1. Manufacturer Details

Product Name: ANCHOR RESIN
Application: Resin based pourable anchor system
Company: Rocbolt Technologies (Pty) Ltd
Address: 42 Steel Rd., Spartan P.O. Box 15, Isando, 1600
Telephone: (011) 970 - 1643
Fax: (011) 970 - 3596

2. Identification of the Substance/Preparation

Name: ANCHOR RESIN (RESIN COMPONENT)
Code: N/A
CAS no: (Xn; Cas no. 100-42-5 < 12.5%)
EC no.: N/A

3. Composition/Information on Ingredients

[Xn] R10][Xn R20][Xi R36/38]
EC Classification: - Xn R10, 20, 36/38 S02, 13, 26, 43A, 46, 51
HAZARDOUS AND/OR OTHER RELEVANT COMPONENTS
STYRENE >12.5%
[CAS #: 100-42-5] [E.C. #: 601-026-00-0]
EEC Labels: XN OEL 420mg OEL 100ppm STOEL 1050mg STOEL 250ppm CL+S
(CL/RL = Controlled/Recommended level 'S' = Skin annotation)

4. Hazards Identification

SAPMA Health Rating: 2-MODERATE - Temporary or minor injury possible even if treatment given
Inhalation: HARMFUL. Excessive exposure to this material must be avoided.
Skin: Highly irritating. Risk of dermatitis. May be absorbed through intact skin.
Eyes: Irritating - may cause damage if not given prompt attention.
Ingestion: Harmful if swallowed. Can affect CNS. Systemic poison.
No carcinogenic, mutagenic or genetic effects established
Medium to long term environmental effects. Contain, collect & remove.

5. First Aid Measures

Inhalation: Move to fresh air. In case of discomfort seek medical attention.
Skin: Drench with water. Remove contaminated clothing. Use a skin cleaner. In severe cases refer to Doctor.
Eyes: Rinse well with water and seek medical advice if discomfort persists.
Ingestion: Wash mouth with plenty of water. Do NOT induce vomiting. Seek medical advice.

6. Fire Fighting Measures

Flammable with toxic fumes. Potential for spontaneous combustion.
Containers can burst in a fire. Can form explosive vapour/air mixture. Static discharge hazard!
Foam. CO2. Dry powder. Fog to cool and control. Do NOT use water jets.
Cool containers in case of fire.

7. Accidental Release Measures - See also Sections 5, 8, 13


8. Handling and Storage

Store separately from any reactive substances - oxidisers in particular.
No open flames. No smoking.
Keep containers cool. Avoid free fall of liquid - use earthing.
For maximum quality store at or below: 20 °C.
9. Exposure Controls/Personal Protection

SAPMA Rating: 2-H-E
2-H-E PPE: Respirator and Eye protection
Inhalation: In case of insufficient ventilation, use suitable respiratory protection.
Skin: AVOID CONTACT. Use impervious gloves, apron and boots.
Eyes: Avoid any form of direct contact. Do not touch eyes with dirty hands or gloves.
Ingestion: Observe the rules of hygiene. Wash before eating, drinking or smoking.
OEL Type: Mix- Mixture - See Section 2 Skin annotation

10. Physical and Chemical Properties

Chemical class: RESIN SOLUTION
Description: Viscous liquid
Smell: Pungent
Boil. Pt (°C): 145°
Flash Point (°C): 32°C

11. Stability and Reactivity

Potential for exothermic reaction
Could generate static - USE EARTHING
Potential for spontaneous combustion
Very unstable with heat &/or water

12. Toxicological Information

No carcinogenic, mutagenic or genetic effects established

13. Ecological Information

Medium to long term environmental effects. Contain, collect & remove.

14. Disposal Information

Use reputable waste contractors - potential for spontaneous combustion. Care with used containers.

15. Transport Information

UN No.: 1866: RESIN SOLUTION
Contains STYRENE
Packing group: III
IMO Class: 3.3
Marine Pollutant Class: 1
EAC: 127
Hazchem: 3[Y]E
Kemler: 33

16. Regulatory Information

EC no.: N/A Contains: STYRENE MONOMER
EC Classification: - Xn R10, 20, 36/38 S02, 13, 26, 43A, 46, 51
R10 - Flammable
R20 - Harmful by inhalation
R36/38 - Irritating to eyes and skin
S2 - Keep out of reach of children. (Retail sales items)
S13 - Keep away from food, drink and animal feeding stuffs
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S43A - In case of fire, use water fog, foam or powder - Do not use water jets!
S46 - If swallowed seek medical advice immediately and show this container or label
S51 - Use only in well ventilated areas

17. Other Information

TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.
IN CASE OF ANY DISCOMFORT ALWAYS SEEK MEDICAL ADVICE.

