

**DSM Elastômeros Brasil**

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**Material Safety Data Sheet**  
**Keltan® EPDM Grade 13, 5508, 4002**

**1. GENERAL INFORMATION**

**Chemical Name:** Ethylene, propylene, ethyldiene norbornene, terpolymer rubber (EPDM)  
**CAS Number:** 25088-36-2  
**CAS Name:** Bicyclo[2,2,1]-hept-2-ene, 5-ethyldiene, polymer with ethane and 1-propene  
**Product Use:** Rubber articles and rubber modified articles

**2. CHEMICAL COMPOSITION**

| <u>Inredient</u> | <u>CAS #</u> | <u>Wt. %</u> | <u>Hazard Classification</u> |
|------------------|--------------|--------------|------------------------------|
| EPDM             | 25088-36-2   | 99           | NH                           |

**3. PHYSICAL DATA**

|   |                  |  |                |
|---|------------------|--|----------------|
| <b>Physical State:</b>                        | Bales or pellets | <b>Odor:</b>                             | none to slight |
| <b>Appearance:</b>                            | White to amber   | <b>Odor Threshold:</b>                   | NE             |
| <b>Melting/Freezing Points:</b>               | NA               | <b>Specific Gravity (range):</b>         | 0.86-0.88      |
| <b>Vapor Pressure:</b>                        | NA               | <b>Boiling Point:</b>                    | NA             |
| <b>Vapor Density:</b>                         | NA               | <b>Volatiles (% by weight, @ 105°C):</b> | 1.0 max        |
| <b>Solubility in Water at 20°C:</b>           | Insoluble        | <b>Evaporation rate:</b>                 | NA             |
| <b>Coefficient in Water/Oil Distribution:</b> | NE               | <b>pH:</b>                               | NA             |

**4. FIRE AND EXPLOSION HAZARD DATA NFPA Classification: Fire 1, Others 0**

|   |   |                                      |    |
|---|---|--------------------------------------|----|
| <b>Flash Point, Method:</b>             | >800°C, CCO   | <b>Upper/Lower Explosive Level:</b>  | NA |
| <b>Auto Ignition Temperature:</b>       | Above 550°C (790°F)   | <b>Upper/Lower Flammable Limits:</b> | NE |
| <b>Ignition Temperature:</b>            | >200°C, 392°F   |                                      |    |
| <b>Combustible:</b>                     | No, but the product will burn if ignited.   |                                      |    |
| <b>Hazardous Combustion Products:</b>   | Carbon monoxide, carbon dioxide, products from incomplete combustion, and various hydrocarbons.   |                                      |    |
| <b>Extinguishing Media:</b>             | All fire extinguishing media permitted - foam or water fog recommended.   |                                      |    |
| <b>Special Fire Fighting Procedure:</b> | During emergency conditions, exposure to thermal decomposition products may cause a health hazard. Use of NIOSH approved self-contained breathing apparatus is recommended. |                                      |    |
| <b>Sensitivity to Static Discharge:</b> | NA  | <b>Sensitivity to Impact/Shock:</b>  | NA |

**5. PROTECTIVE AND PREVENTIVE MEASURES**

|   |  |
|---|--|
| <b>Personal Protective Equipment:</b>     | <b>Eye:</b> Wear Safety glasses.<br><b>Skin:</b> Wear clothing appropriate to prevent skin contact. Where contact may occur with hot material, wear thermal resistant gloves, arm protection, and a face shield.<br><b>Respiratory:</b> Not normally required at ambient temperature. If processing in area where ventilation is inadequate or ignition has occurred, wear a NIOSH-approved organic vapor respirator with mechanical filtration. |
| <b>Handling Procedures and Equipment:</b> | Avoid skin and eye contact, practice good personal hygiene. Avoid inhalation of fumes/vapors from hot rubbers, compounds and vulcanizes.   |
| <b>Engineering Controls:</b>              | Local exhaust ventilation is recommended during all hot processing operations.   |
| <b>Exposure Guidelines:</b>               | NA   |

