

# MATERIAL SAFETY DATA SHEET

## DYPHENE 8318C

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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REVISION DATE: 7-10-06  
PRODUCT NAME: Westco Dyphene 8318C  
Distributor Western Reserve Chemical  
Name and Address: 4837 Darrow Rd.  
Stow, Oh 44224  
Phone: 330-650-2244  
Fax: 330-650-2255  
Email: [support@wrchem.com](mailto:support@wrchem.com)

Emergency Phone Number: CHEMTREC 800-424-9300

PRODUCT USE: Tackifier

CHEMICAL NAME: Formaldehyde, polymer with 4-(1,1,3,3-tetramethylbutyl) phenol

CHEMICAL FORMULA: Mixture

SYNONYMS/COMMON NAMES: None

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

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#### CAS NUMBER / NAME

26678-93-3 Formaldehyde, polymer with 4-(1,1,3,3-tetramethylbutyl)phenol 96-98.5%

140-66-9 Phenol, 4-(1,1,3,3-tetramethylbutyl) 1.5-4%

#### EXPOSURE LIMITS

PEL: Not Established

TLV: Not Established

PELZ2: Not Established

#### COMMON NAMES:

p-tert-Octylphenol, formaldehyde polymer

Listed On(List Legend Below):

00 19 22 23

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**2. COMPOSITION/INFORMATION ON INGREDIENTS (Continued)**


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 LIST LEGEND

00 TSCA INVENTORY	19 PA REQUIREMENT- 3% OR GREATER
22 CANADIAN DOMESTIC SUB LIST	23 NJ REQUIREMENT- 1% OR GREATER
51 EINECS	

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**3. HAZARDS IDENTIFICATION**

**WARNING: AIRBORNE DUST PARTICLES MAY FORM EXPLOSIVE AIR-DUST MIXTURE**

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\*\*\*\*\* EMERGENCY OVERVIEW \*\*\*\*\*

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 \* DUST OR VAPORS MAY BE IRRITATING TO SKIN, EYES AND RESPIRATORY \*  
 \* TRACT. DUST MAY REDUCE LUNG FUNCTION. CAUTION - A CONFINED DUST \*  
 \* CLOUD COULD RESULT IN AN EXPLOSION. \*  
 \*  
 \* Amber flake \*

\*\*\*\*\*

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY:

Inhalation, Eyes, Skin.

TARGET ORGANS:

Skin, Lungs, Respiratory Tract, Eyes.

IRRITANCY:

Dust or vapors may irritate eyes, skin and respiratory tract.

SENSITIZING CAPABILITY:

None known.

REPRODUCTIVE EFFECTS:

None known.

CANCER INFORMATION:

Not known to be carcinogenic.

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**3. HAZARDS IDENTIFICATION (Continued)**

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**SHORT-TERM EXPOSURE (ACUTE)****INHALATION:**

May be irritating.

**EYES:**

May be irritating.

**SKIN:**

May be irritating.

**INGESTION:**

Not a likely route of exposure.

**REPEATED EXPOSURE (CHRONIC)**

Repeated breathing of dust or vapors may reduce lung function.

**SYNERGISTIC MATERIALS:**

None known.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

Pre-existing disorders affecting target organs.

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**4. FIRST AID MEASURES**

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**EYES:**

IMMEDIATELY flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. IF IRRITATION PERSISTS GET MEDICAL ATTENTION.

**SKIN:**

Wash thoroughly with soap and water. Wash clothing before reuse. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

**INHALATION:**

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration. GET MEDICAL ATTENTION IMMEDIATELY.

**INGESTION:**

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Have patient drink several glasses of water then induce vomiting by having patient tickle back of throat with finger. Keep airway clear. GET MEDICAL ATTENTION IMMEDIATELY.

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**4. FIRST AID MEASURES (Continued)**

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## NOTES TO PHYSICIAN:

No specialized procedures. Treat for clinical symptoms.

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**5. FIRE FIGHTING MEASURES**

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Flash Point: Not available

Method: Not available

Autoignition Temperature: Not determined

FLAMMABLE LIMITS IN AIR, BY % VOLUME

Upper: Not determined

Lower: Not determined

## EXTINGUISHING MEDIA:

Water, dry chemical, alcohol foam, carbon dioxide.

