## ROCBOLT TECHNOLOGIES: TUNNELING/MINING/GEOTECHNICAL

# **ROCBOLT Anchor Resin**

**ROCBOLT Anchor Resin** is a pourable solution consisting of two components packaged in a plastic bucket. The first component, in a tin, containing resin and the second component, in a bag, being the filler/grout.



The filler is poured into the bucket provided and then the resin is decanted and mixed. The resin mixture is fast setting, 15min - 35min at 25°C

## **Product Performance**

- Set time (Standard)
- Working time
- Packaged weight
- Typical Volume (mixed)
- 15min 35min at 25°C
- ±8min
- 10kg
- ±4.6 liters (0.0046m³)
- Under adverse storage conditions, above 25°C, shelf life is reduced, conversely, while cold storage does no adversely affect the shelf life of ROCBOLT Anchor Resin, colder temperatures may cause slower setting times.
- It is essential that stocks be rotated so that the oldest stock is first out due to the four month shelf life.

# **Quality Control**

The superior quality of ROCBOLT Anchor Resin is assured through a three-part quality control program.

- Ingredient testing
- In-process control tests
- Finished product acceptance tests

#### Storage

- For maximum shelf life, ROCBOLT Anchor Resin should be stored away from direct sunlight in a reasonably cool, well ventilated, dry area
- Storage life is four months at 20°C

# **Handling Precautions**

Physical contact with resin contained in tins may cause mild irritation. Safety glasses or eye shield should always be used when installation is done. In case of contact with eyes, immediately flush with plenty of water for at least 15 minutes and consult a physician. Use of gloves is recommended.

In case of skin contact, flush skin with water. Prolonged contact with skin will cause skin irritation. Irritation should subside when material is removed from skin.

Buckets are filled with inert fillers and resin (active ingredients include low levels of styrene and benzoyl peroxide).



## SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

**Product Name** Anchor Resin

**Synonyms** Pourable resin, pourable resin grout

1.2 Uses and uses advised against

Resin based Anchor System for general ground/floor based applications Application

1.3 Details of the supplier of the product

ROCBOLT Technologies (Pty) Ltd Company **Address** 30 North Reef Road, Gremiston, 1429

Telephone +27 (0)11 878 6800 Fax +27 (0)11 878 6811 Website www.rocbolt.com

1.4 Emergency telephone numbers

Emergency Telephone (o/h) +27 (0)11 878 6800

Emergency Telephone (a/h) +27 (0)76 891 2707 (06:00-22:00 GMT+2)

## **SECTION 2: HAZARDS IDENTIFICATION**

# 2.1 Classification of the substance or mixture

Flammable Liquid: Category 3 Skin Irritation: Category 2 Eve Irritation: Category 2A Toxic to Reproduction: Category 2 Specific Target Organ Toxicity Category 2

(Repeated Exposure):

2.2 GHS Label elements

Signal Word **WARNING** 

**Pictograms** 







# **Hazard Statements**

H226 Flammable liquid and vapour

H315 Causes skin irritation H319 Causes serious eye irritation

H361 Suspected of damaging fertility or the unborn child

May cause damage to organs through prolonged or repeated exposure H373

**Prevention Statements** 

P201 Obtain special instructions before use

P202 Do not handle until all safety precautions have been read and understood Keep away from heat/sparks/open flames/hot surfaces - no smoking P210

P260 Do not breathe dust/fume/gas/mist/vapours/spray

P264 Wash hands thoroughly after handling

P280 Wear protective gloves/protective clothing/eye protection/face protection





**Response Statements** 

P302 + P352 IF ON SKIN: Wash with plenty of soap and water

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing

P308 + P313 IF exposed or concerned: Get medical advice/attention
P321 Specific treatment is advised - see first aid instructions
P362 Take off contaminated clothing and wash before re-use

**Disposal Statements** 

P501 Dispose of contents/container in accordance with relevant regulations

## 2.3 Other hazards

The materials contained in this product may only represent a hazard if the integrity of the packaging is compromised. If the tin is compromised (e.g. punctured), the product may cause an allergic skin reaction, skin irritation and severe eye irritation if in contact with the substance.

The product in this tin is flammable, although the risk of ignition is very low.

# **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1 Product description

A plastic bucket containing a tin with liquid resin, packed together with a bag of inert filler (containing a small percentage BPO powder).

Components	CAS Number	%ww
Polyester Resin	39459-88-6	<15%
Styrene	100-42-5	<10%
Other Material		Up to 100%

# **SECTION 4: FIRST AID MEASURES**

## 4.1 Description of first aid measures

**Eye Contact** If in eyes, hold eyelids apart and flush continuously with running water.

Flush for at least 15 minutes and seek medical attention.

**Inhalation** If inhaled, remove from contaminated area. To protect rescuer, use

self-contained breathing apparatus. Apply artificial respiration if not breathing.

If skin or hair contact occurs, remove contaminated clothing and flush skin and

hair with running water and soap/suitable cleanser. Seek medical attention if

irritation persists or symptoms of exposure develop.

**Ingestion** If swallowed, do not induce vomiting. Wash mouth with water.

Obtain medical attention.

#### 4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

# 4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

**Skin Contact** 



#### **SECTION 5: FIREFIGHTING MEASURES**

## 5.1 Extinguishing media

Dry agent, carbon dioxide or foam. Prevent contamination of drains and waterways.

### 5.2 Special hazards arising from the substance or mixture

Flammable liquid/paste. May evolve toxic gasses (carbon dioxides, styrene, hydrocarbons) when heated to decomposition. Styrene may polymerise readily at elevated temperatures and may violently rupture sealed containers.

