

Original edition: July 28, 2016

Latest revision: April .28, 2017

Product Information Sheet

| Item | Description | | | | | | | | | | | | | | | | | | |
|---|--|--------------|------------------------|------------------------|-------------------|------|---------|------------------|--------------|---------|-------------------|------------|---------|-------------|-----------|---------|-------|---|-----|
| 1. Identification | Product category : Copper Clad Laminate | | | | | | | | | | | | | | | | | | |
| | Product designation : R-5725S | | | | | | | | | | | | | | | | | | |
| | Company name : Panasonic Corporation, Automotive & Industrial Systems Company | | | | | | | | | | | | | | | | | | |
| | Location : 111,Azaishizuka,Koriyama,Fukushima 963-8556 Japan | | | | | | | | | | | | | | | | | | |
| | Department : Quality Assurance Koriyama Department, Quality Center | | | | | | | | | | | | | | | | | | |
| | : | | | | | | | | | | | | | | | | | | |
| | Telephone number : +81-24-944-2903 FAX number : +81-24-944-6086 | | | | | | | | | | | | | | | | | | |
| 2. Hazards identification | GHS classification : Not applicable to Classification Standard | | | | | | | | | | | | | | | | | | |
| | Hazard : Not applicable | | | | | | | | | | | | | | | | | | |
| | Hazardous property : Not applicable | | | | | | | | | | | | | | | | | | |
| | Environmental impact : Not applicable | | | | | | | | | | | | | | | | | | |
| 3. Composition / information on ingredients | Classification (single product or composite) : Composite | | | | | | | | | | | | | | | | | | |
| | Ingredients and contained amount : | | | | | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Ingredient</th> <th style="text-align: center;">CAS Number</th> <th style="text-align: center;">Contained amount (wt%)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Cured epoxy resin</td> <td style="text-align: center;">None</td> <td style="text-align: center;">1 to 35</td> </tr> <tr> <td style="text-align: center;">Inorganic filler</td> <td style="text-align: center;">Trade secret</td> <td style="text-align: center;">1 to 20</td> </tr> <tr> <td style="text-align: center;">Woven glass cloth</td> <td style="text-align: center;">65997-17-3</td> <td style="text-align: center;">1 to 55</td> </tr> <tr> <td style="text-align: center;">Copper foil</td> <td style="text-align: center;">7440-50-8</td> <td style="text-align: center;">5 to 99</td> </tr> <tr> <td style="text-align: center;">Total</td> <td style="text-align: center;">-</td> <td style="text-align: center;">100</td> </tr> </tbody> </table> | Ingredient | CAS Number | Contained amount (wt%) | Cured epoxy resin | None | 1 to 35 | Inorganic filler | Trade secret | 1 to 20 | Woven glass cloth | 65997-17-3 | 1 to 55 | Copper foil | 7440-50-8 | 5 to 99 | Total | - | 100 |
| | Ingredient | CAS Number | Contained amount (wt%) | | | | | | | | | | | | | | | | |
| | Cured epoxy resin | None | 1 to 35 | | | | | | | | | | | | | | | | |
| | Inorganic filler | Trade secret | 1 to 20 | | | | | | | | | | | | | | | | |
| Woven glass cloth | 65997-17-3 | 1 to 55 | | | | | | | | | | | | | | | | | |
| Copper foil | 7440-50-8 | 5 to 99 | | | | | | | | | | | | | | | | | |
| Total | - | 100 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 4. First aid measures | If inhaled : When you inhaled fine powder generated during handling and processing, gargle with clean water and, as needed, seek medical advice. | | | | | | | | | | | | | | | | | | |
| | In case of skin contact : When your skin is in contact with fine powder generated during handling and processing, wash your skin with a soap and clean water and, as needed, seek medical advice. | | | | | | | | | | | | | | | | | | |
| | In case of eye contact : When your eyes are in contact with fine powder generated during handling and processing, never rub your eyes by hand and wash them with clean water immediately and, as needed, seek medical advice. | | | | | | | | | | | | | | | | | | |
| | If swallowed : When you inhaled fine powder generated during handling and processing, gargle with clean water and, as needed, seek medical advice. | | | | | | | | | | | | | | | | | | |
| 5. Fire fighting measures | Fire extinguishing method : Battle the fires from the windward side to avoid inhalation of toxic gas. Wear respiratory protection equipment depending on the situation. | | | | | | | | | | | | | | | | | | |
| | Extinguishant : Use extinguishants such as water, powder, foams, carbon dioxide although nothing specified. | | | | | | | | | | | | | | | | | | |