## FIRE FIGHTING PROCEDURES:

Evacuate unnecessary personnel and eliminate all sources of ignition.

Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and full protective clothing.

## FIRE AND EXPLOSION HAZARD:

High concentration of airborne dust may form explosive mixture with air. Ensure that good housekeeping practices are followed as well as applicable guidelines such as the National Fire Protection Association [NFPA] 654, "Prevention of Fire and Dust Explosions from the Manufacturing, processing, and Handling of Combustible Particulate Solids". Vapors may be heavier than air and may travel along the ground to some distant source of ignition and flash back.

## SENSITIVITY TO MECHANICAL IMPACT:

Not applicable.

## SENSITIVITY TO STATIC DISCHARGE:

Material can accumulate static charges from handling management. Bond and ground as appropriate. For additional recommendations, consult an applicable guideline such as National Fire Protection Association [NFPA] 77, "Recommended Practices on Static Electricity". The Minimum Ignition Energy for phenolic resins can be as low as 3 mJ [milli-joules]. The Minimum Explosive concentration for phenolic resins can be as low as 20 g/m<sup>3</sup>.

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**6. ACCIDENTAL RELEASE MEASURES**

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## PERSONAL PRECAUTIONS:

Evacuate unnecessary personnel and eliminate all sources of ignition.

## ENVIRONMENTAL PRECAUTIONS:

Contain material and prevent accumulation of dust.

Do not flush to sewer.

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**6. ACCIDENTAL RELEASE MEASURES (Continued)**

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**METHODS FOR CLEANING UP:**

Sweep or vacuum spills. To minimize dust, vacuum cleaning is preferred.

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**7. HANDLING AND STORAGE**

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**HANDLING:**

Guard against dust accumulation of this material. As with all chemicals good industrial hygiene practices should be followed when handling this material. When the container(s) is empty it may retain product residue including vapors which could accumulate. Therefore, do not cut, drill, grind, or weld empty containers. Additionally, do not conduct such activity(ies) near full, partially full, or empty product containers without appropriate workplace safety authorization(s) or permit (s).

**SPECIAL MIXING AND HANDLING INSTRUCTIONS:**

Not applicable.

**STORAGE:**

Protect container from physical abuse. Keep the container tightly closed. Store in a cool, dry, well-ventilated storage area. Keep separate from incompatibles. Bond and ground containers when transferring material. Empty product containers may contain product residue. Do not reuse empty containers.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**ENGINEERING CONTROLS:**

Ventilation should be sufficient to effectively remove and prevent buildup of any vapors, dusts, or fumes that may be generated during handling or thermal processing. In order to ensure appropriate electrical safety practices are followed, consult applicable standards. These may include guidelines such as the National Fire Protection Association [NFPA]70, "The National Electrical Code" and NFPA 499, "Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in chemical Process Areas". NOTE: since this material's vapors, dust or fumes can form explosive mixtures in air, ensure that any potential areas where explosions may occur are designed to minimize potential damage. For recommendations to prevent such explosions and associated damage, consult applicable guidelines such as National Fire Protection Association [NFPA]69, "Standard on Explosion Prevention Systems" and/or NFPA68, "Guide for Venting Deflagrations".

**MATERIAL SAFETY DATA SHEET/DYPHENE 8318C/PAGE 6****PERSONAL PROTECTION****RESPIRATORY:**

Wear a NIOSH/MSHA approved respirator following manufacturer's

recommendations, where airborne contaminants may occur.

**EYE/FACE:**

Wear safety glasses with side shields or chemical safety goggles (ANSI Z87.1).

**SKIN:**

Wear chemical resistant gloves such as rubber, neoprene or vinyl.

**OTHER:**

Emergency shower and eyewash facility should be in close proximity (ANSI Z358.1).