MARKETED BY

**HARWICK STANDARD**  
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 60 S. Seiberling Street - Akron, Ohio 44305

## 6. SPECIAL REGULATORY HAZARD CLASSIFICATIONS FOR HEALTH, SAFETY, AND FOOD

|  |  |
|--|--|
| <b>OSHA:</b>                           | This product is not hazardous under the Hazard Communication Standard, 29 CFR 1910.1200.   |
| <b>FDA:</b>                            | The following grades listed below are approved for use in Food or Drug Applications 21 CFR 177.2600, "Rubber Articles Intended for Repeated Use"<br>Approved Grades: 5508  |
| <b>TSCA:</b>                           | Components of these products are listed under TSCA Chemical Substance Inventory.   |
| <b>TRANSPORTATION CLASSIFICATIONS:</b> | United States DOT: Designation and labeling are not applicable, as products are not defined or designated as a hazardous material by U.S. Department of Transportation under Title 49 of CFR.<br>Canada: These products are not regulated under the Canadian Transportation of Dangerous Goods Regulations.<br>IATA: These products are not regulated under the International Air Transport Association Dangerous Goods regulations. |
| <b>SARA Title III:</b>                 | <u>Section 302/304</u> . Extremely Hazardous Substances - None.<br><u>Section 311</u> . Hazardous Substances - Not Applicable.<br><u>Section 319</u> . This product is not subject to reporting requirements.  |
| <b>CEPA:</b>                           | Components of these products are included in Canada's DSL.   |
| <b>EC:</b>                             | The European Commission does not consider these products hazardous.  |
| <b>WHMIS:</b>                          | These products are not considered Controlled Products under Canada's Workplace Hazardous Material Information System   |

## 7. TOXICOLOGY AND HEALTH DATA

|   |  |
|---|--|
| <b>Medical Conditions Aggravated by Exposure:</b> | Some individuals with specific sensitivities may exhibit eye, nose, throat or thermal irritation with prolonged exposure to processing fumes. Individuals with pre-existing skin disorders should avoid contact with this material.  |
| <b>Specific Hazard:</b>                           | No acute or chronic hazards or effects are known.  |
| <b>Routes of Exposure:</b>                        | <b>Eye Contact:</b> Not a probable route of exposure. Particulates may scratch eye surface or cause mild irritation.<br><b>Skin Contact:</b> A single prolonged exposure is not likely to result in material being absorbed through the skin in harmful amounts. Repeated, prolonged exposure may cause mild skin irritation in some individuals. Exposure to hot material may cause thermal burns.<br><b>Ingestion:</b> Not a probable route of exposure. |
| <b>Toxicology Information:</b>                    | <b>Inhalation:</b> Not a probable route of exposure under conditions of normal use. Hot fumes or vapors first may form during processing or burning can cause irritation to the respiratory tract.<br><b>Reproductive Effects:</b> None reported <b>Mutagenicity:</b> None reported<br><b>LD50 = NE</b> <b>LC50 = NA</b><br><b>Tetragenicity:</b> None reported<br><b>Carcinogenicity:</b> None reported.  |

## 8. EMERGENCY AND FIRST AID PROCEDURES

|                      |  |
|----------------------|--|
| <b>Eye Contact:</b>  | Remove as for any foreign object. Flush with clean water for 15 minutes. Obtain medical attention if irritation persists.  |
| <b>Skin Contact:</b> | Wash with soap and water. If thermal irritation, flush affected area with cold water to dissipate heat, then cover with clean cotton sheeting or gauze and get prompt medical attention. |
| <b>Inhalation:</b>   | If fumes/vapors are inhaled, move to fresh air, aid breathing if necessary. Obtain medical attention if irritation persists.   |
| <b>Ingestion:</b>    | Unlikely to occur.   |

