



**MATERIAL SAFETY DATA SHEET**

005778  
005779

**SECTION 1 - IDENTIFICATION OF PRODUCT AND COMPANY**

Phibro Animal Health  
65 Challenger Road  
Ridgefield Park, NJ 07660

Emergency telephone:  
Hours of operation

1-800-345-4735  
24 Hours

Product Information:  
Hours of operation

1-888-475-7355  
M-F 9 a.m. - 5 p.m. Eastern Time

Trade names                    **MECADOX®**  
Product Name                Carbadox Medicated Premix-10  
Therapeutic use              Antibacterial/Growth promoter  
Description                    Uniform yellow meal with a cereal odor

**SECTION 2 - COMPOSITION**

<u>Ingredient</u>	<u>CAS Number</u>	<u>Amount</u>
Carbadox	6804-07-5	<5%
Inert Material		Proprietary

**SECTION 3 - HAZARDS IDENTIFICATION**

Signal word                    **CAUTION!**  
Statements of hazard        **MAY CAUSE LIVER EFFECTS (BASED ON ANIMAL STUDIES).**  
Eye effects                    None known  
Skin effects                    None known  
Inhalation effects            None known  
Ingestion effects              See 'Known clinical effects and 'Other potential health effects', below.  
Known clinical effects        Ingestion of this material may cause effects similar to those generally seen in clinical use of antibiotics including gastrointestinal irritation, vomiting, transient diarrhea, nausea, and abdominal pain.  
Other potential health effects    Individuals sensitive to this material or other materials in its chemical class may develop allergic reactions.

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#### **SECTION 4 - FIRST AID MEASURES**

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<b>Skin</b>	Wash skin with soap and water. Remove contaminated clothing and shoes. Wash clothing and thoroughly clean shoes before reuse. If irritation occurs or persists, get medical attention.
<b>Eyes</b>	Immediately flush eyes with water for at least 15 minutes. If irritation occurs or persists, get medical attention.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.
<b>Ingestion</b>	If swallowed, get medical attention. Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person.

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#### **SECTION 5 - FIRE FIGHTING MEASURES**

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<b>Fire fighting instructions</b>	Wear approved positive pressure, self-contained breathing apparatus and full protective turn out gear. Evacuate area and fight fire from a safe distance.
<b>Extinguishing media</b>	Use carbon dioxide, dry chemical, or water spray.
<b>Flash point</b>	Not applicable
<b>Hazardous combustion products</b>	Emits toxic fumes of carbon monoxide, carbon dioxide and oxides of nitrogen

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#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

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<b>General</b>	Review Sections 3, 8 and 12 before proceeding with clean up.
<b>Small spill</b>	Sweep material into appropriate recovery container. Clean spill area thoroughly. Avoid creating airborne dust.
<b>Large spill</b>	Sweep material into appropriate recovery container. Close container and move it to a secure holding area. Avoid creating airborne dust.

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#### **SECTION 7 - HANDLING AND STORAGE**

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<b>General handling</b>	Minimize dust generation and accumulation. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid breathing dust.
<b>Storage conditions</b>	Store out of direct sunlight in a well ventilated area at room temperature. Keep container tightly closed when not in use.

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**SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**Exposure limits**

Compound  
Light mineral oil

<u>Issuer</u>	<u>Type</u>	<u>OEL</u>
ACGIH	STEL (15 min)	10 mg/m <sup>3</sup> (mist)
ACGIH	TWA-8 HR	5 mg/m <sup>3</sup> (mist)
OSHA	TWA-8 HR	5 mg/m <sup>3</sup> (mist)

~~Cardboard has not been tested for component (s) listed above. OEL Data for~~

**Ventilation**

General room ventilation is adequate unless the process generates dust or fumes.

**Respiratory protection**

In dusty conditions use an approved dust mask or more protection as needed. If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL.

**Eye protection**

Wear safety glasses with sideshields if airborne dust is present.

**Skin protection**

If dust is created wear long sleeves and pants to protect skin.

**Hand protection**

Rubber gloves

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

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Physical form	Uniform meal
Color	Yellow
Odor	Cereal odor
Molecular weight	Mixture
Molecular formula	Mixture
pH	Not applicable
Boiling point	Not applicable
Melting point	No data available
Density	No data available
Vapor pressure	Not applicable
Water solubility	No data available
Solvent solubility	No data available

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**SECTION 10 - STABILITY AND REACTIVITY**

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Reactivity	Stable
Conditions to avoid	Heat, sparks, flame, and electrostatic discharge
Incompatibilities	Oxidizers
Hazardous decomposition products	See Section 5 - under Hazardous combustion products.
Hazardous polymerization	Will not occur

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**SECTION 11 - TOXICOLOGY INFORMATION**

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**Toxicology summary** The information included in this section describes the potential hazards of the active ingredient.