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance and Odor: Amber flake

Odor Threshold: Not available

Specific Gravity (Water=1): 1.00-1.050

Vapor Pressure: Not available

Vapor Density (Air=1): Not available

Density: Not available

Evaporation Rate: Not available

% Volatiles by Wt: Not available

Boiling Point: Not available

Freezing Point: Not available

Melting Point: 90°C

Solubility in Water (% by wt.): <0.5

pH: 6-8.5 @ 100 gm/l

Octanol/Water Partition Coefficient: Not available

Thermal Decomposition Temperature: Not available

Other: Not available

VOC (% by wt;g/l): Not applicable

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**10. STABILITY AND REACTIVITY**

CHEMICAL STABILITY:

REACTS WITH:	<u>  X  </u> STABLE	UNSTABLE	
	<u>      </u> AIR	<u>      </u> OXIDIZERS	<u>      </u> METALS
	WATER	X ACIDS	OTHER
	<u>      </u> HEAT	<u>      </u> ALKALIS	NONE
HAZARDOUS POLYMERIZATION:	<u>      </u> OCCURS	<u>  X  </u> WILL NOT OCCUR	

COMMENTS:

Exposure to high temperature and/or moisture causes resin agglomeration.

HAZARDOUS DECOMPOSITION PRODUCTS:

Complete combustion yields carbon dioxide and water. Incomplete combustion yields carbon monoxide, olefinic and parafinic compounds. Varying amounts of ketones, aldehydes, alcohols and aromatics may also be formed.

**11. TOXICOLOGICAL INFORMATION**

This material contains "nuisance" dust. The number of factors associated with retention of pulmonary dusts are large. The most important factors appear to be (1) dust overload, (2) particle size, (3) solubility and (4) the toxic potency. This material is comprised of relatively insoluble materials of low toxic potency. The dust in breathing air must be reduced so that lung burdens are well below 1000 nl/g lung. Lung clearance occurs by dissolution and by alveolar-macrophage mediated clearance. A study in mice indicated that dust overloading compromised pulmonary immune function. The exposure limits for nuisance dust are:

PEL = 15mg/m3	(total)	8 hr. TWA
PEL = 5mg/m3	(resp.)	8 hr. TWA
TLV = 10mg/m3	(total)	8 hr. TWA

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**11. TOXICOLOGICAL INFORMATION (Continued)**

140-66-9 Phenol, 4-(1,1,3,3-tetramethylbutyl)-  
 ACUTE ORAL LD50 : (rat) 2160 mg/kg  
 ACUTE DERMAL LD50 : (rabbit) >5000 mg/kg  
 PRIMARY SKIN IRRITATION : (rabbit) moderate  
 PRIMARY EYE IRRITATION : (rabbit) severe  
 The toxicological properties of this compound have not been investigated.

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## 12. ECOLOGICAL INFORMATION

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140-66-9 Phenol, 4-(1,1,3,3-tetramethylbutyl)-  
 Fish:  
 LOEC MORTALITY (44 hr.) (Carp) 81 mg  
 26678-93-3 Formaldehyde, polymer with 4-(1,1,3,3-tetramethyl-  
 AQUATIC ECOTOX DATA  
                   No data available  
 TERRESTRIAL ECOTOX DATA  
                   No data available  
 ENVIRONMENTAL FATE DATA  
                   No data available

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There is no information available on the environmental fate and effects of this material. Due caution should be exercised to avoid the accidental release of this material to aquatic or terrestrial environments.

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## 13. DISPOSAL CONSIDERATIONS

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Dispose of all waste and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

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**14. TRANSPORT INFORMATION**

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DOT INFORMATION: Not Regulated

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**15. REGULATORY INFORMATION**

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**U.S. FEDERAL REGULATIONS:**

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.

To aid our customers in complying with regulatory requirements, SARA Title III Hazard Categories for this product are indicated below. If the word "YES" appears next to any category, this product may be reportable by you under the requirements of 40.CFR.370. Please consult those regulations for details.

The exact composition of this material is a Trade Secret. In case of a medical emergency, the specific chemical identity will be provided to the treating physician or nurse for proper emergency and first aid treatment. A written statement of confidentiality agreement will be required as soon as circumstances permit as provided by 29 CFR 1910.1200.

**TSCA:**

All components of this product that are required to be on the TSCA inventory are listed on the inventory.

