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[METRIC]
A-A-59109
3 July 1997
SUPERSEDING
MIL-A-47284A (MI)
24 September 1991

COMMERCIAL ITEM DESCRIPTION

ADHESIVE, EPOXY RESIN BASE

The General Services Administration has authorized the use of this commercial item description as a replacement for MIL-A-47284A (MI) for all federal agencies.

1. SCOPE. This commercial item description covers one type of adhesive consisting of an epoxy resin base and an amine type curing agent.

2. SALIENT CHARACTERISTICS

2.1 Material. The adhesive shall consist of a two-component system consisting of an epoxy resin formulation with an inorganic filler and an amine type activator.

2.2 Chemical and physical properties of uncured resin and curing agent.

2.2.1 Epoxy resin.

2.2.1.1 Viscosity. The viscosity shall be not less than 40 centipoises nor greater than 100 centipoises at 23° Celsius (C) (73.4° F).

2.2.1.2 Specific gravity. The specific gravity shall be not less than 1.6 and not greater than 1.76 at 25°C (77° F).

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Commander, U.S. Army Missile Command, ATTN: AMSMI-RD-SE-TD-ST, Redstone Arsenal, AL 35898-5270.

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2.2.1.3 Solids content. The solids content shall be not less than 99 percent.

2.2.2 Curing agent.

2.2.2.1 Viscosity. The viscosity of the curing agent shall be not less than 5 nor greater than 15 centipoises at 23°C (73.4° F).

2.2.2.2 Specific gravity. The specific gravity of the curing agent shall be not less than 0.940 and not greater than 0.960 at 25°C (77° F).

2.3 Mechanical properties of cured epoxy. The material shall meet the requirements specified in 2.3.1 through 2.3.4 at 23 ± 1.1°C (73.4° ± 2° F) when tested.

2.3.1 Tensile strength. The tensile strength of the cured epoxy shall be not less than 154.7 kilograms force per square centimeter (kgf/cm^2) (2200 lbf/in^2).

2.3.2 Elongation. The percentage of elongation of the cured epoxy shall be greater than 1 percent and less than 3 percent.

2.3.3 Shear strength. The shear strength of the cured epoxy shall be not less than 112.5 kgf/cm^2 (1600 lbf/in^2).

2.3.4 Hardness. The hardness of the cured epoxy shall be not less than 85 Shore D.

2.4 Physical property. The material shall meet the requirements specified in 2.4.1 when tested.

2.4.1 Shelf life. The shelf life of the resin and activator in unopened containers shall be not less than 1 year from date of manufacture when stored at a temperature less than 27°C (80.6° F) .

2.5 Workmanship. The workmanship shall be such as to ensure a product which is uniform and in conformance with this specification. The resin and activator shall be free of dirt, foreign material or other contaminants.

3. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

4. QUALITY ASSURANCE PROVISIONS

4.1 Product Conformance. The products provided shall meet the salient characteristics of this Commercial Item Description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same

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product offered for sale in the commercial market. The government reserves the right to require proof of such conformance.

4.2 Market Acceptability (MA). The following market acceptability criteria are necessary to document the quality of the product to be provided under this CID.

4.2.1 The company producing the item must have been producing a product meeting the requirements of this CID for at least two years.

4.2.2 The company must have sold 1000 units meeting this CID, in the commercial marketplace over the past two years.

4.3 Inspection requirements. Bid samples may be required for CID items when necessary to ensure product quality.

4.3.1 Examination. Each container in the sample shall be visually examined to verify the requirements of 5.1.

5. PACKAGING

5.1 Preservation, packaging, packing and marking. Preservation, packing, and marking shall be as specified in the contract or order.

6. NOTES

6.1 Intended use. The adhesive covered by this specification is intended for use in bonding metal to metal. Other constructions such as metal to plastic or plastic to plastic may be bonded provided the use of the adhesive is substantiated by testing the combination of the materials in question.

6.2 Source of documents. The Code of Federal Regulations (CFR) may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC, 20402.

6.3 Product names. This adhesive is available commercially as Armstrong A1 with activator A. It is manufactured by Resin Technology Group, Inc. and is sold through distributors of Ellsworth Adhesive System.

Preparing Activity:
Army - MI

(Project No. 8040 - A196)