**Acute toxicity**  
Compound  
Carbadox

<u>Type</u>	<u>Route</u>	<u>Species</u>	<u>Dosage</u>
LD <sub>50</sub>	Oral	Mouse	2810 mg/kg
LD <sub>50</sub>	Oral	Rat	850 mg/kg

**Eye** No data available

**Skin** No data available

**Inhalation** No data available

**Ingestion** See table above

**Mutagenicity**

Evidence of carbadox mutagenicity was observed in the following in vitro assays with or without metabolic activation: the Ames test in *S. typhimurium* TA98 and TA100, the DNA repair test in *B. subtilis* (rec assay) and *S. typhimurium* (uvr assay) and in the sister chromatid exchange assay in Chinese hamster V79 cells. It was also positive in the following in vivo assays: the micronucleus test in rats, the mouse chromosomal aberration test, and in the mouse transplacental micronucleus test.

**Subchronic effects**

Short-term toxicity studies of carbadox were performed in rats and dogs. Oral doses of carbadox at 25 and 50 mg/kg/day for three weeks, produced vomiting in dogs. Clinical chemistry changes indicative of liver toxicity were seen at the 50 mg/kg/day dose level. There were no gross or histopathologic changes attributed to carbadox. In rats, oral doses of carbadox at 50 or 100 mg/kg/day for one month produced pronounced inhibition of body weight gain and food consumption; no gross or histopathologic changes were seen.

**Chronic toxicity**

See Chronic effects/Carcinogenicity below.

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**SECTION 11 - TOXICOLOGY INFORMATION ...continued**

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**Chronic effects/  
carcinogenicity**

Long-term oral toxicity studies of carbadox were conducted in rats and monkeys. In rats, carbadox was given in the diet at dose levels of 5, 10, 25, 50 or 100 mg/kg/day for 2 years. At the 50 and 100 mg/kg/day carbadox, all animals died within the first three months of the study. The pathologic alterations found in these animals were similar at both dose levels and indicated damage to the lung (pulmonary edema and hemorrhage), adrenal gland (adrenocortical degeneration or hemorrhage), spleen (deposition of splenic hemosiderin), failure of accessory sex organs secretory function (males) and severe suppression of body and organ weights (seminal vesicle, prostate gland and testicular fat body). Drug-related liver toxicity was seen in 92% of the animals at dose level of 25 mg/kg/day (hepatic parenchymatous degeneration, necrosis and nodular hyperplasia with areas of anaplasia; additionally, 21% exhibited hepatic carcinoma with metastatic invasion of the pulmonary parenchyma, kidney or abdominal lymphoid tissue). At the 10 mg/kg/day, drug-related liver toxicity (hepatic nodular hyperplasia) was observed. No drug-related changes occurred at the 5 mg/kg/day dose level. In a two-year toxicity study in monkeys, carbadox was given orally at dose levels of 5, 10, or 20 mg/kg/day. Monkeys showed no clinical evidence of liver toxicity at doses up to 20 mg/kg/day after 18 months.

**Carcinogen status**

None of the components of this formulation is listed as a carcinogen by IARC, NTP or OSHA.

**Reproductive effects**

Rats from the second long-term toxicity study were used in a three-generation study to investigate the effects of carbadox on fertility and reproduction. No adverse effects were seen in the mature litters of the second generation.

**Teratogenicity**

No data available

**Target organs**

Liver

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**SECTION 12 - ECOLOGICAL INFORMATION**

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**Environmental overview**

The environmental characteristics of this mixture have not been fully evaluated. Releases to the environment should be avoided.

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**SECTION 13 - DISPOSAL INFORMATION**

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**Disposal procedure**

Incineration is the recommended method of disposal for this material. Observe all local and national regulations when disposing of this mixture.

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**SECTION 14 - TRANSPORTATION INFORMATION**

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**General shipping instructions**                      Not regulated for transport under USDOT, IATA, or IMDG regulations.

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**SECTION 15 - REGULATORY INFORMATION**

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**TSCA status**                                      Not listed  
**SARA section 302**                                No  
**SARA section 313**                                No  
**California Proposition 65**                      Not listed

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**SECTION 16 - OTHER**

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**Disclaimer**                                      **Phibro Animal Health believes that the information contained in this Material Safety Data Sheet is accurate. While Phibro provides this information in good faith, it does not expressly or impliedly warrant its accuracy.**

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