

## **Rubber Selection Guide** **CSM or Hypalon®** **Chlorosulphonated Polyethylene**

- |                                |                               |
|--------------------------------|-------------------------------|
| ▪ Abbreviation                 | CSM                           |
| ▪ ASTM D-2000 Classification   | CE                            |
| ▪ Chemical Definition          | Chlorosulfonated-polyethylene |
| ▪ RRP Compound Number Category | 70000 Series                  |

### ◆ Physical & Mechanical Properties

- |                               |                   |
|-------------------------------|-------------------|
| ▪ Durometer or Hardness Range | 45 – 95 Shore A   |
| ▪ Tensile Strength Range      | 1,000 – 3,000 PSI |
| ▪ Elongation (Range %)        | 100 % – 800 %     |
| ▪ Abrasion Resistance         | Good to Excellent |
| ▪ Adhesion to Metal           | Excellent         |
| ▪ Adhesion to Rigid Materials | Excellent         |
| ▪ Compression Set             | Poor to Good      |
| ▪ Flex Cracking Resistance    | Fair to Good      |
| ▪ Impact Resistance           | Good to Very Good |
| ▪ Resilience / Rebound        | Fair to Good      |
| ▪ Tear Resistance             | Fair to Good      |
| ▪ Vibration Dampening         | Fair to Good      |

### ◆ Chemical Resistance

- |                                 |                   |
|---------------------------------|-------------------|
| ▪ Acids, Dilute                 | Excellent         |
| ▪ Acids, Concentrated           | Good to Excellent |
| ▪ Acids, Organic (Dilute)       | Excellent         |
| ▪ Acids, Organic (Concentrated) | Good              |
| ▪ Acids, Inorganic              | Good to Excellent |

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◆ **Chemical Resistance**

▪ Alcohol's	Excellent
▪ Aldehydes	Poor to Fair
▪ Alkalies, Dilute	Good to Excellent
▪ Alkalies, Concentrated	Good to Excellent
▪ Amines	Poor
▪ Animal & Vegetable Oils	Good
▪ Brake Fluids, Non-Petroleum Based	Fair
▪ Diester Oils	Poor
▪ Esters, Alkyl Phosphate	Poor
▪ Esters, Aryl Phosphate	Fair
▪ Ethers	Poor
▪ Fuel, Aliphatic Hydrocarbon	Fair to Good
▪ Fuel, Aromatic Hydrocarbon	Fair
▪ Fuel, Extended (Oxygenated)	Fair
▪ Halogenated Solvents	Poor
▪ Hydrocarbon, Halogenated	Poor
▪ Ketones	Poor
▪ Lacquer Solvents	Poor
▪ LP Gases & Fuel Oils	Good
▪ Mineral Oils	Good to Very Good
▪ Oil Resistance	Fair to Good
▪ Petroleum Aromatic	Poor
▪ Petroleum Non-Aromatic	Fair
▪ Refrigerant Ammonia	Good
▪ Refrigerant Halofluorocarbons	R-11, R-12, R-13
▪ Refrigerant Halofluorocarbons w/ Oil	R-11, R-12, R-22
▪ Silicone Oil	Excellent
▪ Solvent Resistance	Fair to Good

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◆ **Thermal Properties**

- |                                       |                      |
|---------------------------------------|----------------------|
| ▪ Low Temperature Range               | - 60° F to - 40° F   |
| ▪ Minimum for Continuous Use (Static) | - 65° F              |
| ▪ Brittle Point                       | - 70° F              |
| ▪ High Temperature Range              | + 225° F to + 275° F |
| ▪ Maximum for Continuous Use (Static) | + 275° F             |

◆ **Environmental Performance**

- |                        |                   |
|------------------------|-------------------|
| ▪ Colorability         | Excellent         |
| ▪ Flame Resistance     | Good to Excellent |
| ▪ Gas Permeability     | Good to Excellent |
| ▪ Odor                 | Good              |
| ▪ Ozone Resistance     | Excellent         |
| ▪ Oxidation Resistance | Excellent         |
| ▪ Radiation Resistance | Poor to Good      |
| ▪ Steam Resistance     | Poor to Good      |
| ▪ Sunlight Resistance  | Excellent         |
| ▪ Taste Retention      | Fair to Good      |
| ▪ Weather Resistance   | Excellent         |
| ▪ Water Resistance     | Good              |

For assistance in identifying the appropriate polymer or material, or to develop and formulate a CSM or Hypalon / chlorosulfonated-polyethylene rubber compound to meet your specific application and performance requirements, please contact Robinson Rubber Products at e-mail: [sales@robinsonrubber.com](mailto:sales@robinsonrubber.com) or phone: +1-763-535-6737.

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