Material Safety Data Sheet

WAX-7

1. Product and company identification

Product name : WAX-7

Supplier/Manufacturer : DuBois Chemicals, Inc.
3630 E. Kemper Rd.
Cincinnati, OH 45241
Phone: 1-800-438-2647

DuBois Chemicals Canada, Inc.
3450 Ridgeway Drive, Unit 2
Mississauga, Ontario, L5L OA2
Phone: 1-866-861-3603

Recommended use : Industrial applications: Biocide

MSDS # : DUB00364

Product code : 04652108

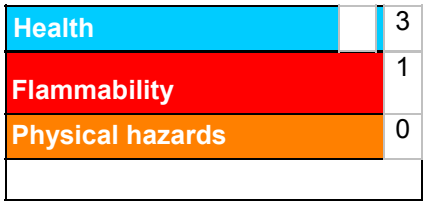
Validation date : 7/11/2011.

Version : 2

Responsible name : Regulatory Department 1-800-438-2647

In case of emergency : 1-866-923-4919 (US and Canada)
01-651-523-0314 (Int'l and Mexico)

Hazardous Material Information System (U.S.A.) :



2. Hazards identification

Physical state : Solid.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!

OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. CORROSIVE. CAUSES EYE AND SKIN BURNS. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

This material increases the risk of fire and may aid combustion. Keep away from combustible material. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation.

Potential acute health effects

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Serious effects may be delayed following exposure.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Skin : Corrosive to the skin. Causes burns.

Eyes : Corrosive to eyes. Causes burns.

Potential chronic health effects

Chronic effects : Contains material that may cause target organ damage, based on animal data.

Carcinogenicity : No known significant effects or critical hazards.

2. Hazards identification

Target organs : Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin, eyes, stomach.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3. Composition/information on ingredients

Name	CAS number	% by weight
1-bromo-3-chloro-5,5-dimethylimidazolidine-2,4-dione	16079-88-2	50 - 60
1,3-dichloro-5-ethyl-5-methylimidazolidine-2,4-dione	89415-87-2	10 - 20
1,3-Dichloro-5,5-dimethylhydantoin	118-52-5	20 - 30

There are no additional 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.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 gloves.

Notes to physician : 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.

5. Fire-fighting measures

Flammability of the product : Contact with combustible material may cause fire. This material increases the risk of fire and may aid combustion.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

5. Fire-fighting measures

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides

Special protective equipment 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.

6. Accidental release measures

Personal precautions : 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled 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).

Methods for cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). 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. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from combustible material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : See NFPA 430, Code for the Storage of Liquid and Solid Oxidizers. 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. Separate from reducing agents and combustible materials. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient	Exposure limits
1,3-Dichloro-5,5-dimethylhydantoin	**ACGIH TLV (United States, 2/2010).** TWA: 0.2 mg/m³ 8 hour(s). STEL: 0.4 mg/m³ 15 minute(s). **OSHA PEL (United States, 6/2010).** TWA: 0.2 mg/m³ 8 hour(s).

8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed 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.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Recommended: natural rubber (latex)

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles

Skin : 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.

Environmental exposure controls : 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.

Personal protective equipment (Pictograms) :

9. Physical and chemical properties

Physical state : Solid.

Flash point : Open cup: 141.67°C (287°F)

Color : White.

Odor : Pungent. [Slight]

pH : Not available.

Dilution pH : Not available.

Boiling/condensation point : Not available.

Melting/freezing point : Not available.

Specific gravity : 1

Vapor pressure : Not available.

Vapor density : Not available.

Odor threshold : Not available.

Evaporation rate : Not available.

Solubility : Partially soluble in the following materials: hot water.
Very slightly soluble in the following materials: cold water.

9. Physical and chemical properties

Octanol/water partition coefficient : Not available.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : No specific data.

Materials to avoid : Reactive or incompatible with the following materials:
combustible materials
reducing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous reactions : Hazardous reactions or instability may occur under certain conditions of storage or use.
Conditions may include the following:
contact with combustible materials
Reactions may include the following:
risk of causing or intensifying fire

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1-bromo-3-chloro-5,5-dimethylimidazolidine-2,4-dione	LD50 Dermal	Rabbit	>2 g/kg	-
	LD50 Oral	Rat	1390 mg/kg	-
1,3-Dichloro-5,5-dimethylhydantoin	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	542 mg/kg	-
sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

Conclusion/Summary

WAX-7 : Dermal LD50 estimated to be > 2000 mg/kg. Oral LD50 estimated to be 200 - 1000 mg/kg.

Carcinogenicity

None known.

Acute toxicity estimates

ATE value	Route
803.6 mg/kg	Oral
4059 mg/kg	Dermal
4402.5 ppm	Inhalation (gases)
3.145 mg/l	Inhalation (vapors)
3.145 mg/l	Inhalation (dusts and mists)

12. Ecological information

Ecotoxicity : Harmful to aquatic organisms.

Aquatic ecotoxicity

None known.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification : D001, D002 [Flammable , corrosive]

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

IATA/IMDG/DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information.

15. Regulatory information

United States

U.S. Federal regulations : **TSCA 12(b) one-time export**: No products were found.

TSCA 12(b) annual export notification: No products were found.

United States inventory (TSCA 8b) : All components are listed or exempted.

EPA Registration Number: : 6836-115-3635

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: WAX-7: Immediate (acute) health hazard

SARA 302/304/311/312 extremely hazardous substances: No products were found.

CERCLA: Hazardous substances.: No products were found.

SARA 313

None identified.

State regulations

Massachusetts : The following components are listed: 1,3-DICHLORO-5,5-DIMETHYL HYDANTOIN

Rhode Island : None of the components are listed.

New Jersey : The following components are listed: 1,3-DICHLORO-5,5-DIMETHYL HYDANTOIN; 2,4-IMIDAZOLIDINEDIONE, 1,3-DICHLORO-5,5-DIMETHYL-

Pennsylvania : The following components are listed: 2,4-IMIDAZOLIDINEDIONE, 1,3-DICHLORO-5,5-DIMETHYL-

California Prop. 65

None of the components are listed.

Canada

WHMIS (Canada) : Not allowed for sale in Canada.

Canadian lists

Canadian NPRI : None of the components are listed.

Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

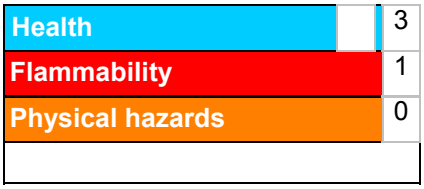
15. Regulatory information

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

Europe inventory : At least one component is not listed in EINECS but all such components are listed in ELINCS.
Please contact your supplier for information on the inventory status of this material.

16. Other information

Hazardous Material Information System (U.S.A.) :



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Date of issue : 7/11/2011.

Date of previous issue : No previous validation.

Version : 2

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.