

## Material Safety Data Sheet

### Xylene-S

### Section 1 - Chemical Product and Company Identification

**MSDS Name:**

Xylene-S

**Catalog Numbers:**

40133

**Synonyms:**

Hemo-De; Carvene; (+)-4-Isopropenyl-1-methylcyclohexene; (+)-R-Limonene;  
 (R)-1-Methyl-4-(1-methylethenyl)cyclohexene; D-(+)-Limonene; d-Limonene; d-p-Mentha-1,8-diene;  
 optically active terpene; (The racemic mixture of d-limonene and l-limonene isomers is

**Company Identification:**

Remel Inc.  
 12076 Santa Fe Drive  
 Lenexa, KS 66215

**Company Phone Number:**

913-888-0939

**InfoTrac Emergency Number:**

(800) 535-5053

**InfoTrac Emergency Number, international:**

1-352-323-3500

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS	Hazard Symbols	Risk Phrases
5989-27-5	D-limonene	>98	227-813-5		
25013-16-5	Butylated hydroxyanisole	<0.024	246-563-8		

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Appearance: Clear almost colorless*

*Warning! Flammable liquid and vapor. May cause allergic skin reaction. Causes eye and skin irritation. May cause respiratory tract irritation. Marine pollutant. Flash Point: 48°C.*

*Target Organs: Skin*

**Potential Health Effects****Eye:**

Causes eye irritation.

## Material Safety Data Sheet

### Xylene-S

**Skin:**

Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

**Ingestion:**

May cause digestive tract disturbances.

**Inhalation:**

May cause respiratory tract irritation.

**Chronic:**

In 2-year gavage studies, there was clear evidence of carcinogenic activity of d-limonene for male rats, as shown by increased incidences of tubular cell hyperplasia, adenomas, and adenocarcinomas of the kidney. There was NO evidence of carcinogenic activity of d-limonene for female rats, for male mice, or for female mice.

## Section 4 - First Aid Measures

**Eyes:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

**Skin:**

In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical aid if symptoms occur. Wash clothing before reuse.

**Ingestion:**

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:**

Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. This liquid floats on water and may travel to a source of ignition and spread fire.

**Extinguishing Media:**

Use water fog, dry chemical, carbon dioxide or alcohol type foam.

**Autoignition Temperature:**

255°C ( 491.00°F)

**Explosion Limits:**

Lower: .70 vol %      Upper: 6.10 vol %

**Flash Point:**

48°C ( 118.40°F)

## Material Safety Data Sheet

### Xylene-S

**NFPA Rating:**

(estimated) Health: 2; Flammability: 2; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:**

Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Forms smooth, slippery surfaces on floors, posing an accident risk. Remove all sources of ignition. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:**

Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor or mist.

**Storage:**

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Separate from oxidizing materials. Partially filled containers should be blanketed with nitrogen.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:**

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.

**Exposure Limits**

Chemical Name:	ACGIH	NIOSH	OSHA
D-limonene	None listed	None listed	None listed
Butylated hydroxyanisole	None listed	None listed	None listed

**OSHA Vacated PELs****Personal Protective Equipment****Eyes:**

Wear chemical splash goggles.

**Skin:**

Wear appropriate protective gloves to prevent skin exposure.

**Clothing:**

Wear appropriate protective clothing to prevent skin exposure.

## Material Safety Data Sheet

### Xylene-S

#### Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

## Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Liquid
<b>Color:</b>	Clear almost colorless
<b>Odor:</b>	Citrus-like odor
<b>pH:</b>	No information found
<b>Vapor Pressure:</b>	1.98 mm Hg @ 25°C
<b>Vapor Density:</b>	4.7 (air=1)
<b>Evaporation Rate:</b>	No information found
<b>Viscosity:</b>	No information found
<b>Boiling Point:</b>	175 - 176°C @ 760 mmHg
<b>Freezing/Melting Point:</b>	-74°C
<b>Decomposition Temperature:</b>	No information found
<b>Solubility in water:</b>	Insoluble.
<b>Specific Gravity/Density:</b>	.8400 g/ml
<b>Molecular Formula:</b>	C10H16
<b>Molecular Weight:</b>	136.24

## Section 10 - Stability and Reactivity

#### Chemical Stability:

Stable under normal temperatures and pressures. Oxidizes to a film in air, oxidation behavior similar to that of rubber or drying oils.

#### Conditions to Avoid:

Ignition sources, excess heat, prolonged exposure to air

#### Incompatibilities with Other Materials

Strong oxidizing agents.

#### Hazardous Decomposition Products

Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide

#### Hazardous Polymerization

Has not been reported.