| Item | Description |
|---|--|
| 6. Accidental release measures | Precautions for human body : Wear a protective mask, protective gloves and protective glasses as needed. Collection and purification method, etc. : When materials such as powder and mills ends have spilled on the floors, etc., clean them quickly and quietly so that powder dust does not fly and treat them in an appropriate way in accordance with country's or regional restrictions. |
| 7. Precautions for handling and storage | Handling : If powder dust generated from cutting or drilling process is attached on skin, skin may be irritated or poisoned. Wear protective tools when operating at such a workplace to avoid direct contact with powder dust. Further, wear protective glove to avoid injuries on hands by sharp edge of the product. Storage : Avoid direct sunlight and store the product indoors with controlled temperature and humidity at normal conditions. |
| 8. Exposure controls and protection measures | Control concentration : Not applicable Allowable concentration Japan Society for Occupational Health : The Japan Society for Occupational Health : Class 3 dusts(Inorganic and organic dusts other than Class 1 and 2); Respirable dust 2mg/m ³ , Total dust 8mg/m ³ ACGIH : Not applicable Equipment measures : Provide a local ventilation equipment since powder dust generates during processing. Protective equipment Protective mask : Necessary wearing Protective glass : Necessary wearing Protective glove : Necessary wearing Protective cloth : Necessary wearing |
| 9. Physical and chemical properties | Appearance : Solid sheet Melting point (°C) : None Specific gravity (23°C) : 1.6 to 2.1 (without copper foil) |
| 10. Stability and reactivity | Stability, reactivity : Chemically stable in ordinary temperatures |
| 11. Toxicity information (including symptoms of humans and epidemiological information) | Skin corrosivity : None known Irritating nature (skin, eyes) : None known Sensitizing property : None known Acute toxicity (including 50% lethal amount, etc.) : None known Chronic toxicity : None known Carcinogenic : None known Mutagenesis(microorganism, chromosomal aberration) : None known Reproductive toxicity : None known Teratogenicity : None known |

| Item | Description |
|--------------------------------------|---|
| 12. Environmental impact information | Resolvability : None known Accumulation property : None known Fish toxicity : None known Others : None known |
| 13. Disposal considerations | Outsource disposal of waste products to industrial waste disposers. Follow relevant national and local regulations when disposing waste products. |
| 14. Transportation considerations | There is no safety problem in transportation. However, avoid moisture absorption, exposing to water and rough handling during transportation. |
| 15. Regulatory information | <ul style="list-style-type: none"> •Customers are informed that this product has possibility for containing 4,4'-isopropylidenediphenol (bisphenol A; BPA) (CAS No: 80-05-7) over 1000ppm. •Other than REACH SVHC regulation, follow relevant national and local regulations for processing our product. •Ensure the environment for processing this material in compliance with federal requirements and ensure conformity to local regulations. •Processing this product is followed by the competent regulations in an applicable country or region. |
| 16. Other information | <p>The product handled in this document is not categorized as "chemical product", we're not legally required to provide customers with the SDS documents. This document contains the general information needed for keeping safe working environment for customer's reference, and is supposed to provide to customers upon individual request.</p> <p>As original chemical structure of raw materials have already extinguished by polymerization, it shall not be deemed as an exposure of raw materials even if the dust of cured dielectric layer is appeared in customer's process.</p> <p>However, please be advised that customer has responsibility to secure a safe working environment by installing the ventilation equipment as described in Article 8 of this document. Any use of our product for an ordinary use or under unrecognized situation are not supposed. In such a case, customer will be responsible for taking the appropriate measure to secure the safe working environment.</p> <p>As actual component contents vary according to the detailed specification of each multilayer materials., the table described in Article 3 in this document covers entire range of all of product specifications.</p> <p>The description in this document is based on the information at the time of issuance or revision. Customers have to be advised that any part of information in this document may contain deviations from latest regulations or product specifications.</p> <p>Cited references ; Chemical Risk Information Platform (NITE) SDS (from source material suppliers) etc</p> |