Product Datasheet

EpoPro® 504

EpoPro® 505

MULTIPURPOSE EPOXY RESINS

COMPARE TO: *Epon® 820, Araldite® GY 6004, Araldite® CY/GY 6005, and D.E.R® 330*

EpoPro® 504 and EpoPro® 505 are modified DGEBA epoxy resins with reduced viscosity compared to standard liquid epoxy resins like Epon® 828, Araldite® GY 6010 or D.E.R® 331. They are extremely versatile and has almost unlimited uses and when combined with suitable hardeners can be used as adhesives, binders, tooling & laminating resins, coatings, sealants and electrically insulating materials. Hundreds of different hardeners can be used with these resins to achieve a wide range of both processing parameters and cured properties. This datasheet is an overview of a small selection of hardeners that might be worth considering and is meant to illustrate the range of properties that can be achieved. For information on the results achieved using other hardeners please contact us assistance.

APPLICATIONS & BENEFITS:

- Wide range of applications when combined with suitable hardeners
- Lower viscosity & better wetting than standard resins with little impact on the cured properties

HANDLING PROPERTIES	VALUE	TEST METHOD
EpoPro® 504		
Visual Appearance	Clear, colorless to light yellow liquid	
Weight per Epoxide	178 – 196	ASTM D-1652
Color, Gardner	<1	ASTM D-1544
Density,	1.16 g/cm³	ASTM E-201
Viscosity at 25ºC	5,000 – 6,800 cps	ASTM D-2393
EpoPro® 505		
Visual Appearance	Clear, colorless to light yellow liquid	
Weight per Epoxide	182 – 196	ASTM D-1652
Color, Gardner	<1	ASTM D-1544
Density,	1.16 g/cm³	ASTM E-201
Viscosity at 25ºC	7,500 – 9,500 cps	ASTM D-2393

Sampling of Common Hardeners:

Description	Curing Conditions	Characteristics & applications
EpoPro 202B	7 days at 25ºC or 16 hrs. at 70ºC or 8 hrs. at 95ºC	Extremely long work-life, used to cast or encapsulate very large parts. Low exotherm. Excellent laminating resin for large parts.
EpoPro HY 956	24 – 48 hours at 25ºC or 4 hrs.	Excellent for electrical encapsulation &

	at 65ºC	potting, tough, rigid casting & coating system.
Hardener H100	24 hrs. at 25ºC or 3 hrs. at 65ºC	General Purpose, tough rigid cured polymer
Hardener H150	24 hrs. at 25ºC or 3 hrs. at 65ºC	Excellent cryogenic performance, impact & thermal shock resistant. Very good adhesive.

Processing Properties

	Mix ratio (by weight)	Mix ratio (by volume)	With EpoPro 504 Mixed Viscosity at 25ºC	With EpoPro 505 Mixed Viscosity at 25ºC	Gel time (100g) at 25ºC
EpoPro 202B	100:15	100:15	4000 cps	6000 cps	16+ hours
EpoPro 956	100:22	100:25	3400 cps	4100 cps	45 minutes
Hardener H100	100:14	100:16.5	1800 cps	2300 cps	45 minutes
Hardener H150	100:29	100:33	350 cps	420 cps	30 minutes

	Shore Hardness	Glass transition Temperature	Flexural Strength	Compressive Strength	Service Temperature
EpoPro 202B	84D	Not determined-	12000 psi	20000 psi	-40ºC to +130ºC
EpoPro 956	82D	84°C	18125 psi	-	-40ºC to +130ºC
Hardener H100	86D	96°C	17500 psi	18200 psi	-40ºC to +130ºC
Hardener H150	81D	58°C	13000 psi	13000 psi	-100ºC to +130ºC

NOTE : Values reported are based on laboratory and/or average production results and are not for specification purposes. Please contact us for assistance if you are establishing specification ranges

SUGGESTED PROCESSING GUIDELINES:

To use, weigh Part A and Part B in the recommended ratio as accurately as possible into a clean mixing container. Mixing containers should preferably be made of polypropylene, polyethylene, glass, or non-corroding metal. (Stainless steel, aluminum, etc.). Always use weighing equipment having accuracy that is ±1% or less of the smallest quantity that you will be weighing. Blend Part A & B thoroughly by using a spatula or stirring stick for at least 2-3 minutes using a kneading motion. Scrape the bottom and sides of the mixing container carefully and frequently to produce a uniform mixture. Vacuum de-gassing after mixing is desirable for the best electrical and mechanical properties as well as for the best visual appearance, however this is not required for all applications.

The mixed material may be applied using a stiff brush, by pouring, or using syringes and or other application equipment.

STORAGE GUIDELINES:

Store these materials in a clean, cool, and dry environment in its tightly closed original container. Protect the EpoPro 504 and 505 resins from extended exposure to temperature below 15ºC (59ºF) as crystallization may occur due to the cold exposure. If crystallization occurs, heat the entire container for 4 hours at 50ºC to re-liquefy the crystals. Allow the resin cool to ambient temperature prior to using. Tightly re-seal containers between uses. If the recommended storage conditions are observed these resins will have a minimum shelf-life of 24 months from the date of shipment from SP&S.

HANDLING PRECAUTIONS:

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding Safety Data Sheets.

PERSONAL HYGIENE:

EpoPro® 504 and EpoPro® 504

WARNING! May cause eye & skin irritation and possible allergic skin reactions. Harmful if inhaled or swallowed. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Keep away from fire, sparks, or heat. Use only with adequate ventilation. Do not take internally.

FIRST AID

In case of contact:

Skin – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather.

Eyes – Immediately flush eyes with plenty of water for 15 minutes and get prompt medical attention.

Inhalation - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

Ingestion - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

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