#### 5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved when heated. Wear full protective equipment including self-contained breathing apparatus (SCBA) when combatting fire. Use water spray to cool nearby containers and water fog for nearby storage areas.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

## 6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in Section 8 of the SDS. Ventilate area where possible.

## **6.2 Environmental precautions**

Prevent product from entering drains and waterways.

#### 6.3 Methods of cleaning up

Contain spillage, then cover/absorb spill with non-combustible absorbent material (vermiculite, sand or similar), collect and place in suitable containers for disposal. Eliminate all sources of ignition.

## 6.4 Reference to other sections

See Section 8 and 13 for exposure controls and disposal.

## **SECTION 7: HANDLING AND STORAGE**

#### 7.1 Precautions for safe handling

Before use, carefully read the product label and markings. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

#### 7.2 Conditions for safe storage

Store in a cool, dry well ventilated area, removed from heat or ignition sources and foodstuffs. Ensure containers are adequately labeled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation and fire protection systems. Underground storage should be in return airway. For maximum quality, store at temperatres close to or just under 25°C.



# **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1 Controls

Use only in well ventilated areas.

#### 8.2 Personal protection

In case of poor ventilation, wear suitable respiratory equipment. The use of impervious gloves, safety glasses and overalls are recommended.

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

## 9.1 Info on basic physical and chemical properties

Physical State: LIQUID (TIN AND POWDER (BAG)

Colour: SEMI CLEAR LIQUID (TIN) AND BLUE POWDER (BAG)

**Boiling Point:** 145 DEGREES CELSIUS (LIQUID RESIN)

Flash Point: 32 DEGREES CELSIUS (CLOSED UP)(LIQUID RESIN)

**Relative Density:** 2.0 AT 25 DEGREES CELSIUS (MIXTURE)

Water Solubility: INSOLUBLE

# **SECTION 10: STABILITY AND REACTIVITY**

## 10.1 Reactivity

Carefully review all information provided in Sections 10.2 to 10.6.

# 10.2 Chemical stability

Stable under normal recommended conditions of storage and use.

## 10.3 Possibility of hazardous reactions

Polymerises with the evolution of heat. Can enhance combustion of other materials.

# 10.4 Conditions to avoid

Do not mix with other chemicals or store in direct sunlight and extreme temperatures. Keep away from ignition sources and open flames.

# 10.5 Incompatible materials

Oxidising agents, strong acids, strong alkalis and accelerators.

## 10.6 Hazardous decomposition products

May evolve toxic gasses when heated to decomposition.



## **SECTION 11: TOXICOLOGICAL INFORMATION**

#### 11.1 Information on toxicological effects

Acute Toxicity: Due to the product form (enclosed), contact with contents is not anticipated with normal use.

#### 11.2 Information available for the ingredients

Styrene: LD50 oral > 5000mg/kg (rat), skin > 2000mg/kg (rat), inhalation 11.8mg/L/4 hours (rat). Benzoyl Peroxide: LD50 oral 5700mg/kg (mouse), skin > 1000mg/kg (mammal).

**Skin** Avoid skin contact. If the container is damaged, contact may result in

irritation, redness, pain, rash, dermatitis and possible burns. Effects may

be delayed.

**Eye** Avoid eye contact. If the container is damaged or splatter occurs, direct

contact may result in irritation, lacrimation and burns.

**Sensitisation** Exposure to contents may cause skin sensitisation.

**Carcinogenicity** Styrene is classified as possibly carcinogenic to humans.

**Reproductive Toxicity** Styrene is suspected of damaging fertility or the unborn child.

**Aspiration** Not classified as causing aspiration.

STOT - Single Exposure Over exposure may result in irritatiom of the nose and throat, coughing,

nausea, vomiting, dizziness and breathing difficulties.

**STOT - Repeated Exposure** Due to product encapsulation, the potential for exposure to the

contents is reduced. May cause damage to organs (nasal epithelial and ear) through prolonged or repeated exposure to styrene if inhaled.

Mutagenicity Insufficient data available to classify as a mutagen.

# **SECTION 12: ECOLOGICAL INFORMATION**

# 12.1 Toxicity

Harmful to aquatic organisms, avoid contaminating waterways.

**Styrene** LC50: 4.02 mg/l, Exposure time: 96h, Species: Pimephales promelas

(Fathead Minnow), flow-through test.

EC50: 4.7 mg/l, Exposure time: 48h, Species: Daphnia magna (Water

Flea), flow-through test.

EC50: 4.9 mg/l, Exposure time: 72h, Species: Selenastrum

capricornutum (Algae).



#### **SECTION 13: DISPOSAL CONSIDERATIONS**

#### 13.1 Waste treatment methods

Waste Disposal Dispose of in compliance of national legislation and local bylaws.

Use of a registered waste disposal company is advised.

#### **SECTION 14: TRANSPORT INFORMATION**

No special transport arrangements are required.

### **SECTION 15: REGULATORY INFORMATION**

15.1 Safety, health and environmental regulations/legislations specific for the substance or mixture

**EC Directives** Dangerous substances directive 67/548/EEC.

Dangerous preparations directive 88/379/EEC.

**Statutory Instruments** OHS Act No 85 of 1993 and Regulations.

Mine Health and Safety Act No 29 of 1996 and Regulations. Hazardous Substances Act, 1973 (Act No. 107 of 1998).

SANS 10234:2008 Globally Harmonised System of Classification

and Labelling of Chemicals (GHS).

# **SECTION 16: OTHER INFORMATION**

## Additional Information

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.

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