ROCBOLT TECHNOLOGIES: MINING
Anchor Resin (Resin Component) MATERIAL SAFETY DATA SHEET

+27 11 878 6800 www.rocbolt.com
1. Manufacturer Details

Product Name: ANCHOR RESIN
Application: Resin based pourable anchor system
Company: Rocbolt Technologies (Pty) Ltd
Address: 42 Steel Rd., Spartan
P.O. Box 15, Isando, 1600
Telephone: (011) 970 – 1643
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2. Identification of the Substance/Preparation

Name: ANCHOR RESIN (FILLER COMPONENT)
Code: N/A

Chemical description
(Dibenzoyl peroxide, powder, 75% with water) – Less than 1%
Mixed with other inert fillers/limestones – more than 99%

3. Composition/Information on Ingredients

Composition / information on peroxide
Number % w/w CAS-number Chemical name
1 75.0 000094-36-0 Dibenzoyl peroxide
Annex-1 number EC-number Symbol(s) Risk-phrase(s)
1 617-008-00-0 202-327-6 E Xi R02 R36 R43
Other information
Balance of peroxide component: non-hazardous ingredients
Mixture is less than 1% peroxide powder with more than 99% inert filler.

4. Hazards Identification

Risk of explosion by shock, friction, fire or other sources of ignition. May cause fire.
Irritating to eyes. May cause sensitization by skin contact.

5. First Aid Measures

Symptoms and effects
Irritating to eyes. May cause sensitization by skin contact. Dust may be irritating to the respiratory tract and cause symptoms of bronchitis.

First aid
General
In all cases of doubt, or when symptoms persist, seek medical attention.
Inhalation
Move to fresh air, rest, half upright position, loosen clothing.
Skin
Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Seek medical advice if irritation develops. Launder clothes before reuse.
Eye
Rinse immediately and as long as possible with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
Ingestion
Rinse mouth with water. Do NOT induce vomiting. Call a physician immediately!
Advice to physician
Symptomatic treatment is advised.

6. Fire Fighting Measures

Extinguishing media
Carbon dioxide, dry chemical powder, dry sand, water, foam.
Unsuitable extinguishing media
Halones.
Hazardous decomposition/combustion products
Carbon dioxide, Carbon monoxide, Benzoic acid, Benzene.
Protective equipment
Wear suitable protective clothing. Wear self-contained breathing apparatus.
Other information
Extinguish a small fire with powder or carbon dioxide then apply water to prevent re-ignition. Cool closed containers with water.
Fire and explosion hazard
CAUTION: re-ignition may occur. Decomposition under effect of heating. If involved in a fire, it will support combustion. In case of fire and/or explosion do not breathe fumes.
7. Accidental Release Measures

Personal precautions
Do not breathe dust. Avoid contact with skin and eyes. For personal protection see Section 8.

Environmental precautions
Do not allow to enter drains or water courses.

Methods for cleaning up
Eliminate all sources of ignition, and do not generate flames or sparks. First moisten with water. Sweep up with dustpan and brush off inert material, flushing the remainder with water. Avoid dust generation. Keep contents moist. The waste should NOT be confined.

Other information
CAUTION: re-ignition may occur.

8. Handling and Storage

Handling
Never weigh out in the storage room. When using do not eat, drink or smoke. Do not breathe dust. Handle in well ventilated areas. Eliminate all sources of ignition, and do not generate flames or sparks. Keep away from reducing agents (e.g. amines), acids, alkalis and heavy metal compounds (e.g. accelerators, driers, metal soaps). Keep product and emptied container away from heat and sources of ignition. Confinement must be avoided. Do not allow to dry out. Avoid shock and friction. Avoid contact with skin and eyes.

Storage requirements
Store in accordance with local/national regulations. Keep away from food, drink and animal feeding stuffs. Store in a dry well ventilated place away from sources of heat and direct sunlight. Keep only in the original container.

Storage
For maximum quality store at or below: 20 °C.

Other information
It is recommended to use electrical equipment of temperature group T3. However, auto-ignition can never be excluded. Wash hands thoroughly after handling or contact. Keep working clothing separately and do not take them home.

9. Exposure Controls/Personal Protection

Personal protection
Respiratory
Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment (respirator with Filter P1).

Hand
Wear suitable protective gloves of neoprene or synthetic rubber.

Eye
Wear protective glasses. A face shield is preferred over goggles.

Skin and body
Wear suitable protective clothing.

Other information
Launder clothes before reuse.

Dibenzoyl peroxide
Time Weighted Average (TWA) 5.0 mg/m³

10. Physical and Chemical Properties

Appearance and Odour
Powder (granules) blue
Odour: faint

Boiling point/range
Do not distil (Decomposes)

Melting point/range
Pure BPO 103 °C

Flash point
Not determined

Flammability
Not determined

Explosive properties
Yes

Oxidizing properties
Not applicable

Vapour pressure
Not determined

Density
Not determined

Bulk density
Approx. 630 kg/m³

Solubility in water
Insoluble
Solubility in other solvents
Soluble in aromatic solvents pure phthalates

11. Stability and Reactivity

Stability
SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used in transport.
Microfibrillar Cellulose (FMC) MATERIAL SAFETY DATA SHEET

1. Identifiers

a. Product identifier

b. Other identifiers

2. Composition

3. Hazards identification

4. First-aid measures

5. Fire-fighting measures

6. Accidental release measures

7. Handling and storage

8. Exposure controls/Personal protective equipment

9. Physical and chemical properties

10. Stability and reactivity

11. Toxicological information

12. Ecological information

13. Disposal consideration

14. Transport information

15. Regulatory information

16. Other information

17. Certification

18. Specification

19. Labelling information

20. Safety data sheet status

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**Microfibrillar Cellulose (FMC)**

Microfibrillar Cellulose (FMC) is a material that has been used extensively in various applications due to its unique properties. It is known for its high strength and stiffness, making it a popular choice in industries such as packaging, composites, and specialty papers.