## Section 11 - Toxicological Information

#### RTECS:

CAS# 5989-27-5: GW6360000  
CAS# 25013-16-5: SL1945000

## Material Safety Data Sheet

### Xylene-S

**LD50/LC50:**

CAS# 5989-27-5:

Draize test, rabbit, skin: 10%/24H Mild

Oral, mouse: LD50 = 5600 mg/kg

Oral, rat: LD50 = 4400 mg/kg

Skin, rabbit: LD50 = &gt;5 gm/kg.

CAS# 25013-16-5:

Oral, mouse: LD50 = 1100 mg/kg

Oral, rabbit: LD50 = 2100 mg/kg

Oral, rat: LD50 = 2 gm/kg.

**Carcinogenicity:**

CAS# 5989-27-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 25013-16-5

ACGIH: Not listed

California: carcinogen, initial date 1/1/90

NTP: Suspect carcinogen

IARC: Group 2B carcinogen

**Epidemiology:**

No information available.

**Teratogenicity:**

Not known to be teratogenic.

**Reproductive:**

See actual entry in RTECS for complete information.

**Mutagenicity:**

d-Limonene was not mutagenic in 4 strains of *S. typhimurium*, did not significantly increase the number of Tft-resistant cells in the mouse L5178Y/TK+/- assay, and did not induce chromosomal aberrations or SCEs in cultured CHO cells.

**Neurotoxicity:**

No information available.

**Other:**

See actual entry in RTECS for complete information.

## Section 12 - Ecological Information

**Ecotoxicity:**

No information found

**Environmental:**

May bioconcentrate in aquatic organisms and fish. Has low mobility in soil and may rapidly volatilize in the atmosphere. Limonene can be readily degraded in soil.

**Physical:**

No information found

**Other:**

Dipentene, which is optically inactive limonene, is a marine pollutant.

## Material Safety Data Sheet

### Xylene-S

### Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

#### RCRA P Series Wastes

None of the components are on this list.

#### RCRA U Series Wastes

None of the components are on this list.

### Section 14 - Transport Information

	US DOT	Canadian TDG
<b>Proper Shipping Name:</b>	DIPENTENE	DIPENTENE
<b>Hazard Class:</b>	3	3
<b>UN Number:</b>	UN2052	UN2052
<b>Packing Group:</b>	III	III

### Section 15 - Regulatory Information

#### European/International Regulations

##### European Labelling in Accordance with EC Directives:

Hazard Symbols: XI N

Risk Phrases: R 10 Flammable.

R 38 Irritating to skin.

R 43 May cause sensitization by skin contact.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases: S 24 Avoid contact with skin.

S 37 Wear suitable gloves.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

##### WGK (Water Danger/Protection)

Not available

##### United Kingdom Occupational Exposure Limits

Not available

##### United Kingdom Maximum Exposure Limits

Not available

##### Canadian DSL/NDSL

CAS# 5989-27-5 is listed on Canada's DSL List.

CAS# 25013-16-5 is listed on Canada's DSL List.

## Material Safety Data Sheet

### Xylene-S

#### Canadian WHMIS Classifications

This product has a WHMIS classification of B3, D2B.

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

#### Canadian Ingredient Disclosure List

CAS# 5989-27-5 is listed on the Canadian Ingredient Disclosure List.

CAS# 25013-16-5 is listed on the Canadian Ingredient Disclosure List.

#### US Federal

##### TSCA

CAS# 5989-27-5 is listed on the TSCA Inventory.

CAS# 25013-16-5 is listed on the TSCA Inventory.

##### Health and Safety Reporting List

None of the components are on this list.

##### Chemical Test Rules

None of the components are on this list.

##### TSCA Section 12b

None of the components are on this list.

##### TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

##### CERCLA Hazardous Substances and corresponding RQs

None of the components are on this list.

##### SARA Section 302 Extremely Hazardous Substances

None of the components are on this list.

##### SARA Hazard Categories

CAS# 5989-27-5: immediate, fire.

##### SARA Section 313

None of the components are on this list.

##### Clean Air Act - Hazardous Air Pollutants (HAPs)

None of the components are on this list.

##### Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

##### Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

##### Clean Water Act - Hazardous Substances

None of the components are on this list.

##### Clean Water Act - Priority Pollutants

None of the components are on this list.

##### Clean Water Act - Toxic Pollutants

None of the components are on this list.

##### OSHA - Highly Hazardous

None of the components are on this list.

##### OSHA - Specifically Regulated Chemicals

None of the components are on this list.

## Material Safety Data Sheet

### Xylene-S

#### US State

##### State Right to Know

Butylated hydroxyanisole can be found on the following state Right-to-Know lists: California, Minnesota, Massachusetts.

##### California Prop 65

WARNING: This product contains Butylated hydroxyanisole, a chemical known to the State of California to cause cancer.

##### California No Significant Risk Level

None of the components are on this list.

None of the components are on this list.

## Section 16 - Other Information

No information found

MSDS Creation Date: November 14, 2005

Revision Date: August 7, 2007

#### Revisions were made in Sections:

14

*This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this*

*MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.*