## 9. CHEMICAL REACTIVITY

|  |   |
|--|---|
| <b>Chemical Stability:</b>                   | Product is stable at ambient temperature and pressure.  |
| <b>Conditions to Avoid:</b>                  | High temperature, 300°-350°C(572°-662°F) will cause thermal decomposition; Ignition source.           |
| <b>Incompatibility with other Materials:</b> | None known.   |
| <b>Hazardous Decomposition Products:</b>     | Carbon monoxide, carbon dioxide, various hydrocarbons, silicates and partially oxidized hydrocarbons. |
| <b>Hazardous Polymerization:</b>             | Will not occur.   |

## 10. SPILLS, DISPOSAL, STORAGE GUIDELINES

|                                       |  |
|---------------------------------------|--|
| <b>Spill and Release Information:</b> | Repackage uncontaminated rubber. Flush or dispose of as noted below. |
|---------------------------------------|--|

**Disposal Information:**

Reuse if possible. Material as supplied is not characterized as hazardous under RCRA. Dispose in accordance with local, state, and federal regulations and applicable environmental regulations.

**Storage:**

Store below 35°C (95°F) in dry area and in the absence of direct, natural, or artificial light.

**11. LABELS**

OSHA: Not Required

WHMIS: Not Required

**ADDITIONAL INFORMATION, ABBREVIATIONS AND NOTICES TO USER**

|                          |   |              |                             |
|--------------------------|---|--------------|-----------------------------|
| <b>ACGIH:</b>            | American Conference of Governmental Industrial Hygienists   | <b>CAS:</b>  | Chemical Abstract Service   |
| <b>CEPA:</b>             | Canadian Environmental Protection Act   | <b>CFR:</b>  | Code of Federal Regulations |
| <b>DOT:</b>              | Department of Transportation  | <b>DSL:</b>  | Domestic Substance List     |
| <b>EPA:</b>              | Environmental Protection Agency   | <b>NA:</b>   | Not applicable              |
| <b>EEC:</b>              | European Economic Community   | <b>NE:</b>   | Not established             |
| <b>FDA:</b>              | Food and Drug Administration (U.S.)   | <b>NH:</b>   | Not hazardous               |
| <b>IARC:</b>             | International Agency for Research on Cancer   | <b>PEL:</b>  | Permissible Exposure Limit  |
| <b>NFPA:</b>             | National Fire Protection Association  | <b>TLV:</b>  | Threshold Limit Value       |
| <b>RCRA:</b>             | Resource and Conservation Recovery Act  | <b>TSCA:</b> | Toxic Substance Control Act |
| <b>LC50:</b>             | The concentration in air that causes death in 50% of the animals exposed  |              |                             |
| <b>LD50:</b>             | The dose that causes death in 50% of the animals exposed  |              |                             |
| <b>mg/m<sup>3</sup>:</b> | Milligrams (mg) of substance per cubic meter (m <sup>3</sup> ) of air; method of expressing the concentration of a substance in air |              |                             |
| <b>IATA:</b>             | International Air Transportation Association  |              |                             |
| <b>NIOSH:</b>            | National Institute for Occupational Safety and Health   |              |                             |
| <b>OSHA:</b>             | Occupational Safety and Health Administration   |              |                             |
| <b>SARA:</b>             | Superfund Amendments and Reauthorization Act  |              |                             |
| <b>WHMIS:</b>            | Workplace Hazardous Material Information System   |              |                             |

**NOTICE:**

Although the information contained in this MSDS is believed to be correct as of the date hereof, DSM Elastómeros Brasil makes no representation as to the completeness or accuracy thereof. Those who utilize the product described herein are responsible for determining (a) the suitability of the product for the intended use and (b) the appropriate manner of processing the product to insure safety and quality. In no event DSM Elastómeros Brasil will be responsible for damages of any nature resulting from the use of or reliance upon the information contained herein.

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