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GOOD PEOPLE, GREAT SCIENCE

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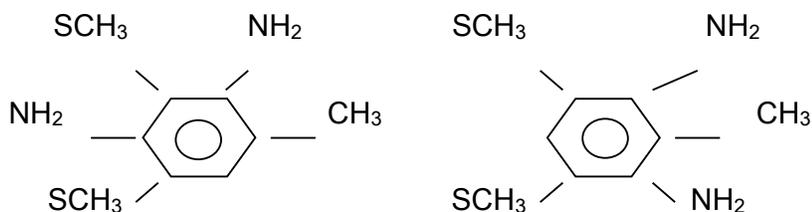
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HARTCURE 30

Technical Data Sheet

STRUCTURAL FORMULA



PHYSICAL PROPERTIES OF HARTCURE 30 CURATIVE

Equivalent Weight.....107

Appearance at Room Temperature.....Amber Liquid

Odor.....Slight Amine

Boiling Point, °F(°C),.....	667(353) (decomposes)
Density(g/cc)@68°F(20°C).....	1.21
140°F(60°C).....	1.18
212°F(100°C).....	1.15
Viscosity, Cps @68°F(20°C).....	690
140°F(60°C).....	22
212°F(100°C).....	5
Vapor Pressure, mm@65°F(20°C).....	0.6
Amine Number, mg· KOH/g.....	536
TDA content %, by weight.....	≤1.0%
Moisture.....	≤0.1%

PROCESSING

HARTCURE 30, being a liquid at room temperature results in significant processing advantages, for example, in such operation as transfer, melting down of solids is eliminated. Also, the possibility of freezing-up is no longer a concern during mixing or in meter-mixing machines. Additionally, its liquid state permits processing prepolymer at lower temperatures than that of MOCA.

HARTCURE 30 has an equivalent weight of 107 compared to 133.5 for MOCA. This means that about 20% less by weight is required for a given prepolymer at the same stoichiometry.

EXAMPLE

Prepolymer (%NCO 4.1).....	100Pts.	100Pts.
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MOCA@95%Theory.....	12.4Pts.	—
HARTCURE 30@ 95%Theory.....	—	9.9Pts.
Formula Weight.....	112.4Pts.	109.9Pts.

The specific gravity of HARTCURE 30 is about 1.20g/cc at recommended use temperatures of 70-90°F(21-33°C), whereas the specific gravity of molten MOCA at its use temperature of 240°F(116°C) is 1.26. This means that weight delivery by volumetric pumps is comparable for the two materials and therefore if no alterations for meter-mixing machines, we must change the formula weight of MOCA into that of HARTCURE 30.

PHYSICAL PROPERTIES OF PREPOLYMER CURED WITH HARTCURE 30 CURATIVE

The physical properties of prepolymer, both ether and ester types, when cured with HARTCURE 30 curative, are comparable to those obtained with MOCA. As in MOCA-curing systems, physical properties are sensitive to the ration (stoichiometry) of curative to prepolymer. HARTCURE 30 curative exhibits tolerance to stoichiometry variations similar to that of MOCA.

Low stoichiometry (85-90%) generally tends to maximize properties such as compression set resistance, while high stoichiometry (100-105%) tends to maximize properties such as tear strength and flex life. The best results for most applications are obtained at about 95% stoichiometry. While cure conditions (temperature and times) are similar to those used with MOCA, HARTCURE 30 curative requires somewhat closer attention to post-cure conditions to obtain maximum physical properties, particularly with respect to compression set and dynamic properties. Use the recommended schedules listed.

PACKAGE

- I. 20kg per iron drum
- II. 200kg per iron drum