



## SAFETY DATA SHEET

### SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name: **Westco AO 445**

Other means of identification:

Product Description: Used as a heat stabilizer for a wide variety of applications in the rubber and plastics industries.

Synonyms: 4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl)phenyl]aniline; Antioxidant KY-405, Antioxidant 445

Recommended use of the chemical and restrictions on use:

Product Use/Restriction: Westco AO-445 is a highly effective non-discoloring antioxidant. The combination of high amine antioxidant activity, good color and low volatility makes it an ideal antioxidant and heat stabilizer for a wide variety of applications in rubber and plastics. Westco AO-445 exhibits a strong synergy with other antioxidants, i.e. phenolics and phosphites, making it an ideal choice as a component of a stabilizer package.

Chemical distributor, or other responsible party Name, address, and telephone number:

Distributor Name: Western Reserve Chemical Corporation

Address: 4837 Darrow Road  
Stow, OH 44224  
USA

General Phone Number: 330 650 2244

General Fax Number: 330 650 2255

Emergency phone number:

Emergency Phone Number: Chemtrec 1 800 424 9300 USA

Website: [www.wrchem.com](http://www.wrchem.com)

### SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

GHS Pictograms:



Signal Word: **WARNING!**

GHS Class: \* Skin Sensitizer, Category 1.  
\* Hazardous to the aquatic environment, Chronic Category 4.

Hazard Statements: \* May cause an allergic skin reaction.  
\* May cause long lasting harmful effects to aquatic life.

Precautionary Statements: \* Avoid breathing dust/fume/gas/mist/vapours/spray.  
\* Contaminated work clothing should not be allowed out of the workplace.  
\* Avoid release to the environment.  
\* Wear protective gloves/protective clothing/eye protection/face protection.  
\* IF ON SKIN: Wash with plenty of soap and water.  
\* If skin irritation or rash occurs: Get medical advice/attention.  
\* If skin irritation occurs: Get medical advice/attention.  
\* Wash contaminated clothing before reuse.  
\* Dispose of contents/container in accordance with Local, State, and Federal regulations.

Hazards not otherwise classified that have been identified during the classification process:

Carcinogenicity: Not classified.

**4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl) phenyl]aniline**

Emergency Overview: \* May cause allergic skin reactions.  
\* Potential Sensitizer

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Eye: Overexposure may cause eye watering or discomfort, redness and swelling.

Skin: May cause itching and redness. Prolonged or repeated skin contact may cause burns.

**Inhalation:** Inhalation may result in irritation to nose and throat.  
**Ingestion:** Ingestion may cause gastrointestinal irritation, diarrhea, nausea and vomiting.  
**Chronic Health Effects:** Prolonged contact with this product may cause allergic skin sensitization reactions.  
**Carcinogenicity:** Unknown (IARC, NTP, OSHA & ACGIH)

### SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

#### Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl)phenyl]aniline	10081-67-1	Concentration: 98.6538% by weight	233-215-5
Unknown impurities	Not Applicable	Concentration: 1.3462% by weight	

### SECTION 4 : FIRST AID MEASURES

#### Description of necessary measures:

**Eye Contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

**Skin Contact:** Wash off with warm water and soap.

**Inhalation:** Remove to fresh air. If symptoms persist, call a physician.

**Ingestion:** Do NOT induce vomiting.  
Rinse mouth with water.  
Obtain medical attention.

**Notes :** In all cases of doubt, or when symptoms persist, seek medical attention.  
Most important symptoms and effects, both acute and delayed: May cause an allergic skin reaction.  
Indication of any immediate medical attention and special treatment needed: If skin irritation or rash occurs, get medical advice/attention.

### SECTION 5 : FIRE FIGHTING MEASURES

#### Suitable and unsuitable extinguishing media:

**Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>); Dry powder; Foam; Water mist.

**Unsuitable extinguishing media:** Do not use a solid water stream as it may scatter and spread fire.

#### Special protective equipment and precautions for fire-fighters:

**Protective Equipment:** As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

**Fire Fighting Instructions:** Clear the area of non-emergency personnel. Do not enter confined fire space without full protective clothing and equipment.

### SECTION 6 : ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures:

**Personnel Precautions:** For non-emergency personnel: Provide adequate ventilation. Wear protective equipment. Avoid contact with skin and eyes.  
For emergency responders: Wear suitable protective equipment. Avoid contact with skin and eyes.  
Remove all sources of ignition. Avoid dust formation. Do not breathe dust.

