **X**International
 - : Advice on general occupational hygiene
 - : Conditions for safe storage, including any incompatibilities

: Environmental exposure controls

controls

- : Hand protection



X.International.

Section 8. Exposure controls/personal protection Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

| Appearance | |
|---|---|
| Solid. | : Physical state |
| Grey. | : Colour |
| Odourless. | : Odour |
| Not available. | : Odour threshold |
| Not available. | : pH |
| Not available. | : Melting point |
| Not available. | : Boiling point |
| Closed cup: 101°C (213.8°F) | : Flash point |
| Not available. | : Evaporation rate |
| Not available. | : Flammability (solid, gas) |
| Not available. | : Lower and upper explosive (flammable) limits |
| Not available. | : Vapour pressure |
| Not available. | : Vapour density |
| 1.51 | : Relative density |
| Insoluble in the following materials: cold water and hot water. | : Solubility |
| Not available. | : Partition coefficient: n- octanol/water |
| Not available. | : Auto-ignition temperature |
| Not available. | : Decomposition temperature |
| Kinematic (room temperature): 999 mm ² /s (999 cSt) | : Viscosity |

Section 10. Stability and reactivity

| No specific test data related to reactivity available for this product or its ingredients. | : Reactivity |
|--|---|
| The product is stable. | : Chemical stability |
| Under normal conditions of storage and use, hazardous reactions will not occur. | : Possibility of hazardous reactions |
| No specific data. | : Conditions to avoid |
| No specific data. | : Incompatible materials |
| Under normal conditions of storage and use, hazardous decomposition products should not be produced. | : Hazardous decomposition products |
| | |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Exposure | Dose | Species | Result | Product/ingredient name |
|----------|-------------|---------|-------------|-------------------------|
| - | >7900 mg/kg | Rabbit | LD50 Dermal | triphenyl phosphate |
| - | 3500 mg/kg | Rat | LD50 Oral | |

Irritation/Corrosion

| Observation | Exposure | Score | Species | Result | Product/ingredient name |
|-------------|---------------------------|-------|---------|--------------------------|--|
| - | 100 milligrams | - | Rabbit | Eyes - Mild irritant | reaction product: bisphenol- A-(epichlorhydrin); epoxy resin |
| - | 24 hours 20 milligrams | - | Rabbit | Eyes - Moderate irritant | |
| - | 24 hours 5 milligrams | - | Rabbit | Eyes - Severe irritant | |
| - | 24 hours 500 microliters | - | Rabbit | Skin - Moderate irritant | |
| - | 24 hours 2 milligrams | - | Rabbit | Skin - Severe irritant | |

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

| Not available. | | rmation on the likely tes of exposure |
|--|--------|--|
| Potential acute health effects | | |
| Causes serious eye irritation. | : Eye | contact |
| Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. | : Inha | alation |
| Causes skin irritation. May cause an allergic skin reaction. | : Skii | n contact |
| Irritating to mouth, throat and stomach. | : Inge | estion |

Symptoms related to the physical, chemical and toxicological characteristics





Section 11. Toxicological information

| Section 11. Toxicological information | |
|---|----------------------------------|
| Adverse symptoms may include the following: pain or irritation watering redness | : Eye contact |
| No specific data. | : Inhalation |
| Adverse symptoms may include the following: irritation redness | : Skin contact |
| No specific data. | : Ingestion |
| Delayed and immediate effects and also chronic effects from short and long ter | <u>rm exposure</u> |
| Short term exposure | |
| Not available. | : Potential immediate effects |
| Not available. | : Potential delayed effects |
| Long term exposure | |
| Not available. | : Potential immediate effects |
| Not available. | : Potential delayed effects |
| Potential chronic health effects | |
| Not available. | |
| Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. | : General |
| No known significant effects or critical hazards. | : Carcinogenicity |

- : Mutagenicity
 - : Teratogenicity
 - : Developmental effects
 - : Fertility effects

Numerical measures of toxicity

No known significant effects or critical hazards.

Acute toxicity estimates

Not available.

Section 12. Ecological information

<u>Toxicity</u>

| Exposure | Species | Result | Product/ingredient name |
|----------|--|----------------------------------|-------------------------|
| 96 hours | Algae - Pseudokirchneriella subcapitata | Acute EC50 2000 μg/l | triphenyl phosphate |
| 96 hours | Fish - Oncorhynchus mykiss - Fingerling | Acute EC50 225 µg/l Fresh water | |
| 48 hours | Daphnia - Daphnia magna | Acute LC50 1000 µg/l Fresh water | |
| 30 days | Fish - Oncorhynchus mykiss - Fingerling | Chronic NOEC 55 µg/l Fresh water | |

Persistence and degradability

X.International.

Section 12. Ecological information

| Biodegradability | Photolysis | Aquatic half-life | Product/ingredient name |
|------------------|------------|-------------------|--|
| Not readily | - | | reaction product: bisphenol- A-(epichlorhydrin); epoxy resin |

Bioaccumulative potential

| Potential | BCF | LogP _{ow} | Product/ingredient name |
|-----------|---------------|--------------------|--|
| low | - | | reaction product: bisphenol- A-(epichlorhydrin); epoxy resin |
| low | 190.546071796 | 4.63 | triphenyl phosphate |

Mobility in soil

Not available.

: Soil/water partition coefficient (Koc)

No known significant effects or critical hazards.

: Other adverse effects

: Disposal methods

Section 13. Disposal considerations

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| ΙΑΤΑ | IMDG | UN | |
|---|--|---|-------------------------------|
| UN3077 | UN3077 | UN3077 | UN number |
| ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, triphenyl phosphate) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, triphenyl phosphate). Marine pollutant (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (reaction product: bisphenol-A- (epichlorhydrin); epoxy resin, triphenyl phosphate) | UN proper shipping name |
| 9 | 9 | 9 | Transport hazard class(es) |
| | 111 | | Packing group |
| | | | |

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XInternational

Section 14. Transport information

| Yes. | Yes. | Yes. | Environmental hazards |
|---------------------|---|---|---------------------------|
| ≤5 kg, provided the | This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. | This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. | Additional information |

: IMDG Code Segregation group

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

: Special precautions for user

: Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

environmental regulations specific for the product

: Safety, health and

Section 15. Regulatory information

No known specific national and/or regional regulations applicable to this product (including its ingredients).

Section 16. Other information

- 4161 - - 41

Not available.

| Justification | Classification |
|---|---|
| Calculation method Calculation method Calculation method Calculation method | Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 |
| History | |
| 10/06/2016 | : Date of printing |
| 10/06/2016 | Date of issue/Date of revision |
| 18/04/2016 | : Date of previous issue |
| 2 | : Version |
| ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification a IATA = International Air Transport Association IBC = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coeffi MARPOL 73/78 = International Convention for the Prev Ships, 1973 as modified by the Protocol of 1978. ("Mar UN = United Nations | icient /ention of Pollution From |
| Not available. | : References |
| Indicates information that has changed from previo | ously issued version. |

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

IMPORTANT NOTE: the information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates.

Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this safety data sheet, then the user uses the product at their own risk.

MANUFACTURER'S DISCLAIMER: the conditions, methods and factors affecting the handling, storage, application, use and disposal of the product are not under the control and knowledge of the manufacturer. Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety laws.

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