



MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION ⁽¹⁾

Product Type:	Friction Material	Manufacturer:
		Scan-Pac Manufacturing Inc.
Product Name:	200AF, 202AF, 220AF, 230AF, 232AF, 232AFHDM, 250AF, 252AF, 240OR, 242OR, 725AF, 1136AF, 1186AF, GGA (GREEN GRIPPER ARAMID).	Address:
		N84W13510 Leon Rd. Menomonee Falls, WI 53051.
		Telephone:
		(262) 255-2320

SECTION 2: COMPOSITION/ INFORMATION ON HAZARDOUS INGREDIENTS

This section lists the ingredients which have been determined, for the purpose of 29 C.F.R. 1910.1200, to be health hazards. The ingredients in the products identified should be resin bonded and hazards normally associated with pure dusts of the listed ingredients should be reduced significantly in normal use and service of the product. All products identified in Section 1 contain **Asbestos free materials** and some products will not contain all hazardous components listed.

Ingredient	CAS #	%Weight	OSHA PEL	ACGIH TLV
Aramid Fiber	26125-61-1	>1.0	None Established	1 fiber/cc*
Barium Sulfate	7727-43-7	>1.0	5*-15* mg/m ³	10.0 mg/m ³
Calcium Hydroxide	1305-62-0	>1	5*-15** mg/m ³	5.0 mg/M ³
Carbon Black	1333-86-4	>0.1	3.5mg/m ³	3.5mg/m ³
Chromium (III) Oxide	1308-38-9	>0.1	.5 mg/m ³	.5 mg/m ³
Graphite (natural)	7782-42-5	>1	15mppcf	2.0 mg/m ³
Kaolin	1332-58-7	>1	5*-15** mg/m ³	2* mg/m ³
Nitrile Rubber	9003-18-3	>1	None Established	None Established

Phenolic Resin Cured	9003-35-4	>1	None Established	None Established
Zinc Oxide	1314-13-2	>1	5*-15** mg/m ³	2 mg/m ³

* Respirable fraction , ** Total Dust

SECTION 3: HEALTH HAZARD DATA

EMERGENCY OVERVIEW

Under normal handling conditions solid friction materials as shipped are considered non hazardous. However, processing operations (machining, riveting, drilling, or over heating etc) can produce airborne particles or fumes. Over exposure to these dusts should be considered hazardous.

POTENTIAL HEALTH EFFECTS

Ingredient	Carcinogenicity			
	NTP	IARC	OSHA	ACGIH
Aramid Fiber	No	3(unclassifiable)	No	No
Carbon Black	No	2B(possibly carcinogenic)	yes	No
Chromium (III) Oxide Green	No	3(unclassifiable)	No	No
Barium Sulfate, Calcium Hydroxide, Graphite,. Nitrile Rubber, Phenolic Resin Cured, Zinc Oxide	No	No	No	No

Inhalation: Dust may cause irritation. Fume produced at high temperatures may cause metal fume fever. Repeated inhalation of dust over time may affect a variety of organs.

Skin: May cause irritation. Prolonged skin contact may cause skin sensitization and/or dermatitis.

Eye: Dust may cause irritation and redness. Particles may scratch the eye.

Ingestion: Ingestion may cause irritation, nausea, vomiting and diarrhea.

Chronic: Repeated inhalation of dust over time may cause fibrotic lung disease and increased risk of sinus and respiratory cancer. Long-term dust inhalation may also harm the nervous, gastrointestinal, renal and hematological systems.

Medical Conditions Generally Aggravated By Exposure: NK/NA

SYMPTOMS AND EFFECTS OF EXPOSURE TO SELECTED INDIVIDUAL COMPONENTS

ARAMID FIBER

Inhalation hazard- Inhalation may cause soreness in the nose and throat, and coughing.

Other hazards- Exposure to fibers may cause mechanical irritation and tissue irritation to skin and eyes.

BARIUM SULPHATE

Inhalation hazard- Inhalation of fine dust may cause irritation of the nose and throat.

Other hazards- Eye contact may cause temporary discomfort and irritation.

CALCIUM HYDROXIDE (HYDRATED LIME)

Inhalation- This product can cause severe irritation to the respiratory system. Long term exposure may cause permanent damage. Contact can cause severe irritation or burning of eyes, including permanent damage. Contact with skin can cause severe irritation or burning of skin. Ingestion can cause severe irritation or burning of gastro-intestinal tract.

