

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1916, 1918, 1917)

SECTION I

REVISED 4/89

MANUFACTURER'S NAME

BROTHERS RESEARCH CORPORATION

EMERGENCY TELEPHONE NO.
(919) 229-6480

ADDRESS (Number, Street, City, State, and ZIP Code)

2245 AIRPARK DRIVE, BURLINGTON, NC 27215

CHEMICAL NAME AND SYNONYMS
PHOSPHORIC ACID, SURFACTANTS, ACID

HYDROFLUORIC

TRADE NAME AND SYNONYMS
DUKAGLOSS AC

CHEMICAL FAMILY
ACID CLEANER

FORMULA

PROPRIETARY

SECTION II - HAZARDOUS INGREDIENTS

| PAINTS, PRESERVATIVES, & SOLVENTS | % | TLV (Units) | ALLOYS AND METALLIC COATINGS | | |
|-------------------------------------------------------|---|----------------|-------------------------------------------|----------------|----------------|
| | | | % | TLV (Units) | |
| PIGMENTS | | | BASE METAL | | |
| CATALYST | | | ALLOYS | | |
| VEHICLE | | | METALLIC COATINGS | | |
| SOLVENTS | | | FILLER METAL PLUS COATING OR CORE FLUX | | |
| ADDITIVES | | | OTHERS | | |
| OTHERS | | | | | |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES | | | | % | TLV (Units) |
| PHOSPHORIC ACID | | | | | |
| HYDROFLUORIC ACID | | | | | |
| | | | | | |
| | | | | | |

SECTION III - PHYSICAL DATA

| | | | |
|-------------------------|----------------------|---------------------------------------|-----|
| BOILING POINT (°F.) | 212° | SPECIFIC GRAVITY (H ₂ O=1) | 1.1 |
| VAPOR PRESSURE (mm Hg.) | NA | PERCENT VOLATILE BY VOLUME (%) | 90 |
| VAPOR DENSITY (AIR=1) | NA | EVAPORATION RATE (_____ = 1) | NA |
| SOLUBILITY IN WATER | SOLUBLE | | |
| APPEARANCE AND ODOR | COLORLESS, ACID ODOR | | |

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

| | | | | |
|------------------------------------|-------------------------------|------------------|-----|-----|
| FLASH POINT (Method used) | > 200°F | FLAMMABLE LIMITS | Lel | Uel |
| EXTINGUISHING MEDIA | WATER, CO ₂ , FOAM | | | |
| SPECIAL FIRE FIGHTING PROCEDURES | | | | |
| | NONE | | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | | | | |
| | NONE | | | |

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

NA

EFFECTS OF OVEREXPOSURE

AVOID PROLONGED CONTACT WITH SKIN. AVOID CONTACT WITH EYES.

DO NOT TAKE INTERNALLY.

EMERGENCY AND FIRST AID PROCEDURES

SKIN CONTACT - WASH WITH SOAP AND WATER - APPLY LOTION TO ADD MOISTURE

EYE CONTACT - WASH WITH WATER - SEEK MEDICAL ATTENTION.

INGESTION - DO NOT TAKE INTERNALLY.

SECTION VI - REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

ALKALI

INCOMPATIBILITY (Materials to avoid)

ALKALI

HAZARDOUS DECOMPOSITION PRODUCTS

NA

HAZARDOUS POLYMERIZATION

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

X

ALKALI

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

WASH AREA WITH WATER OR COVER WITH ABSORBANT INERT MATERIAL.

WASTE DISPOSAL METHOD

DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL REGULATIONS

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

NONE

VENTILATION

LOCAL EXHAUST

X

SPECIAL

MECHANICAL (General)

OTHER

PROTECTIVE GLOVES

YES

EYE PROTECTION

YES

OTHER PROTECTIVE EQUIPMENT

NONE

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

AVOID CONTACT WITH ALKALI

OTHER PRECAUTIONS