SARA/TITLE III HAZARD CATEGORIES:

**Component Analysis**

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

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**15. REGULATORY INFORMATION CONTINUATION**

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Immediate (Acute) Health: NO      Reactive Hazard      NO

Delayed(Chronic) Health: NO Sudden Release of Pressure NO

Fire Hazard: NO

HMIS HAZARD RATINGS:

HEALTH HAZARD: 1 FIRE HAZARD: 1 REACTIVITY: 0

STATE REGULATIONS:

**Component Analysis - State**

This product does not contain any components in amounts exceeding reportable thresholds that are listed on the state lists from CA, MA, MN, NJ, PA, RI.

WHMIS Hazard Class: D2B

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**16. OTHER INFORMATION**

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MSDS LEGEND:

ACGIH = American Conference of Governmental Industrial Hygienists

CAS = Chemical Abstracts Service Registry Number

CEILING = Ceiling Limit (15 Minutes)

CEL = Corporate Exposure Limit

OSHA = Occupational Safety and Health Administration

PEL = Permissible Exposure Limit (OSHA)

STEL = Short Term Exposure Limit (15 Minutes)

TDG = Transportation of Dangerous Goods (Canada)

TLV = Threshold Limit Value (ACGIH)

TWA = Time Weighted Average (8 Hours)

WHMIS = Worker Hazardous Materials Information System (Canada)

\* = See Section 3 Hazards Identification - Repeated Exposure(Chronic) Information

IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE, OR OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, STABILITY OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling and storage. Other factors may involve other or additional safety or performance considerations. While our technical

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**16. OTHER INFORMATION CONTINUATION**

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personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended

as, and nothing herein shall be construed as a recommendation to infringe any existing patents or violate any federal, state or local laws, rules, regulations or ordinances.  
The product number may contain an "alpha" and/or "numeric" suffix for internal coding purposes.

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## 17. WARNING LABEL INFORMATION

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### SIGNAL WORD:

CAUTION - A CONFINED DUST CLOUD COULD RESULT IN AN EXPLOSION.

### HAZARD WARNINGS:

**AIRBORNE DUST PARTICLES MAY FORM EXPLOSIVE AIR-DUST MIXTURE.**

DUST OR VAPORS MAY BE IRRITATING TO SKIN, EYES AND RESPIRATORY TRACT.  
DUST MAY REDUCE LUNG FUNCTION.

### PRECAUTIONS:

Avoid breathing dust, vapors or mist.

Avoid contact with eyes, skin and clothing.

Wear chemical resistant gloves such as rubber, neoprene or vinyl.

Wear safety glasses with side shields or chemical safety goggles.

Wash thoroughly after handling.

Before using, read Material Safety Data Sheet (MSDS) for this material.

### FIRST AID

#### EYES:

IMMEDIATELY flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. IF IRRITATION PERSISTS GET MEDICAL ATTENTION.

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**17. WARNING LABEL INFORMATION (Continued)**

**SKIN:**

Wash thoroughly with soap and water. Wash clothing before reuse. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

**INHALATION:**

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration. GET MEDICAL ATTENTION IMMEDIATELY.

**INGESTION:**

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Have patient drink several glasses of water then induce vomiting by having patient tickle back of throat with finger. Keep airway clear. GET MEDICAL ATTENTION IMMEDIATELY.

**IN CASE OF SPILL OR LEAK:**

Sweep or vacuum spills. To minimize dust, vacuum cleaning is preferred.

**FIRE:**

Water, dry chemical, alcohol foam, carbon dioxide.

Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and full protective clothing.

**HANDLING AND STORAGE:**

Store in a clean, dry, well ventilated area away from heat.

Store in closed and properly labeled containers.

Do not reuse containers.

**DISPOSAL:**

Dispose of in accordance with federal, state and local regulations.

**INFORMATION REQUIRED BY FEDERAL, STATE OR LOCAL REGULATIONS:**

**This Product Contains:**

CAS#	NAME
26678-93-3	Formaldehyde, polymer with 4-(1,1,3,3-tetramethyl-butyl)phenol
140-66-9	Phenol, 4-(1,1,3,3-tetramethylbutyl)-

HMIS RATING: HEALTH   1   FLAMMABILITY   1   REACTIVITY   0  

LABEL NUMBER: 1100M8839

For Industrial Use Only

The product number may contain an "alpha" and/or "numeric" suffix for internal coding purposes.