CARBON BLACK

Inhalation hazard- Temporary discomfort to upper respiratory tract may occur when over exposed to dust. California proposition 65 lists carbon black as a cancer-causing chemical.

Other health hazards(acute and chronic) – Cases of pulmonary fibrosis, emphysema and corpulmonale may result from prolonged inhalation of dust. Minor skin or eye irritation may occur.

CHROMIUM (III) OXIDE

Inhalation hazard - Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Other hazards - Causes irritation to skin. Symptoms include redness, itching, and pain. It can cause irritation to the gastrointestinal tract if ingested. Symptoms may include nausea, vomiting and diarrhea.

GRAPHITE

Health Hazards (acute and chronic): Inhalation of dust may result in irritation of mucous membranes. Long term inhalation may result in silicosis or pneumoconiosis. Symptoms may include coughing and shortness of breath. May produce black sputum, decreased pulmonary function and lung fibrosis. May cause mild irritation and redness to skin and eyes. Persons with pre-existing respiratory or cardiopulmonary problems may be more susceptible to the effects of this substance.

KAOLIN

Acute Health Effects: Hazardous in case of inhalation (lung irritant). Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion.

Potential Chronic Health Effects: Slightly hazardous in case of ingestion.

The substance may be toxic to upper respiratory tract, stomach. Repeated or prolonged exposure to the substance can produce target organs damage.

NITRILE RUBBER

Inhalation hazard- Overexposure to gases and fumes produced under processing temperatures may cause irritation to the eyes, skin, nose, throat and respiratory tract. Processing under conditions of inadequate ventilation may produce symptoms of nausea, dizziness or headaches. Smokers and persons with pre-existing lung conditions are more susceptible to effects of excessive dust exposure.

Other hazards- Dust may cause skin, eyes and/or respiratory tract irritation.

PHENOLIC RESIN – CURED

Inhalation hazard- Dust may cause irritation to nasal and respiratory tracts. As product is fully cured, formaldehyde vapor is not expected to be present. Formaldehyde is listed as an IARC carcinogen and is irritant to eyes, lungs and skin.

ZINC OXIDE

Inhalation of high levels of dust may result in tightness of chest, metallic taste, cough, dizziness, fever, chills, headache, nausea and dry throat. Overexposure may produce symptoms known as metal fume fever. Chronic exposure may cause respiratory tract irritation with nasopharyngitis and laryngitis.

SECTION 4: FIRST AID MEASURES

Ingestion: Seek medical attention.

Inhalation: Move to fresh air. Seek medical attention if irritation persists.

Eye Contact: Flush with water to remove particulate. Seek immediate medical attention if symptoms persist.

Skin Contact: Wash thoroughly with soap and water. If irritation persists, seek medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: N/A

Flammable Limits: N/A

Extinguishing Media: Select extinguishing agents appropriate to other materials involved

Unusual Fire and Explosion Hazards: None

Special Fire Fighting Procedures: Positive pressure, self contained breathing apparatus.

Auto ignition temperature: This product is inherently flame resistant, but may ignite at temperatures exceeding 1112⁰F (600⁰C) in an oxygen-enriched atmosphere.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Grinding, drilling, milling, etc. can result in the release of airborne dust. Remove the dust by vacuuming or wet mopping. Vacuums used for this purpose should be equipped with HEPA filters. Do not use compressed air to blow dust in the workplace.

SECTION 7: HANDLING AND STORAGE

Store in a dry place. Avoid creating dust or airborne particulate. Use approved vacuum or wet methods to remove dust. Vacuums used for this purpose should be equipped with HEPA filters. Do not use compressed air to blow dust. Avoid breathing dust. Use respirator if dust becomes airborne. After handling, wash with mild soap and cold water. Wash work clothes separately.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Respiratory Protection: Use NIOSH approved respirator if there is a potential for exposure to pneumoconiosis-fibrosis producing dusts and dusts with TLV not less than 0.05 mg/M³.

Ventilation: All operations such as machining, grinding, riveting that may produce dust should be adequately exhausted to prevent dust inhalation.

Local Exhaust: For Dust exposure exceeding TLV.

Mechanical (General): Remove dust with vacuum

Skin protection: Protective Gloves and Long sleeved shirts or other protective clothing suggested for sensitive persons.

Eye Protection: Wear OSHA approved safety glasses as necessary, if dust exposure is possible.

Work/Hygienic Practices: Employees should be properly instructed in the use of control measures as indicated above when there is a need for it. Employees should not remove dust using compressed air.

