

de Savely 3-29-00

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1st REVIEW DATE: 6-1-99
 AUTHORITY: AOC/ADC/ADD
 NAME: Buzz Hammer
 ORG: PNNL ADD
 2nd REVIEW DATE: 6/1/99
 NAME: Buzz Hammer
 ORG: PNNL-ADD

(Miles) 4-7-00

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- #1 G. H. Sanford
- #2 E. G. Sizoo - D. O. A
- #3 F. A. Gato - 700 File
- #4 H. H. Kahl - Wilmington
- #5 F. W. Gruesz
- #6 K. H. Smith
- #7 D. E. Smith
- #8 K. G. James
- #9 800 File
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- #11 Yellow Copy

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RLO-CG-5,REV 1 (E.O. UP)
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December 21, 1944

COPY 1

PAGES NO. 2
SERIES

G. H. Sanford
Chief Supervisor
800 Area

CHEMICAL AND OTHER SPECIFICATIONS FOR
800 AREA ESSENTIAL MATERIALS

IV.
9-47

Attached are the chemical specifications for essential materials for the 800 area.

These specifications have been discussed with your personnel and also with the Chemical Control Group.

K. G. James, Chief Supervisor

R. C. Grills
R. C. Grills, Area Supervisor
Metallurgy

XCS/mic

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ACCEPTANCE SPECIFICATIONS

1. Soluble Cutting Oil (Get Mfr's. Specs.) Also A.S.T.M. III '42, p. 777
2. Degreaser Solvent (Tentative Specs. Attached)
3. Nitric Acid (Tentative Specs. Attached) Also 200 Area Specs.
4. Sodium Pyrophosphate A.S.T.M. III '42, p. 1538, 1542
5. Drying Alcohol (Specs. Attached) or Acetone (A.S.T.M. II '42, p. 903)
6. Phosphoric Acid A.C.S. '41, p. 15
7. Caustic Soda (200 Area Specs. #10)
8. Acenaphthene (Specs. Attached)
9. Carbon Tetrachloride (Reair, p. 124)
10. Al-Caps (Specs. Attached)
11. Al-Caps (Specs. Attached)
12. Steel Sleeves (Specs. Attached)
13. Copper (for Bronze) (Specs. Attached)
14. Tin (for Bath) (Specs. Attached)
15. Aluminum-Silicon (Specs. Attached)
16. Aluminum (25) (Specs. Attached)
17. Barium Chloride (A.C.S., '41, p. 35)
18. Sodium Chloride (A.C.S., '41, p. 10)
19. Potassium Chloride (A.C.S., '41, p. 76)
20. Hydrofluoric Acid (Specs. Attached)
21. Sodium Nitrate (200 Area Specs. #22)
22. Fissicilic Acid (Specs. Attached)
23. Duponol (Send for Mfr's. Specs.)
24. Argon - Use Test

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DEGREASER SOLVENT

Tentative Specs. for Trichloroethylene

Sp. G., 15/4° 1.465 to 1.475

Distillation Range 84.4° - 90°C

Total Alkalinity: Min. 0.10% as Pyridine

Maximum Impurities

Non-volatile .03%

Chlorides .01%

Free Chlorine - No trace

Phosgene - No trace

Water - No turbidity resulting when cooled to -10°C and allowed to come to room temperature.

MATERIAL SPECS. FOR ALUMINUM CANS, CAPS AND INGOTS

Material: 23 Aluminum

Chemical Composition

Assay: 99.30% Al (min.)

Total of all Elements except Al - 0.80%

Barium)	Max. .0001%, by
Cadmium)	Spectrochemical
Lithium)	Analysis

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TENTATIVE SPECS. FOR NITRIC ACID
FOR SLUG PICKLE

Strength as HNO_3 56% (by weight) min.

Containers shall be plainly labeled as to % concentration and Specific Gravity.

Maximum Impurities

Residue on Evaporation - .005%

Chloride - .001%

Phosphate - .001%

Sulfate - .001%

Nitrite - .150%

Metals below Al in EMF Series:

Each - .0001%

Total - .001%

TENTATIVE SPECS. FOR ACENAPHTHENE

M.P. - $92.5^\circ - 95^\circ\text{C}$. (Capillary)

Solubility: Completely soluble in C.P. Chloroform

at 20°C to the extent of 33 g. per 100 g.

CHCl_3 . The saturated solution shall be clear

and colorless at 20°C without turbidity or

suspended matter.

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TENTATIVE SPECS. FOR STEEL SLURVES

Material: Low-carbon steel (SAE 1016 to 1030)

TENTATIVE SPECS. FOR COPPER METAL FOR BATH

Quality: Electrolytic Copper

Metal Content: Minimum Purity 99.90% Cu.

Maximum Impurities:

Boron)	Max. .0001%, by
Cadmium)	Spectrochemical
Lithium)	Analysis

TENTATIVE SPECS. FOR TIN METAL FOR BATH

(Send for Mfr's. Specs.)

Assay: 99.90% (min.) Tin

Maximum Impurities

Boron)	Max. .0001%, by
Cadmium)	Spectrochemical
Lithium)	Analysis

Other metals (including Arsenic) 0.1%

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TENTATIVE SPECS. FOR AL-SI FOR BATH

Composition: Si - 11.25% (min.) 15% (max.)

Impurities 0.80% (max.)

Al - Remainder

Maximum Impurities

Iron 0.4%
Copper 0.1%
Titanium 0.006%

Boron) .0001% max., by
Cadmium) Spectrochemical
Lithium) Analysis

TENTATIVE SPECS. FOR HYDROFLUORIC ACID
USED IN RECLAIMING

Assay: Not less than 60% HF

Maximum Impurities

Fluosilicic Acid (.05%)
Non-volatile Matter (0.1%)
Chloride (.03%)

TENTATIVE SPECS. FOR FLUOSILICIC ACID

Assay: 27 - 30% H_2SiF_6

Maximum Impurities

Non-volatile 0.25%
Chloride 0.02%
Sulfate .05%
Heavy Metals (as Pb) .005
Iron .005

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200 AREA SPECS. FOR NaNO₃

Grade: Commercial NaNO₃

Insoluble in H₂O: 0.20%

Total No₃ 60.0% min.

Total Cl 0.5% max.

Total Se₄ 1.0% max.

TENTATIVE SPECS. FOR METHANOL FOR DRYING CANS

Sp. G., 25/25°: .790 - .791; 15/4° - .796 (7)

Boiling Range: 65° - 66°C

Maximum Impurities

Grade: Synthetic

Non-volatile: .001%

Substances precipitated by water - none

Acidity (as Acetic Acid) .003%

Boron)
Cadmium) .0001% max.
Lithium)

Water - Miscible without turbidity with 19 volumes
80° A.P.I. Gasoline at 20°C.

Color - Water Clear

Odor: Characteristic of Analytical Grade Methanol

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