

### SECTION 1: Identification

#### 1.1. Identification

Product form : Substance  
Trade name : Westco AO 2246  
Synonyms : 2,2'-methylenebis-(4-methyl-6-tertiarybutylphenol); Antioxidant 2246

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Phenolic antioxidant  
Restrictions on use : Other

#### 1.3. Supplier

Western Reserve Chemical Corporation  
4837 Darrow Road  
Stow, OH 44224 - USA  
T 330 650 2244 - F 330 650 2255  
[www.wrchem.com](http://www.wrchem.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC 1 800 424 9300 USA

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS classification

Reproductive toxicity Category 2 H361 Suspected of damaging fertility or the unborn child  
Specific target organ toxicity (repeated exposure) Category 2 H373 May cause damage to organs through prolonged or repeated exposure  
Combustible Dust May form combustible dust concentrations in air

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS labeling

Hazard pictograms (GHS) :



Signal word (GHS) : Warning

Hazard statements (GHS) : May form combustible dust concentrations in air  
H361 - Suspected of damaging fertility or the unborn child  
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS) : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P260 - Do not breathe dust.  
P280 - Wear eye protection, protective gloves.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P314 - Get medical advice/attention if you feel unwell.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS)

Not applicable

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### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Name : Westco AO 2246

Name	Product identifier	%	GHS classification
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	(CAS-No.) 119-47-1	97 – 98	Repr. 2, H361 STOT RE 2, H373 Comb. Dust
2-t-Butyl-4-methylphenol	(CAS-No.) 2409-55-4	0.2 – 0.3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411

Full text of hazard classes and H-statements : see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures after skin contact : Wash skin with mild soap and water. Take off contaminated clothing.  
First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### 4.2. Most important symptoms and effects (acute and delayed)

Most Important Symptoms/Effects : Symptoms may be delayed.  
Chronic symptoms : May cause damage to organs through prolonged or repeated exposure. May damage fertility. May damage the unborn child.

#### 4.3. Immediate medical attention and special treatment, if necessary

All treatments should be based on observed signs and symptoms of distress in the patient.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Foam. Dry powder.  
Unsuitable extinguishing media : Carbon dioxide (CO<sub>2</sub>). Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : Could burn but do not ignite readily.  
Explosion hazard : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source, is a potential dust explosion hazard.  
Hazardous decomposition products in case of fire : Carbon oxides (CO, CO<sub>2</sub>).

#### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Protective equipment : Avoid contact with skin and eyes. Dust impervious gloves. Chemical goggles or safety glasses.  
Emergency procedures : Avoid all unnecessary exposure. Eliminate ignition sources. Avoid dust formation.

##### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Dust impervious gloves. Chemical goggles or safety glasses.  
Emergency procedures : Collect as much as possible in a clean container for (preferable) reuse or disposal. Avoid raising powdered materials into airborne dust, creating an explosion hazard.

#### 6.2. Environmental precautions

Do not discharge into drains or the environment.

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### 6.3. Methods and material for containment and cleaning up

- For containment : Recover the product by vacuuming, shoveling or sweeping.  
Methods for cleaning up : Do not use compressed air for cleaning. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Exclude sources of ignition and ventilate the area.

### 6.4. Reference to other sections

Section 7: safe handling. Section 8: personal protective equipment. Section 13: disposal information.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Avoid dispersal of dust in the air (i.e. clearing dust surfaces with compressed air). Dust may form flammable and explosive mixture with air.  
Precautions for safe handling : Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product.  
Hygiene measures : Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a dry, cool and well-ventilated place. Store in correctly labelled containers.  
Maximum storage period : Stability in storage: 2 years  
Heat-ignition : Keep away from heat, sparks and flame.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Westco AO 2246	
No additional information available	
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (119-47-1)	
No additional information available	
2-t-Butyl-4-methylphenol (2409-55-4)	
No additional information available	
Monitoring methods	
Monitoring methods	NIOSH 0600 for total particulate sampling.

### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Provide local exhaust or general room ventilation to minimize exposure to dust.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Dust impervious gloves. nitrile rubber gloves

#### Eye protection:

Safety glasses. In case of dust production: protective goggles

#### Respiratory protection:

If dust is formed: Dust/aerosol mask with filter type P1

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Solid  
Appearance : White powder.  
Color : White to off-white  
Odor : slight  
Odor threshold : No data available  
pH : Not applicable  
Melting point : 125 – 130 °C  
Freezing point : No data available  
Boiling point : 185 °C

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Flash point	: 198 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1.04 g/ml
Solubility	: Soluble in acetone. Soluble in ethylacetate. Soluble in ethanol. Water: 0.02 mg/l
Log Pow	: 6.25
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

Minimum ignition energy	: < 1 mJ
Dust Explosion Class	: St 3

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known.

### 10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Ignition sources when dusting occurs.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (119-47-1)	
LD50 oral rat	> 10000 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 inhalation rat (mg/l)	> 4000 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility or the unborn child. Caused adverse effects on reproductive organs and on fertility in rats.

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STOT-single exposure : Not classified  
STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

<b>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (119-47-1)</b>	
LOAEL (oral, rat, 90 days)	50 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	12.5 mg/kg bodyweight/day
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Most Important Symptoms/Effects : Symptoms may be delayed.  
Chronic symptoms : May cause damage to organs through prolonged or repeated exposure. May damage fertility. May damage the unborn child.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (119-47-1)</b>	
LC50 fish 1	> 5 mg/l 96 h
EC50 crustacea	> 4.8 mg/l 48 h

<b>2-t-Butyl-4-methylphenol (2409-55-4)</b>	
LC50 fish 1	1.9 mg/l
EC50 crustacea	2.7 mg/l

### 12.2. Persistence and degradability

<b>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (119-47-1)</b>	
Biodegradation	0 % 28 d

<b>2-t-Butyl-4-methylphenol (2409-55-4)</b>	
Biodegradation	0 % 4 weeks

### 12.3. Bioaccumulative potential

<b>Westco AO 2246</b>	
Log Kow	6.25

<b>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (119-47-1)</b>	
Log Pow	6.25

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on the ozone layer : None known  
Effect on global warming : None known

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Waste disposal recommendations : Recycle or dispose of in compliance with current legislation.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not regulated.

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### Transport by sea

Not regulated.

### Air transport

Not regulated.

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

#### CANADA

##### 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (119-47-1)

Listed on the Canadian DSL (Domestic Substances List)

##### 2-t-Butyl-4-methylphenol (2409-55-4)

Listed on the Canadian NDSL (Non-Domestic Substances List)

#### National regulations

No additional information available

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16: Other information

Data sources : toxplanet.  
HSDB (Hazardous Substances Data Bank).  
European Chemicals Agency (ECHA) Registered Substances list.  
Supplier's safety documents.  
Internal Company test data.

Full text of H-phrases:

H315	Causes skin irritation
H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

Abbreviations and acronyms:

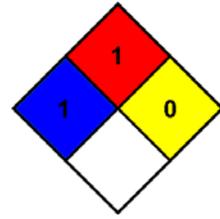
ATE	Acute Toxicity Estimate
LC50	Median lethal concentration
LD50	Median lethal dose
NOAEL	No-Observed Adverse Effect Level

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NFPA health hazard	: 1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	: 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.



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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*