

**MATERIAL SAFETY DATA SHEET****BELCLENE 500****1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME BELCLENE 500
CHEMICAL NAME Phosphinocarboxylic acid
PRODUCT NO. 100193, 100195
PRODUCT USE Scale inhibitor
SUPPLIER BWA Water Additives US LLC
1979 Lakeside Parkway
Suite 925, Tucker, GA30084.
T: (800) 600-4523 .
(Technical/commercial enquiries)
E: MSDS@wateradditives.com
EMERGENCY TELEPHONE Chemtrec Phone: 1-800-424-9300
IDENTIFICATION No. 3265

2 HAZARDS IDENTIFICATION**POTENTIAL HEALTH EFFECTS****INHALATION**

No specific health warnings noted.

INGESTION

May cause discomfort if swallowed. May cause stomach pain or vomiting.

SKIN CONTACT

Non Irritant

Not a Skin Sensitiser

EYE CONTACT

Non irritant

3 COMPOSITION/INFORMATION ON INGREDIENTS

| Name | EC No. | CAS-No. | Weight |
|--------------------------------------|--------|------------|--------|
| PHOSPHINOCARBOXYLIC ACID HOMOPOLYMER | | 71050-62-9 | 30-60% |

COMPOSITION COMMENTS

Aqueous solution of phosphinocarboxylic acid

4 FIRST-AID MEASURES**INHALATION**

Provide fresh air, warmth and rest, preferably in a comfortable upright sitting position. Get medical attention if any discomfort continues.

INGESTION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Rinse mouth thoroughly. Get medical attention.

SKIN CONTACT

Immediately remove contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

EYE CONTACT

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Contact physician if irritation persists.

BELCLEN 500

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Use: Water spray, fog or mist. Foam, carbon dioxide or dry powder.

SPECIAL FIRE FIGHTING PROCEDURES

Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Keep run-off water out of sewers and water sources. Dike for water control.

UNUSUAL FIRE & EXPLOSION HAZARDS

No unusual fire or explosion hazards noted.

PROTECTIVE MEASURES IN FIRE

Leave danger zone immediately. Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Follow precautions for safe handling described in this safety data sheet. For personal protection, see section 8.

ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment. To prevent release, place container with damaged side up.

SPILL CLEAN UP METHODS

Should be prevented from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Collect and reclaim or dispose in sealed containers in licensed waste. Containers with collected spillage must be properly labeled with correct contents and hazard symbol.

7 HANDLING AND STORAGE

HANDLING

Avoid spilling, skin and eye contact.

STORAGE

Store separated from: Alkalis. Reducing Agents. Do NOT use container made of: Carbon steel. Keep containers tightly closed. Keep separate from food, feedstuffs, fertilizers and other sensitive material. Protect from light, including direct sunrays.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT



ENGINEERING MEASURES

Provide sufficient ventilation during operations which cause vapor formation.

RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

HAND PROTECTION

Selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances.

Gloves should be replaced immediately if signs of degradation are observed.

It has been found that gloves made from rubber, neoprene or PVC provide short-term splash protection.

EYE PROTECTION

Wear approved safety goggles.

OTHER PROTECTION

Wear appropriate clothing to prevent repeated or prolonged skin contact.

HYGIENE MEASURES

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

BELCLENÉ 500**9 PHYSICAL AND CHEMICAL PROPERTIES**

| | |
|--|--------------------------|
| APPEARANCE | Liquid |
| COLOR | Colorless to pale yellow |
| ODOR | Slight |
| SOLUBILITY | Miscible with water. |
| BOILING POINT (°C) | 101 - 103 |
| RELATIVE DENSITY | 1.16 - 1.18 @ 20 °C |
| pH-VALUE, CONC. | 2-3 |
| SOLUTION | |
| VISCOSITY | 5 - 15 cSt @ 25 °C |
| PARTITION COEFFICIENT (N-Octanol/Water) | <0 |

10 STABILITY AND REACTIVITY**STABILITY**

Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID

Reacts with alkalis and generates heat.

MATERIALS TO AVOID

Strong alkalis.

11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50 > 10000 mg/kg (oral rat)

INHALATION

No specific health warnings noted.

INGESTION

May cause discomfort if swallowed. May cause stomach pain or vomiting.