SECTION 9: PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: N/A **Specific Gravity (H₂O-1):** 1.5 to 3.6

Vapor Pressure (mm Hg.): N/A **Melting Point:** N/A

Vapor Density (Air - 1): N/A **Evaporation Rate:** N/A

Solubility in Water: Insoluble

Appearance and Odor: Solid with various colors, including green, brown & black, and with phenolic odor.

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: Stable at normal temperatures and storage conditions

Condition to Avoid: NA

Incompatibility (Materials to Avoid): None

Conditions to Avoid: NA/NK

Hazardous Polymerization: Will not occur. The product is fully cured in the manufacturing process.

Hazardous Decomposition or By-Products: Incomplete combustion will produce oxides of carbon, nitrogen, sulfur, hydrocarbons, ammonia and other trace organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation: Refer to sections 2 & 3

Skin: Refer to sections 2 & 3

Eye: Refer to sections 2 & 3

Ingestion: Refer to sections 2 & 3

SECTION 12: ECOLOGICAL INFORMATION

No ecological data has been found for this product

SECTION 13: DISPOSAL CONSIDERATIONS

Comply with applicable Federal, State and Local regulations. Waste should be placed in airtight containers. Properly mark all containers with appropriate labeling and dispose in landfill in compliance with 49CFR261, 40CFR262 and applicable state and local regulations.

SECTION 14: TRANSPORTATION INFORMATION

Proper Shipping Name: Not regulated

Hazard Class: N/A

Identification Number: N/A

Packing Group: N/A
Shipping Label: None
Additional Marking Requirement: None

SECTION 15: REGULATORY INFORMATION

U.S. TSCA: All chemicals used in the manufacture of this product are listed on the U.S. Toxic Substances Control Act (TSCA) Inventory.

California Proposition 65: This product contains carbon black and may contain silica, ingredients known to the State of California to cause cancer, birth defects or other reproductive effects.

SARA Title III- Section 313 Supplier Notification: This product contains the following chemicals subject to SARA Title III/CERCLA “reportable quantities” (RQs) and/or “threshold planning quantities” (TPQs) and/or are classified as “Toxic Chemicals” under the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372.

Ingredient	CAS #	
% Weight		
Chromium (III) compounds	1308-38-9	>1

RCRA Hazardous Waste Code: N/A

CERCLA Hazardous Substances: This product contains chemicals in the raw state classified as CERCLA Hazardous Substances.

OSHA: OSHA has not developed standards other than PELs specific to its constituents.

WHMIS Classification: Not Available.

SECTION 16: OTHER INFORMATION

HMIS RATINGS: Health = 1
Flammability = 0
Physical Hazard = 0
Protective Equipment = E

Abbreviations:

CAS #: Chemical Abstract Services Number

OSHA PEL: U.S. Occupational Safety and Health Administration Permissible Exposure Limits

ACGIH TLV: American Conference of Governmental Industrial Hygienists Threshold Limit Value (2005)

Fibers/cc: Fibers per cubic centimeter of sampled air.

Mg/m³: Milligrams of contaminant per cubic meter of sampled air, on a weight-to-volume basis

N/A: Not Applicable

N/K: Not Known

Mppcf: Millions of particles per cubic foot of sampled air

A3: ACGIH has classified the compound as a confirmed animal carcinogen with unknown relevance to humans

NIOSH: National Institute of Occupational Safety and Health

IARC: International Agency for Research on Cancer

NTP: National Toxicology Program

HEPA: High-efficiency particulate air

HMIS: Hazardous Materials Identification System

RCRA: Resource Conservation and Recovery Act

Notes:

(1) Notwithstanding the preparation and delivery of this Material Safety Data Sheet, Scan-Pac Mfg. Inc.'s position is that the products identified herein meet the OSHA definition of an "article" and are exempt from the Hazard Communication Standard.

Exact formulations of the product identified herein are considered proprietary and confidential and will not be revealed except in accordance with the Hazard Communication Standard.

This Material Safety Data Sheet has been prepared solely for the purpose of complying with 29 C.F.R. 1910.1200. The information given herein is based, in part, on data supplied by various chemical manufacturers. While the information set forth herein is believed to be accurate, Scan-Pac Mfg. Inc. makes no representation or warranty as to its accuracy or completeness and said information is furnished independently of any sale of the products identified herein. Scan-Pac Mfg. Inc. shall in no event be responsible for any damages of whatever nature, directly or indirectly, resulting from the publication or use or reliance upon data contained herein. No express or implied warranties of merchantability or fitness for use, with respect to the products or data herein, is made hereunder. May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.