#### Environmental precautions:

**Environmental Precautions:** Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

#### Methods and materials for containment and cleaning up:

**Methods for containment:** Sweep up and shovel. Pick up and arrange disposal without creating dust.

**Methods for cleanup:** Sweep up and shovel. Pick up and arrange disposal without creating dust.

**Notes :** Reference to other sections:  
See Section 7 for information on safe handling.  
See section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.  
Additional information: Not available.

## SECTION 7 : HANDLING and STORAGE

### Precautions for safe handling:

**Handling:**

- \*Protective measures: Handle in accordance with good industrial hygiene and safety practice.
- \*Use with adequate ventilation.
- \*Avoid dust formation.
- \*Avoid breathing dust.
- \*Keep container tightly closed.
- \*Keep away from sources of ignition - No smoking.
- \*May form explosive dust-air mixture.
- \*Take precautionary measures against static discharges.

Advice on general occupational hygiene: Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

### Conditions for safe storage, including any incompatibilities:

**Storage:** Requirements for storage areas and containers: Keep container tightly closed. Keep in a well-ventilated place. Keep away from heat.

### Specific end use(s):

**Work Practices:** Safety showers and eye wash stations should be available.

## SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

#### Appropriate engineering controls:

**Engineering Controls:** Appropriate: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

#### Individual protection measures:

**Eye/Face Protection:** Safety glasses with side-shields.

**Skin Protection Description:** impervious clothing

**Hand Protection Description:** Gauntlets, PVC or other plastic material gloves.

**Respiratory Protection:** In the case of dust or aerosol formation use respirator with a dust filter.

**Other Protective:** Body protection: Impervious clothing.  
Thermal hazards: Wear suitable protective clothing to prevent heat.

Environmental exposure controls: General advice: Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

#### **PPE Pictograms:**



## SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

### PHYSICAL AND CHEMICAL PROPERTIES:

**Physical State:** Appearance: Solid at 20 deg C and 101.3 kPa

**Boiling Point:** 400 deg C at 101.3 kPa

**Melting Point:** 95 deg C at 101.3 kPa

**Density:** Relative Density: 1.061 at 20 deg C

**Solubility:** 0.0067 mg/L at 20 °C

**Vapor Pressure:** (25 deg C): 0.667 kPa at 20 deg C

**Flash Point:** (Deg C): Study technically not feasible.

**Explosive Properties:** Non explosive.

**Oxidizing Properties:** No

#### 9.2. Other information:

**Notes :** Surface tension: 72.9 mN/m at 20 deg C and 1007 mg/L

Other information:  
Self-ignition temperature: Study technically not feasible.  
Dissociation constant in water( pKa): Study scientifically unjustified.  
Flammability: Non flammable.

## SECTION 10 : STABILITY and REACTIVITY

### Reactivity:

**Reactivity:** No dangerous reaction known under conditions of normal use.

### Chemical Stability:

**Chemical Stability:** Stable under normal conditions.

### Possibility of hazardous reactions:

**Hazardous Polymerization:** Hazardous polymerisation does not occur.

**Conditions To Avoid:**

**Conditions to Avoid:** Extremes of temperature and direct sunlight.

**Incompatible Materials:**

**Incompatible Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:**

**Special Decomposition Products:** Carbon oxides, nitrogen oxides (NOx).

## SECTION 11 : TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL INFORMATION:

**Skin:** LD50 (Dermal, Rat): 2000 mg/kg bw

**Inhalation:** LC50 (Inhalation, Rat): Not available

**Ingestion:** LD50 (Oral, Rat): 2000 mg/kg bw

**Sensitization:** Respiratory or skin sensitization: Adverse effect observed (sensitising) for skin and No study available for respiratory system.

**Mutagenicity:** Germ cell mutagenicity: Negative.

**Reproductive Toxicity:** Not classified.

## SECTION 12 : ECOLOGICAL INFORMATION

### Ecotoxicity:

**Ecotoxicity:**

Toxicity:  
Acute toxicity: LC50 - 100 mg/L  
Time: 96h  
Species: Fish  
Method: OECD Guideline 203 (Fish, Acute Toxicity Test) STN EN ISO 7346-1 (ISO 7346-1): Water quality -- Determination of the acute lethal toxicity of substances to freshwater fish [Brachydanio rerio Hamilton-Buchanan (Teleostei, Cyprinidae)] -- Part 1: Static method  
Remarks: 1 (reliable without restriction) key study experimental result.

