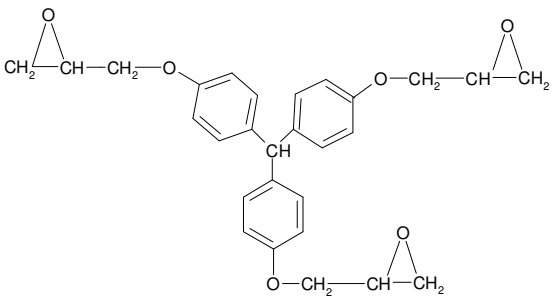
HUNTSMAN

Enriching lives through innovation

Advanced Materials

Tactix® 742*

EPOXY RESIN

GENERAL	Tactix® 742 resin is a tris-(hydroxyl phenyl) methane-based epoxy and is an excellent matrix material for both commercial and military applications. It is most commonly used in adhesive formulation, especially for parts and components near high-heat zones such as aircraft engine nacelles. As with other solid resins, processing is easier with the addition of lower-viscosity epoxy resins such as Tactix® 123 resin.
CHEMICAL STRUCTURES	
FEATURES AND BENEFITS	Multifunctional epoxies are well suited for high-temperature applications. Tactix® 742 resin has the highest dry glass transition temperature of any resin in the Tactix® resin line.

TYPICAL PROPERTIES (ARE BASED ON HUNTSMAN'S TEST METHODS. COPIES ARE AVAILABLE UPON REQUEST)	
Visual Appearance	Yellow semi-solid
Color, Gardner, max	13
Epoxy Value, eq./kg	6.7 - 5.9
Epoxy Equivalent, g/eq.	150 - 170
Softening Point °C (°F)	48.9 (120)
Density @ 25°C (77°F), g/cm^3 (lb/gal.)	1.23 (10.3)
Flash Point, Closed Cup, °C (°F)	204 (400)

* *In addition to the brand name product denomination may show different appendices , which allows us to differentiate between our production sites: e.g , BD = Germany, US = United States, IN = India,CI = China, etc.. These appendices are in use on packaging, transport and invoicing documents. Generally the same specifications apply for all versions. Please address any additional need for clarification to t he appropriate Huntsman contact.*

FORMULATIONS

Typical Resin System: Tactix® 742 and Tactix® 123 resins 75:25 (Wt.). (Physical properties listed below are based on this resin system.)

Viscosity @ 79 °C (175 °F), cPs	635
Typical Hardener	DDS
Mix Ratio	38 phr
Cure Schedule	3 hrs @ 177 °C 2 hrs @ 250 °C
Platen Gel Time @ 177 °C (350 °F)	15 min
Flexural Strength (ksi)	15.0
Flexural Modulus (ksi)	400
Tensile Strength (ksi)	10.5
Tensile Modulus (ksi)	455
Tensile Elongation, %	2.7
Moisture Absorption, wt. % (14 day water boil)	4.4
Tg (TMA), °C	299
Tg (DMA Tan δ), °C	311
CLTE (below Tg, ppm/°C)	67

Chemical Resistance Properties of 75:25 Tactix® 742 and Tactix® 123 resin blend*

Reagent	**Percent Weight Change****
JP4 Fuel	<0.5
Hydraulic Fluid (Skydrol 500B-4, Monsanto)	<0.5
De-icing Fluid (Polyglycol Mixture)	<0.5

* Typical starting point formulations and properties; not to be construed as specifications; test expected performance before use.

** Following a 28-day immersion.

Electrical properties of 75:25 Tactix 742 and Tactix 123 resin blend

Frequency	Dielectric Constant	Dissipation Factor
1 kHz	5.05	0.0210
10 kHz	4.85	0.0321
50 kHz	4.68	0.0373
100 kHz	4.60	0.0378

PACKAGING & STORAGE

This product is packaged in 500 pounds drums. The minimum shelf life is two years if stored at room temperature.

HANDLING PRECAUTIONS

Personal hygiene	
Safety precautions at workplace	
protective clothing	yes
gloves	essential
arm protectors	recommended when skin contact likely
goggles/safety glasses	yes
Skin protection	
before starting work	Apply barrier cream to exposed skin
after washing	Apply barrier or nourishing cream
Cleansing of contaminated skin	
	Dab off with absorbent paper, wash with warm water and alkali-free soap, then dry with disposable towels. Do not use solvents
Disposal of spillage	
	Soak up with sawdust or cotton waste and deposit in plastic-lined bin
Ventilation	
of workshop	Renew air 3 to 5 times an hour
of workplaces	Exhaust fans. Operatives should avoid inhaling vapours

FIRST AID

Contamination of the *eyes* by resin, hardener or mix should be treated immediately by flushing with clean, running water for 10 to 15 minutes. A doctor should then be consulted.

Material smeared or splashed on the *skin* should be dabbed off, and the contaminated area then washed and treated with a cleansing cream (see above). A doctor should be consulted in the event of severe irritation or burns. Contaminated clothing should be changed immediately.

Anyone taken ill after *inhaling* vapours should be moved out of doors immediately.

In all cases of doubt call for medical assistance.

INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

The behaviour of the products referred to in this publication in manufacturing processes and their suitability in any given end-use environment are dependent upon various conditions such as chemical compatibility, temperature, and other variables, which are not known to Huntsman Advanced Materials. It is the responsibility of the user to evaluate the manufacturing circumstances and the final product under actual end-use requirements and to adequately advise and warn purchasers and users thereof.

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