ADVANCED POLYMER ALLOYS
MATERIAL SAFETY DATA SHEET
DURAGRIP® MELT-PROCESSIBLE ELASTOMER – BLACK GRADES

Revised April 17, 2006

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1. MATERIAL/COMPANY IDENTIFICATION

Material Identification

"DuraGrip is a registered trademark of Advanced Polymer Alloys.

Trade Names and Synonyms

"DuraGrip®"	DGR 6030BK, DGR 6040BK, DGR 6050BK, DGR 6060BK, DGR 6070BK, DGR 6080BK, DGR 6090BK
"DuraGrip®"	DGR 6150BK, DGR 6160BK, DGR 6170BK, DGR 6180BK, DGR 6185BK, DGR 6195BK
"DuraGrip®"	DGR 6250BK, DGR 6260BK, DGR 6270BK
"DuraGrip®"	DGX 7317, DGX 7354, DGX 7355, DGX 7360, DGX 7361, DGX 7367, DGX 7368, DGX 7412, DGX 7445 #

Company Identification

Manufacturer/Distributor

Advanced Polymer Alloys
Division of Ferro Corporation
3521 Silverside Road - Suite 2E
Wilmington, DE 19810

Telephone Number

Product Information: 1-888-663-6005
1-302-478-8989 (outside U.S.)

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
Styrene-Ethylene/Butylene Styrene thermoplastic elastomer-based compositions	NApp	>70
Carbon Black	1333-86-4	<30

Components (Remarks)

DuraGrip® thermoplastic rubber grades are proprietary formulated products. Their formulations are trade secrets. These multi-ingredient products cannot be identified by a CAS number. However, all components of these products appear on the Inventory of Chemical Substances published by the U.S. Environmental Protection Agency or qualify for the TSCA polymer exemption under U.S. Federal Register Vol. 60, No. 60, March 29, 1995. This material is not known to contain Toxic Chemicals pursuant to Title III, §313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 C.F.R., part 372.

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3. HAZARDS IDENTIFICATION

Before using this product, read the "Safe Handling Guide" for DuraGrip Melt Processible Elastomer.

Safety Hazards:

Pellet Spills: Pellet spills can be a slipping hazard, especially on smooth floors.

Human Health Hazards:

Contact with Molten Product/Degradation/Combustion Vapors:
Contact of molten polymer with any human tissue will result in thermal burns.

Vapors generated in polymer degradation will contain volatile compounding components which may cause temporary eye and respiratory irritation.

Vapors generated in the combustion of the polymer will contain carbon dioxide and can contain toxic chemicals, such as carbon monoxide. Fire fighters should wear self-contained breathing apparatus. All unprotected personnel should leave the area.

Chronic Effects:
None are known.

Medical Conditions Aggravated By Exposure:
None are known.

Carcinogenicity:
None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Environmental Hazards:

None are known.

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4. FIRST AID MEASURES

First Aid

Inhalation:

If vapors from the degradation or combustion of the product are inhaled, remove personnel to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain professional medical attention.

Skin Contact:

In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse. If molten material gets on skin, cool rapidly with cold water. Do not attempt to remove material from skin. Obtain medical treatment for thermal burn.

Eye Contact:

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

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5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Ignition Temperature: No data available, but > 249°C (480°F).

Fire and Explosion Hazards: The solid polymer can only be combusted with difficulty. No explosion hazard.

Hazardous Combustion Products:

Complete combustion yields carbon dioxide and water. Incomplete combustion /thermal degradation may additionally generate carbon monoxide, simple hydrocarbons and hydrocarbon oxidation products including acrolein, aldehydes and ketones.

Extinguishing Media:

Water spray or fog (avoid strong water stream which may spread fire) for all types of fires. Foam, Dry Chemical, CO_2 for small fires only..

Fire Fighting Instructions

Use self-contained breathing apparatus and protective clothing to avoid exposure to hydrogen chloride and toxic combustion vapors.

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6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES (5) and Handling (Personnel) (7) sections before proceeding with clean-up. Use appropriate Personal Protective Equipment during clean-up.

Spill Clean-Up: Sweep or vacuum up to avoid slipping hazard. Follow disposal recommendations

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7. HANDLING AND STORAGE

Handling (Personnel): See FIRST AID (4) and Personal Protective Equipment (8) Sections.

Storage: Store products in a cool, dry, well-ventilated place. Avoid storage locations in direct sunlight or near other heat sources, such as operating machinery or heating units. Keep containers tightly closed to prevent moisture absorption and contamination.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Ventilation:

Use sufficient local ventilation over hot processing equipment to keep employee exposure to fumes below suggested limits of MEL/TWA (8hr) = 0.6 mg/m^3

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Personal Protective Equipment

Eye/Face Protection: Wear approved safety glasses.

Respirators: Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

Skin Protection: Wear protective gloves to avoid burns from hot/molten polymer and to minimize skin contact. Follow good hygiene practices - wash hands thoroughly after handling products.

Exposure Guidelines

Exposure Limits

"DuraGrip" Melt-Processible Elastomer - All In Synonym List in Section 1

PEL (OSHA)	: None Established
TLV (ACGIH)	: None Established

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Melting Point	: NApp
Volatiles	: NApp
Solubility in Water	: Negligible
Odor	: Very Mild
Form	: Pellets
Specific Gravity Range	: 0.9 to 1.5

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10. STABILITY AND REACTIVITY

Chemical Stability:

Stable at normal ambient temperatures and storage conditions. Oxidizes exothermically at elevated temperatures.

Conditions to Avoid:

Rapid heating to temperatures above 280°C (536°F) or prolonged (days) exposure to temperatures above 90°C (194°F) will result in polymer degradation and possible auto-ignition.

Incompatibility with Other Materials

MATERIALS TO AVOID: Oxidizing agents.

Decomposition

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

Polymerization: Polymerization will not occur**.**

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11. TOXICOLOGICAL INFORMATION

Specific data have not been obtained for all grades. Based on similarities of ingredients, all grades can be expected to conform to the following generalities:

Acute Toxicity – Oral:
ALD > 5,000 mg/kg. of body weight, as tested in rats. Ingestion is not a probable route to toxic exposure.

Acute Toxicity – Dermal: ALD > 5,000 mg/kg of body weight.

Acute Toxicity – Inhalation: N/A. - Pellets cannot be inhaled.

Skin Irritation: Tests on rabbits indicated the product is not a skin irritant.

Eye Irritation: Tests on rabbits indicated only mechanical eye irritation.

Mutagenicity: Product is not considered to be a mutagenic hazard.

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12. ECOLOGICAL INFORMATION

Eco-toxicological Information

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

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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.

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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.

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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 Laws

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.

Substances Known to the State of California To Cause Cancer, Birth Defects or Other Reproductive Harm- None are known.

Substances on The New Jersey Workplace Hazardous Substance List Present at a Concentration Of 1% Or More (O.1% For Substances Identified as Carcinogens, Mutagens or Teratogens): - Carbon Black

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16. OTHER INFORMATION

Medical Use Caution: Do not use in medical applications involving implantation in the human body.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS	E. D. SANTOLERI
Address	ADVANCED POLYMER ALLOYS DIVISION OF FERRO CORPORATION 3521 SILVERSIDE ROAD - SUITE 2E WILMINGTON, DE 19810
Telephone	302-478-8989