



FOUNDRY PRODUCTS: Technical Data Sheet

PRODUCT: POLYURETHANE NO-BAKE BINDER SYSTEM ALUDUR™ ULTRA A 1.0/B 2.0

**FOR NON-FERROUS METAL CASTINGS
LOW ODOUR, HIGH STRENGTH, SUPERIOR SHAKEOUT SYSTEM**

DESCRIPTION:

This ALUDUR ULTRA NO-BAKE SYSTEM is made up of the following three components:

1. ALUDUR ULTRA A 1.0 Low Formaldehyde Phenolic binder (less than 0.1% formaldehyde)
2. ALUDUR ULTRA B 2.0 Isocyanate Solution
3. ALUDUR ULTRA C (Amine Catalyst's) - used around 3-5% based upon A

It is a room temperature curing system that allows for fast, continuous production and has tremendous flexibility for large and small moulding and core making. It has been designed to optimize the upfront cure characteristics, while giving the broad range of work/set times that are characteristic of all 3 part Phenolic Urethane Systems. Aludur offers considerable improvements over existing systems in shakeout performance. The Aludur binder system breaks down rapidly with low melting point non-ferrous alloys allowing significantly faster shakeout performance. This significantly decreases shakeout times, particularly on pieces with blind holes and speeds up sand recycling. With lower energies required to reclaim the sand there are less issues of casting damage.

FIELD OF APPLICATION:

Large or small quantities of cores and moulds, from floor molding through to high speed 'loop' and carousel operations for non-ferrous castings. The Aludur binder system exhibits very high front end strengths, a fast thru-cure, and low odour. This system is suitable for use in all types of ambient conditions. It is 100% compatible with all Phenolic Urethane No Bake equipment and storage facilities.

PHYSICAL AND CHEMICAL PROPERTIES:

	ALUDUR ULTRA A 1.0	ALUDUR ULTRA B 2.0
Specific Gravity 25°C	1.095 – 1.130 kg/L	1.060 – 1.090 kg/L
Viscosity @ 25°C	200 cps. max.	40 cps. max.
Refractive Index @ 25°C	1.5450-1.5550	1.5590 -1.5770
Colour / State	Amber / Heavy Liquid	Brown / Water-like
Odour	Mild Aromatic Odour	

METHOD OF APPLICATION (standard):

100 parts in weight silica sand AFS 50 – 55
 0.5 - 1.0 " " " ALUDUR ULTRA A 1.0
 0.5 - 1.0 " " " ALUDUR ULTRA B 2.0

The ALUDUR ULTRA A 1.0 and ALUDUR ULTRA B 2.0 are designed to be used at a 50/50 ratio of A to B but can cover a range of 55:45 to 45:55. Curing depends on the strength of the catalyst used, sand temperature and quality of reclaimed sand. Work times from 3 – 15 minutes are available, as are equivalent strip times.

HANDLING:

ALUDUR ULTRA A 1.0 and ALUDUR ULTRA B 2.0 contain ingredients which could be harmful if not handled properly. Please see details in MSDS.



MANCUSO CHEMICALS LIMITED

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MTDS ALUDUR ULTRA A 1.0/B 2.0 v0 May 27, 2013



FOUNDRY – COATINGS – STEEL MILL - SULPHONIC ACIDS - PSA
TOMORROW'S GREEN CHEMISTRY, TODAY

Technical Data



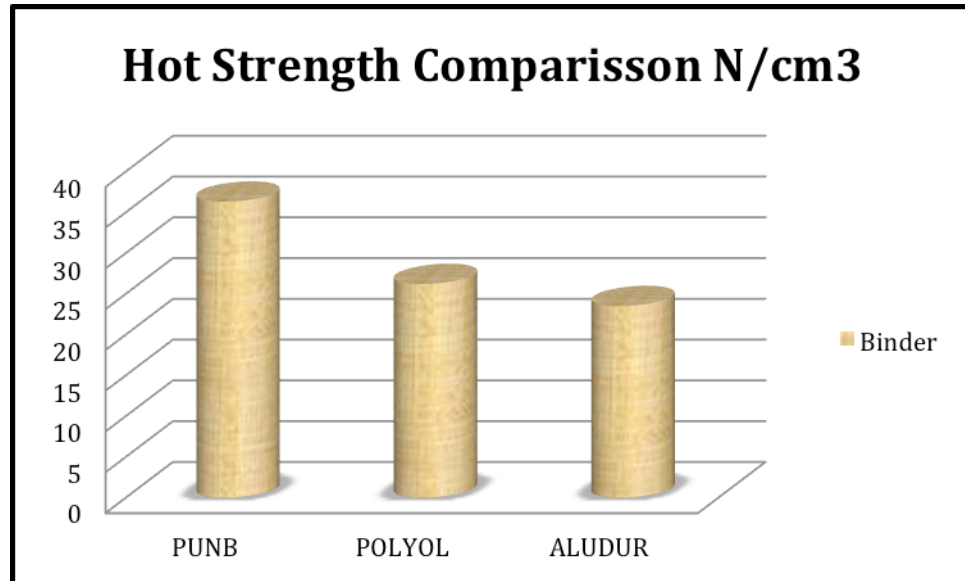
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Packaging: ALUDUR ULTRA A 1.0 and ALUDUR ULTRA B 2.0 binder components are available in bulk, totes, 45 Gallon drums or small containers.

Storage: Optimum storage temperature is between 15°C - 30°C. Water can react with ALUDUR ULTRA B 2.0 to form sludge as well as producing carbon dioxide gas.

HOT STRENGTH DECOMPOSITION FOR IMPROVED SHAKE-OUT:

1.0% Total Binder 50:50 ratio* – Compression strength at 700°C (1292°F) 40 seconds



35% REDUCTION IN COMPRESSION SAND HOT STRENGTH FROM PUNB to ALUDUR

SHELF LIFE:

Can be stored in sealed steel containers at temperatures not lower than -7°C and not under high heat for up to 2 years. Do not store in direct sunlight. Keep dry and free of moisture.

SAFETY MEASURES:

Safety glasses and rubber gloves must be used when transferring. Consult MSDS for further information.

BEFORE USE, ALWAYS READ AND FOLLOW THE DIRECTIONS CONTAINED ON THE LABEL, AND MATERIAL SAFETY DATA SHEET.

** The information presented, while not guaranteed, it is to the best of our knowledge true and accurate. No warranty or guarantee, express or implied, is made regarding the performance or stability of any product, since the manner of use and conditions of storage and handling are beyond our control. No suggestions for product use are intended as and nothing herein shall be construed as a recommendation to infringe any existing patents or to violate any government laws.



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