Acute toxicity: EC50 - 100 mg/L  
Time: 48h  
Species: Daphnia magna  
Method: OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test) ISO 6341 15 (Water quality - Determination of the Inhibition of the Mobility of Daphnia magna Straus (Cladocera, Crustacea)) STN EN ISO 6341, 75 7742: Water quality - Determination of the inhibition of the mobility of Daphnia magna Straus (Cladocera, Crustacea) - Acute toxicity test (ISO 6341: 1996)  
Remarks: 1 (reliable without restriction) key study experimental result

Acute toxicity: EC50 - 100 mg/L  
Time: 72h  
Species: Algae  
Method: OECD Guideline 201 (Alga, Growth Inhibition Test) EU Method C.3 (Algal Inhibition test) ISO 8692 (Water Quality - Fresh Water Algal Growth Inhibition Test with Scenedesmus subspicatus and Selenastrum capricornutum)  
Remarks: 1 (reliable without restriction) key study experimental result

### Persistence and degradability:

**Biodegradation:** Persistence and degradability: The substance is not considered to be biodegradable in any medium.

### Bioaccumulative potential:

**Bioaccumulation:** Bioaccumulative potential: The substance is unlikely to bioaccumulate.

## SECTION 13 : DISPOSAL CONSIDERATIONS

### Description of waste:

**Waste Disposal:** Waste treatment methods: Special waste. Incinerate according to applicable local, state and federal regulations. Do not dispose of with household waste.

Product/Packaging disposal:  
Dispose of waste according to applicable legislation.  
Handle contaminated packages in the same way as the substance itself.

## SECTION 14 : TRANSPORT INFORMATION

**DOT Shipping Name:** Non regulated.

**DOT UN Number:** Non regulated.

**DOT Hazard Class:** Non regulated.

**DOT Packing Group:** Non regulated.

**DOT Pictograms:**



IATA Shipping Name: Not Regulated.  
 IATA UN Number: Not Regulated.  
 IATA Packing Group: Not Regulated.  
 IATA Pictograms: 

IMDG UN Number : Not Regulated.  
 IMDG Shipping Name : Not Regulated.  
 IMDG Hazard Class : Not Regulated.  
 IMDG Packing Group : Not Regulated.  
 RID UN Number : Not Regulated.  
 RID Shipping Name : Not Regulated.  
 RID Hazard Class : Not Regulated.  
 RID Packing Group : Not Regulated.  
 ICAO UN Number : Not Regulated.  
 ICAO Shipping Name: Not Regulated.  
 ICAO Hazard Class : Not Regulated.  
 ICAO Packing Group : Not Regulated.

## SECTION 15 : REGULATORY INFORMATION

### Safety, health and environmental regulations specific for the product:

**TSCA Inventory Status:** All components of this product are listed in the TSCA inventory of Chemicals Substances.  
**SARA:** SARA Title III: This product does not contain any material regulated under Title III, Section 313  
**Risk Phrases:** \* R43 - May cause sensitization by skin contact.  
 \* R53 - May cause long-term adverse effects in the aquatic environment.  
**Safety Phrase:** \* S15 - Keep away from heat.  
 \* S23 - Do not breathe gas/fumes/vapour/spray.  
 \* S36 - Wear suitable protective clothing.  
 \* S29/35 - Do not empty into drains; dispose of this material and its container in a safe way.

### 4-(1-methyl-1-phenylethyl)-N-[4-(1-methyl-1-phenylethyl) phenyl]aniline :

EC Number: 233-215-5



## SECTION 16 : ADDITIONAL INFORMATION

### HMIS Ratings:

HMIS Health Hazard: 1  
 HMIS Fire Hazard: 1  
 HMIS Reactivity: 0  
 HMIS Personal Protection: F

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	F

SDS Revision Date: July 01, 2015

MSDS Revision Notes: Indication of changes:<br> Version 1.1: Amended by EU No 453/2010<br> Version 2.0: Placed exposure scenarios in the Annex (eSDS)

Notes : Important Note: This information relates to the specific product described herein and may not be valid for this material when used in combination with other raw materials. The information provided is without warranty regarding its accuracy or completeness. The information may not be valid under all conditions. The user has the final responsibility for determining the suitability of the product in a given application.

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