NARCO CONFIDENTIAL-RESTRICTED



NARCOCAST E.S. FINE (TROWEL)

Made at: Farber, MO

PRODUCT LIFE: JULY 13, 1961 TO JAN. 17, 1986

ASBESTOS DATES: AUG. 9, 1963 TO JULY 11, 1978

NARCOCAST E.S. FINE (TROWEL) MIXES: 353

353A

353B

353-03

CONFIDENTIAL — RESTRICTED

NORTH AMERICAN REFRACTORIES COMPANY NARCO CONFIDENTIAL-RESTRICTE

MIX SHEET

BRAND NARCOCAST E.S. FINE (Trowel) MIX NO. 353-03

PLANT Farber, Mo DATE October 3, 1983

	MIX			BATCH	
	RMS No.	Raw Material	Sizing	Wt. %	Batch
1	012	Calcined Flint Clay	-7½M	66.8	2670#
2	013	60% CA Cement		28.2	12-94# bags
3	016	Tennessee #5 Ball Clay		5.0	4-50# bags
4				100.0	3998#
5					
6					
7					
8					
10					
11					
12					
13					
14					

MIXING INSTRUCTIONS

IN-PROCESS CONTROL SPECIFICATIONS

SCRAP DISPOSITION/REWORKING

1) Approved Landfill

2) 10% bled into virgin batch

BRAND NARCOCAST E.S. FINE (Trowel) MIX NO. 353-03

PLANT Farber, Mo DATE October 3, 1983

FINISHED PRODUCT SPECIFICATIONS

NARCO CONFIDENTIAL-RESTRICTED

PROPERTY	TEST METHOD	SPECIFICATIONS
Screen analysis on: 20M		30-35%
35M		
200M		
After Casting:		
Bulk Density (Dried at 230°F		
MOR for 24 hours)		400 psi
Water To Cast		
me of Initial Set		
Working Time		

HANDLING, STORAGE, PACKAGING, ...

Shelf Life: 12 months

SAFETY PRECAUTIONS

Potential crystalline silica from clays

(approved dust respirator)

APPROVED [signature] RESEARCH

APPROVED [signature] OPERATING

APPROVED J. F. Goodin PLANT

REPLACES MIX SHEET DATED 7-11-78

REASON FOR CHANGE

~~Mix Sheet updated~~

FORM 116 B

NORTH AMERICAN REFRACTORIES COMPANY

Mix Instructions NARCO CONFIDENTIAL-RESTRICTED

Plant	FARBER, MO.	**Date**	JULY 11, 1978
Brand	NARCOCAST E.S. FINE (TROWEL)	**Mix No.**	353B
Process	CLASS B CASTABLE FOR TROWELING	**Burn**	
		Shrinkage	

Mix

BATS (DRY)	-7½M	70%
REFCON CEMENT		30%
TENN. NO. 5 BALL CLAY	A.F.	5% (ADDED)

Special Instructions STENCIL "TROWEL" ON BAGS.

Control Specifications

M/R DRY 230°F 400 PSI MIN.

WET SCREEN 30 TO 35% CUMULATIVE ON 20 MESH

ELIMINATION OF ASBESTOS, ROLANDSHUETTE CEMENT AND "STIFF MUD" DESIGNATION FOR BATS

Replaces Sheet Dated
8/9/63 (MIX NO. 353A)

Approved Robert F. Hays — Research

Approved [signature] — Operating

Approved [signature] — Plant

FORM 116 B

NORTH AMERICAN REFRACTORIES COMPANY

Mix Instructions NARCO CONFIDENTIAL-RESTRICTED

Plant Farber, Mo.

Date Aug 9, 1963

Brand Narcocast E.S. Fine (Trowel)

Mix No. 353 A.

Process

Burn

Class B castable for troweling

Shrinkage

Mix

Stiff Mud Bats (Dry)	7½ M	70 %
Rolandshutte Cement	-	30 %
Tenn. No. 5 Ball Clay	A.F.	5 % (added)
Asbestos 7K05 (J.M.)		1 % (added)

Special Instructions Stencil "TROWEL" on bags.
Reason for change To improve trowelability

Control Specifications

M/R Dry 230°F 400 psi Min
Wet screen, 30 to 35% cumulative
on 20 Mesh

Signed Engineering

Approved F. W. Schroeder Research

Approved C. F. Whitford Operating

Approved R. L. Walters Plant

Replaces Sheet Dated
7/13/61

7K05 6

Form M67

NARCO CONFIDENTIAL-RESTRICTED

NORTH AMERICAN REFRACTORIES COMPANY

MIX INSTRUCTIONS

PLANT Farber, Mo. DATE July 13, 1961

BRAND Narcocast E.S. Fine (Trowel) MIX NO. 353

PROCESS BURN

Class "B" Castable for Troweling SHRINKAGE

MIX

STIFF MUD BATS (DRY)	7½ M	70%
Rolandshuette Cement		30%
Tenn. No. 5 Ball clay	A.F	5% (added)

SPECIAL INSTRUCTIONS stencil "Trowel" on bags

CONTROL SPECIFICATIONS

M/R Dry 230°F. 900 psi min.

2300°F Reheat 1.5% Lin. SHR. MAX.

Wet screen 30 to 35% Cumulative on 20 mesh

APPROVED F.W. Schroeder Research

APPROVED R.F. Whitford Operating

APPROVED P. Walter Plant

Replaces Sheet Dated

new mix