

# DANTOBROM<sup>®</sup> RW

Dantobrom RW is a halogenated dialkylhydantoin that functions as an effective microbiocide through the controlled release of active bromine and chlorine. Dantobrom RW is a fungicide, bactericide, algacide, and molluscicide for recirculating and once-through fresh and salt water systems. It is also a slimicide for the manufacture of food and non-food grades of paper and paperboard. Dantobrom RW is also recommended to control bacterial, fungal, and algal slimes in evaporative condensers, recirculating cooling tower systems, influent systems, industrial wet scrubber systems, sewage systems, auxiliary water systems, photo processing wash water, air washers, and brewery pasteurizers.

Dantobrom RW is an effective component of a total program to control biofilm in industrial water systems. Published studies show that the combination of free and combined halogen provided by Dantobrom RW is more efficacious towards biofilm than either free chlorine or free bromine alone. The increased stability of the combined halogen in systems with high halogen demand allows greater diffusion into the biofilm without losses due to unwanted side reactions.

## Chemical Composition

1-bromo-3-chloro-5,5-dimethylhydantoin,	60.0%
1,3-dichloro-5, 5-dimethylhydantoin	27.4%
1,3-dichloro-5-ethyl-5-methylhydantoin	10.6%
Inert Ingredients	2.0%

## Typical Physical Properties

Total Available Halogen as Chlorine, %Cl <sub>2</sub>	62
Available Chlorine, %Cl <sub>2</sub>	44
Available Bromine, %Br <sub>2</sub>	40
Insolubles, %	1.5
Volatiles, %	0.5
Melting Range, powder, (°C)	120 – 148
Solubility in Water (g/100g at 25°C)	0.54
pH, (1% Slurry at 25°C)	3.6
Decomposition Temperature (°C)	180
Color	Off White
CAS Numbers	126-06-7      118-52-5      89415-87-2
EPA Registration Number	Briquette      6836-115
	Granule      6836-237

The seller makes no warranty, expressed or implied, concerning the accuracy of any results to be obtained from the use of this information and no warranty is expressed or implied concerning the use of these products other than indicated within. The buyer assumes all risks of use and/or handling. No statement is intended or should be construed as a recommendation to infringe any patent..  
Revised 10-21-08 Supersedes 10-18-05

## Briquette

Wt. (g)	12
Density (g/cm <sup>3</sup> )	1.6
Bulk Density (kg/m <sup>3</sup> )	960
Nominal Dimensions (cm)	4.2 x 2.2 x 1.3
Moisture Retention (%) (6 hour soak in water at 25°C)	7

## Granule

Bulk Density (kg/m <sup>3</sup> )	1040
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## Toxicology

Acute Oral LD <sub>50</sub> – Rats	500 mg/kg (male), 758 mg/kg (female)
Primary Eye Irritation – Rabbits	Within 24 hours, both washed and unwashed eyes were destroyed.
Primary Dermal Irritation – Rabbits	Corrosive; tissue destruction down to musculature. Edema in surrounding tissue.

See the Material Safety Data Sheet (MSDS) for a complete description.

## Environmental Fate – Biodegradability

Dantobrom RW ultimately hydrolyzes to dimethylhydantoin (DMH) and ethylmethyl hydantoin (MEH). Performance results from an actual operating sewage waste treatment plant demonstrate that both DMH and MEH are biodegradable compounds.

### Biodegradation of DMH and MEH in an Operating Sewage Treatment Plant

#### Analysis (ppm)\*

<u>Time</u>	<u>Total Flow thru Plant (MM Gals.)</u>	<u>Primary Settler Effluent</u>		<u>Final Discharge Before Chlorination</u>	
		<u>DMH</u>	<u>MEH</u>	<u>DMH</u>	<u>MEH</u>
2 P.M.	2.48	15	<1	<1	<1
5 P.M.	2.16	36	3	<1	<1
8 P.M.	1.87	45	4	<1	<1

\*The detection limit for DMH and MEH is 1 ppm

In addition, DMH is classified as “ultimately biodegradable” according to the Modified SCAS Method adopted by US-TSCA guidelines and OECD’s Expert Group on Degradation/Accumulation.

## **Compatibility**

Dantobrom RW is an active halogen compound that remains stable when stored in a cool dry area. Similar to other halogen donors, Dantobrom RW will decompose if mixed with reactable, oxidizable substances. Avoid mixing Dantobrom RW with lubricating oils, strong acids, strong alkalis and reducing agents.

## **Safety and Health Information – First Aid**

**Eyes:** Flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. If physician not available, flush for additional 15 minutes. Get immediate medical attention.

**Skin:** Immediately wipe away excess material with a dry cloth while removing contaminated clothing and shoes. Under a safety shower, wash affected areas thoroughly with large amounts of water, and soap if available, for at least 15 minutes. Get immediate medical attention. Discard or decontaminate clothing and shoes.

**Ingestion:** Immediately give several glasses of water, DO NOT induce vomiting. If vomiting occurs, give fluids again. Have physician determine if patient's condition allows induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

**Inhalation:** Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. Get immediate medical attention. If the victim is having trouble breathing, transport to medical care and, if available, give supplemental oxygen.

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

## **Containers and Labeling**

Dantobrom RW is available in 50 lb. plastic pails, 100 or 300 lb. fiber drums and bulk bags. For more transportation information and labeling, see MSDS.