**Hazards Identification**

Microfibrillar Cellulose (FMC) does not pose significant health hazards when handled properly. However, it is advisable to wear protective clothing and gloves when handling the material to avoid skin contact.

**Fire-Fighting Measures**

Microfibrillar Cellulose (FMC) is not a flammable material and does not pose a fire hazard. Typically, it can be extinguished with water or foam.

**Accidental Release Measures**

In the event of an accidental release, Microfibrillar Cellulose (FMC) should be cleaned up using standard procedures for handling similar materials. If inhaled, the person should be moved to fresh air and medical attention should be sought.

**Handling and Storage**

Microfibrillar Cellulose (FMC) should be stored in a cool, dry place away from sources of ignition and incompatible materials. It is recommended to store the material in its original container to maintain quality.

**Exposure Controls/Personal Protective Equipment**

When handling Microfibrillar Cellulose (FMC), it is recommended to wear protective clothing and gloves to prevent any accidental skin contact. Eye protection may also be necessary depending on the specific application.

**Physical and Chemical Properties**

Microfibrillar Cellulose (FMC) is a white, fibrous material with high tensile strength and stiffness. It has a high tensile strength and a low elongation at break.

**Stability and Reactivity**

Microfibrillar Cellulose (FMC) is stable under normal conditions of handling and storage. It does not react with water or air and is not prone to spontaneous combustion.

**Toxicological Information**

Microfibrillar Cellulose (FMC) is not considered a toxic material. It does not pose a significant health hazard and is not considered a respiratory irritant.

**Ecological Information**

Microfibrillar Cellulose (FMC) is a biodegradable material, making it an environmentally friendly option. Its biodegradability makes it a suitable choice for applications requiring biodegradable materials.

**Disposal Consideration**

Microfibrillar Cellulose (FMC) should be disposed of according to local regulations. Proper disposal methods should be followed to ensure environmental safety.

**Transport Information**

Microfibrillar Cellulose (FMC) can be transported under normal conditions without special precautions. It is recommended to consult the Material Safety Data Sheet (MSDS) for specific shipping information.

**Regulatory Information**

Microfibrillar Cellulose (FMC) is not subject to specific regulatory requirements. However, it is advisable to check with local authorities for any specific handling or disposal requirements.

**Other Information**

Microfibrillar Cellulose (FMC) is a widely used material in various applications. It is known for its high tensile strength and stiffness, making it a popular choice in industries such as packaging, composites, and specialty papers.

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Microfibrillar Cellulose (FMC) is a versatile material with numerous applications due to its unique properties. It is important to handle and store the material properly to ensure safety and maintain its quality.
R36. Irritating to eyes.
R43. May cause sensitization by skin contact.
S03/07. Keep container tightly closed in a cool place.
S14B. Keep away from reducing agents (e.g. amines), acids, alkalis and heavy Metal compounds (e.g. accelerators, driers, metal soaps).
S22. Do not breathe dust.
S26. In case of contact with eyes, rinse immediately with plenty of water and seek Medical advice.
S36/37/39. Wear suitable protective clothing, gloves and eye/face protection.

Other information
Substance and/or product listed in Directive 96/82/EC.

17. Other Information

R-phrase information (Dibenzoyl Peroxide)
Chemical name Dibenzoyl peroxide
R(isk) phrase(s): R02 R36 R43 Risk of explosion by shock, friction, fire or other sources of ignition
Irritating to eyes May cause sensitization by skin contact.

18: General

This Anchor Resin MSDS (Resin and filler) was derived combining the root material MSDS’s and it should be noted that the Peroxide component forms a very small part (less than 1%) of the end product.

The data and advice given in this document apply when the product is used for the stated purpose or application. The product is not suitable for any other application, and use of this product for any other application may give rise to risks not covered in this document. If in doubt as to the intended application, or use in other applications is considered, the advice of Rocbolt Technologies (Pty) Ltd. should first be sought. If the product has been purchased for supply to a third party, it is the purchaser’s duty to ensure that any person handling or using the product is provided with the information in this document. It is the responsibility and duty of the employer to inform employees (or others who may be affected) of the hazards described in this document and the precautions that should be taken. This document does not constitute or substitute for the users own assessment of workplace risk as required by other health and safety legislation.

Prepared By: Rocbolt Technologies (Pty) Ltd
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Revision Summary: N/A