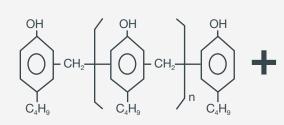


FOUNDRY RESINS

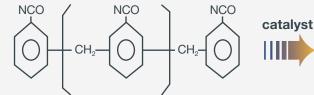
FlexaTrac[®]-DME

In the production of phenolic urethane molds for metal casting, FlexaTrac-DME can be used as a carrier solvent for phenol formaldehyde binder resin (PFBR). This PFBR is then mixed with polyisocyanates binder resin (PIBR) and catalyzed to create phenolic urethane molds.





Phenol Formaldehyde Binder resin (PFBR)



Polyisocyanates (polymeric MDI) Binder resin (PIBR)

KEY ATTRIBUTES

- Excellent polymer solvency
- Mild to no odor
- Excellent HSE profile
- Controlled solvent evaporation rate
- High miscibility with most organic solvents
- Readily biodegradable
- Clear and colorless liquids

FlexaTrac can be used to make up 10-40% of the phenol binder resin used in no-bake metal casting or phenolic urethane cold box production.

Phenolic

Urethanes

No-bake metal casting process

No-bake metal casting involves room temperature curing of two or more binder components in presence of sand and liquid curative or catalyst.

Phenolic urethane cold box process

In cold box metal casting, binder components are cured together at room temperature in presence of sand and gaseous curative.

	FlexaTrac- DME-100	FlexaTrac- DME-200	FlexaTrac- DMS-400	FlexaTrac- DMG-500	FlexaTrac- DMA-600
CHEMICAL PROPERTIES					
Dimethyl Succinate (wt. %)	15-25	1.0 max.	98.5 min.	1.0 max.	1.0 max.
Dimethyl Glutarate (wt. %)	59-73	72-76	1.0 max.	99.0 min.	1.0 max.
Dimethyl Adipate (wt. %)	10-20	23-27	1.0 max.	1.0 max.	99.0 min.
Acid content max. (mg KOH/g)	0.3	0.1	0.1	0.1	0.1
Water content max. (wt. %)	0.1	0.1	0.1	0.1	0.1
Methanol content max. (wt. %)	0.2	0.1	0.1	0.1	0.1
Color max. (APHA)	15	15	15	15	15
PHYSICAL PROPERTIES					
Molecular weight	159	163	146	160	174
Distillation range (°C)	211-214	203-220	192-201	203-214	216-230
Density at 25°C (#/gal)	9.07	8.98	9.28	9.03	8.82
Specific gravity at 25°C	1.09	1.076	1.112	1.082	1.057
Viscosity at 25°C (cps)	2.64	3.31	3.91	3.66	4.33
Solubility in water (wt. %)	5.6	4.3	10.3	5.1	2.1
Water solubility in DMEs (wt. %)	3.3	3.2	4.0	2.9	2.9
Freezing point (°C)	-38	-42.4	16.8	-37.5	9.4
Flash point (°C)	98	108	94	107	124
Surface tension (dynes/cm)	35.3	35	34.6	35.6	35.1
Vapor pressure at 25°C (torr)	0.06	0.04	0.12	0.05	0.01
Boiling point (°C)	211-214	203-220	192-201	203-214	216-230
KB values	38.6	44.4	28.1	41.6	56.6

*NOTE: Product specifications are subject to change without notice. Please write or call us for our current product specifications.

About Ascend

Ascend Performance Materials is a global leader in the production of high-quality plastics, chemicals, and fibers. As the world's largest fully integrated manufacturer of nylon 6,6 resin, our manufacturing processes are vertically integrated, ensuring the highest level of quality and economies of scale. Ascend's specialty chemicals and blends of acids, amines and esters are used in a variety of applications and industries. We offer customized solutions through formulated products and superior technical support.

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