SKIN CONTACT

Non Irritant

Not a Skin Sensitiser

EYE CONTACT

Non irritant

12 ECOLOGICAL INFORMATION

LC 50, 96 hrs, Fish mg/l >100

EC 50, 48 hrs, Daphnia, mg/l >1000

IC 50, 72 hrs, Algae, mg/l <100

DEGRADABILITY

Not inherently biodegradable

13 DISPOSAL CONSIDERATIONS**WASTE MANAGEMENT**

When handling waste, consideration should be made to the safety precautions applying to handling of the product.

DISPOSAL METHODS

Absorb in vermiculite or dry sand and dispose of at a licenced hazardous waste collection point.

Liquid material should be incinerated. Material absorbed onto sand or earth should be disposed of as solid waste in accordance with local regulations. Empty packaging may contain product residues and due consideration should be given prior to disposal.

14 TRANSPORT INFORMATION

BELCLENE 500

| | |
|---------------------------------|---|
| DOT PROPER SHIPPING NAME | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (Contains phosphinocarboxylic acid.) |
| TDG SHIPPING NAME | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (Contains phosphinocarboxylic acid.) |
| IDENTIFICATION No. | 3265 |
| UN NO. SEA | 3265 |
| IMDG CLASS | 8 |
| IMDG PACK GR. | III |
| EMS | F-S, A-B |
| MARINE POLLUTANT | No. |
| UN NO. AIR | 3265 |
| AIR CLASS | 8 |
| AIR PACK GR. | III |

15 REGULATORY INFORMATION**INVENTORIES**

| COMPONENT | CAN | US | EU | AUS | JAP | KOR | CHN | PHLP |
|--------------------------------------|-----|------|--------|------|------|------|------|------|
| PHOSPHINOCARBOXYLIC ACID HOMOPOLYMER | DSL | Yes. | EINECS | Yes. | Yes. | Yes. | Yes. | Yes. |

| COMPONENT | TSCA 12(b) Export Notification |
|--------------------------------------|--------------------------------|
| PHOSPHINOCARBOXYLIC ACID HOMOPOLYMER | N/A. |

US FEDERAL REGULATIONS

| COMPONENT | SARA 302-TPC | CERCLA-RQ | SARA 313 |
|--------------------------------------|--------------|-----------|----------|
| PHOSPHINOCARBOXYLIC ACID HOMOPOLYMER | No | No | N/A. |

CLEAN AIR ACT

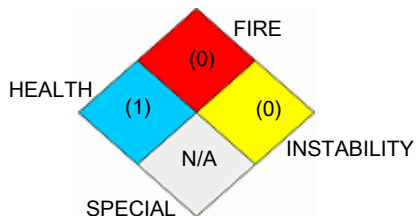
| COMPONENT | CAA Accidental Release Prevention |
|--------------------------------------|-----------------------------------|
| PHOSPHINOCARBOXYLIC ACID HOMOPOLYMER | No |

US STATE REGULATIONS

| COMPONENT | CAS | CA | FL | MA | MN | NJ | PA | RI |
|--------------------------------------|------------|----|----|----|----|----|----|----|
| PHOSPHINOCARBOXYLIC ACID HOMOPOLYMER | 71050-62-9 | No | | | | | | |

16 OTHER INFORMATION**HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)**

| | |
|---------------------|---|
| HEALTH | 1 |
| FLAMMABILITY | 0 |
| PHYSICAL | 0 |
| PERSONAL PROTECTION | B |

BELCLENE 500**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)****GENERAL INFORMATION**

Belclene 500 is classified as non-irritant when tested in skin and eye irritation tests (see section 11). When tested for its effect on mild steel, a corrosion rate of >6.25 mm/year at 55 C was obtained - this results in the classification for conveyance of class 8 corrosive (packaging group 3).

For advice on chemical emergencies, spillages, fires or first aid in relation to this product please contact the relevant emergency number below :

EU/English Speakers - +44 (0) 1235 239 670 (NCEC)

Arabic Speakers - +44 (0) 1235 239 671

Asia/Pacific countries - +65 3158 1074

For emergencies within China - +86 10 5100 3039

REVISION COMMENTS

New MSDS

ISSUED BY

J.B.

REVISION DATE 14/01/2011

VERSION No. 1

SDS NO. 11315

SAFETY DATA SHEET STATUS

Approved.

DISCLAIMER

For safety reasons it is IMPERATIVE that customers:-

1. Ensure that all those within their control who use the products are supplied with all relevant information contained within the Safety Data Sheet and Technical Bulletin concerning the applications for which the product is designed and any instructions and warnings contained therein.

2. Consult BWA Water Additives before using or supplying the product for any other applications. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.