CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Revised February 9, 2012

1. MATERIAL / COMPANY IDENTIFICATION

Material Identification

"ALCRYN" is a registered trademark of Advanced Polymer Alloys.

Trade Names and Synonyms

"ALCRYN" 1060BK, 1070BK, 1080BK
"ALCRYN" 2060BK, 2060BK598F, 2060BK848, 2060BKP, 2265BK
"ALCRYN" 2070BK, 2070BKF, 2070BKC, 2080BK, 2080BK848, 2080BKP, 2080BK598F, 2080BKJA6A, 2080BK, 2080BKYGYA, 2090BK, 2095BK
"ALCRYN" 2160BK, 2170BK, 2170BK848, 2180BK
"ALCRYN" 2250BK #
"ALCRYN" 2360BK, 2370BK, 2380BK
"ALCRYN" 3075BK
"ALCRYN" 4060BK, 4070BK, 4080BK
"ALCRYN" 4660BK, 4670BK, 4680BK
"ALCRYN" 5070BK, 5080BK, 5085BK
"ALCRYN" ALR 6908BK, DUX 7105, ALR 7134, ALR 7225, ALR 7227, ALR 7237, ALR 7523
"ALCRYN" ALX 7430, ALX 7431, ALR7755

Company Identification/Manufacturer/Distributor

Ferro Corporation Advanced Polymer Alloys 400-A Maple Avenue Carpentersville, IL 60110-0729

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300 CHEMTREC (outside U.S.): 1-703-527-3887

Product Information: 1-847-836-8119

2. COMPOSITION / INFORMATION ON INGREDIENTS

Components

Material CAS Number % HALOGENATED POLYOLEFIN COMPOSITION >70 CARBON BLACK 1333-86-4

Components (Remarks)

Material is not known to contain Toxic Chemicals under of Title III, §313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 C.F.R., part 372.

3. HAZARDS IDENTIFICATION

Potential Health Effects ADDITIONAL HEALTH EFFECTS Before using

"ALCRYN" Melt Processible Rubber, read the Bulletin

"The Toxicity and Handling Guide for "ALCRYN." INGESTION: Ingestion is not a

probable route of exposure. SKIN: The material was not a skin irritant. Skin irritation tests

were run on one type of "ALCRYN" on rabbits. Hot polymer may cause thermal burns. EYE: Mechanical

irritation only. INHALATION: The polymer is not respirable at room temperature.

Remperatissingabove 205°C fumes irritating to the eyes, nose, throat, and lungs may be produced. This exposure may result in reddening, tearing, and itching of the eyes and soreness in the nose and throat together with coughing.

CHRONIC EFFECTS: None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None are known.

Carcinogenicity Information The following components are listed by IARC, NTP, OSHA or

ACGIH as carcinogens. A "P" indicates a proposed carcinogen. Material IARC NTP OSHA ACGIH CARBON BLACK X

4. FIRST AID MEASURES

First Aid

If exposed to fumes from overheating or combustion, move to fresh air. Consult a physician if symptoms persist.

SKIN CONTACT

The compound is not likely to be hazardous by skin contact but cleansing the skin after use is advisable.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: No Data Available

Fire and Explosion Hazards: The solid polymer can be combusted only with difficulty. HAZARDOUS COMBUSTION PRODUCTS Complete combustion gives carbon dioxide, water and hydrogen chloride. Incomplete combustion gives, in addition, carbon monoxide and hydrocarbon oxidation products including organic acids, aldehydes and alcohols.

Extinguishing Media

Water, Foam, Dry Chemical, CO₂.

Fire Fighting Instructions

Use self-contained breathing apparatus and protective clothing to avoid exposure to hydrogen chloride and other fumes.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Clean-Up

Sweep up to avoid slipping hazard.

7. HANDLING AND STORAGE

Handling (Personnel)

See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT SECTIONS.

Storage

Store in a cool, dry place. Keep container closed to prevent contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

VENTILATION: Local ventilation should be used over processing equipment.

Personal Protective Equipment

EYE/FACE PROTECTION

Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying of molten material.

RESPIRATORS

A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge with a dust/mist filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

PROTECTIVE CLOTHING

If there is potential contact with hot/molten material, wear heat resistant clothing and footwear.

Exposure Guidelines

Applicable Exposure Limits CARBON BLACK PEL (OSHA) : 3.5 mg/m3, 8 Hr. TWA TLV (ACGIH) : 3.5 mg/m3, 8 Hr. TWA, A4

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Melting Point : NA % Volatiles : NA Solubility in Water : Negligible Odor : Mild ester-like Form : Pellets Color : Black Specific Gravity : NA

10. STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Conditions to Avoid

CONDITIONS TO AVOID: Rapid heating to temperatures above 250° C (480° F) or prolonged heating at temperatures above 205° C (400° F) will result in polymer degradation and evolution of hydrogen chloride.

Incompatibility with Other Materials

MATERIALS TO AVOID: Acetal homopolymers and acetal compolymers. At processing temperatures, these materials interact and cause degradation.

Decomposition

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, carbon monoxide, and hydrocarbon oxidation products including organic acids, aldehydes, and alcohols.

Polymerization

Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

The approximate lethal dose of one type of "ALCRYN" is greater than 5000 milligrams per kilogram body weight as tested in rats. This is low toxicity. Other types of "ALCRYN" are predicted to have the same low ingestion toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

No information is available. Toxicity is expected to be low based on insolubility in water.

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Preferred options for disposal are (1) recycling, (2) incineration with energy recovery, and (3) landfill. The high fuel value of this product makes option 2 very desirable for material that cannot be recycled, but incinerator must be capable of scrubbing out acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

14. TRANSPORT INFORMATION

US Department of Transportation Classification: This material is not subject to DOT Regulations pursuant to 49 C.F.R., parts 171-180. International Air Transportation Association Classification: This material is not classified as hazardous under IATA Regulations. International Maritime Organization - IMDG: This material is not classified as hazardous under IMDG Regulations. UN, IMO, ADR/RID, ICAO Code:

This material is not dangerous for conveyance under these codes.

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : In compliance with TSCA Inventory requirements for commercial purposes.

State Regulations (U.S.)

STATE RIGHT-TO-KNOW

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated.

SUBSTANCES ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST PRESENT AT A CONCENTRATION OF 1 % OR MORE (0.01% FOR SPECIAL HAZARDOUS SUBSTANCES)- Carbon black.

WARNING - SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM- Carbon black

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS)- Carbon black.

16. OTHER INFORMATION

Prepared by: Ferro Technical Center

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guaranty or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.

End of MSDS