SAFETY DATA SHEET (1)

SECTION 1 - IDENTIFICATION

Product Identifier (As Used on Label and List):

RF-30, RF-34, RF-36, RF-38, RF-41, RF-415, RF-43, RF-44, RF-45, RF-45J, RF-52, RF-53, RF-56, RF-57, RF-59, RF-61, RF-62, RF-63, RF-70, RF-72, RF-73, RF-75, RF-81, RF-87-1, GM, GM43, GM45, GMH, GH, PTT002, PTT003, SM-001, SM-002, SM-003, SM-004, SM-005, SM006, SM008, SP-009, UHC-001, UHC-002, WF-001, WB001D.

Other means of identification: Not available

Recommended use: As Friction Material

Restrictions on use: None

Manufacturer: Scan-Pac Manufacturing Inc.

Address: N84W13480 Leon Rd., Menomonee Falls, WI 53051.

Telephone number: (262) 255-2320

Emergency phone number: (262) 437-7849

Prepared By: Research & Development Department

SECTION 2 – HAZARD(S) IDENTIFICATION

Classification of hazard: Solid friction materials (identified in Section 1) as shipped meet the OSHA definition of " Articles" and are considered "non- hazardous" under normal handling conditions.

Signal Word: None

Pictograms : None

Hazard statement: Processing operations of solid friction materials (machining, riveting, drilling, or over- heating, etc.,) can produce airborne particles or fumes. Over exposure to these dusts should be considered hazardous.

Inhalation: Dust may cause irritation.

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

Eye: Dust may cause irritation and redness.

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

Precautionary statement: 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. Use personal protection gears such as safety glasses, gloves and dust respirator while processing the friction materials.

Hazard not otherwise classified: N/A

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS[2]

All products identified in Section 1 are mixtures of the following **Asbestoses free** ingredients in a resin bonded form. Hazards normally associated with pure dusts of the listed ingredients should be reduced significantly in normal use and service of the product. Some products do not contain all the components listed.

INGREDIENT	CAS #	%WEIGHT[@]
Aluminum Oxide	1344-28-1	>0.1
Aramid Fiber	26125-61-1	>1.0
Barium Sulfate	7727-43-7	>1.0
Brass		>1.0
Copper	7440-50-8	>0.6
Zinc	7440-66-6	>0.3
Lead	7439-92-1	<0.01
Calcium Hydroxide (Lime)	1305-62-0	>1
Carbon Black	1333-86-4	>0.1
Chromium (III) Oxide	1308-38-9	>0.1
Cashew Particle	68333-94-8	>1
Coke(Petroleum)	64743-05-1	>1
Copper	7440-50-8	>1
Graphite (natural)	7782-42-5	>1
Iron Powder	7439-89-6	>1
Iron Oxide	1309-37-1	>1
Magnesium Oxide	1309-48-4	>1
Nitrile Rubber	9003-18-3	>1
Phenolic Resin Cured	9003-35-4	>1

Polytetra fluoroethylene	9002-84-0	>1
Potassium Titanate	12030-97-6	>1
Rottenstone	1335-30-4	>1
Reclaimed Rubber	139497-04-4	>1
Synthetic Vitreous Fibers	65997-17-3	>1
Steel fiber	65997-19-5	>1
Talc	14807-96-6	>1
Wollastonite	13983-17-0	>1
Zinc	7440-66-6	>0.3
Zinc Oxide	1314-13-2	>1
Zinc Sulphide	1314-98-3	>1

@ Exact Percentage (concentration) of composition withheld as a trade secret is required.

SECTION 4 – FIRST AID MEASURERS

Emergency and First Aid Procedures: Should not be required in normal handling of the products. 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

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

Skin: Prolonged skin contact may cause skin sensitization, irritation and/or dermatitis. Wash thoroughly with soap and water. If irritation persists, seek medical attention

Eye: Dust may cause irritation and redness. Particles may scratch the eye. Flush with water to remove particulate. Seek immediate medical attention if symptoms persist.

Ingestion: Ingestion may cause irritation, nausea, vomiting and diarrhea. Seek medical attention.

Medical Conditions Generally Aggravated By Exposure: NK/NA

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point: N/A Flammable Limits: N/A

Extinguishing Media: Water

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 1112^0F (600^0C) 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 the materials 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 clothes separately. Protective sleeves and creams may be necessary for employees with sensitive skin.

SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

Ingredient Exposure Limits: *Respirable fraction, ** Total dust

INGREDIENT	CAS #	OSHA PEL (TWA)	ACGIH TLV (TWA)
Aluminum Oxide	1344-28-1	5*-15** mg/m^3	None
Barium Sulfate	7727-43-7	5*-15** mg/m^3	5.0 mg/m^3
Brass			
Copper	7440-50-8	1 mg/m^3	1 mg/m^3
Zinc	7440-66-6	None	None
Lead	7439-92-1	0.05 mg/m^3	0.05 mg/m^3,
Calcium Hydroxide	1305-62-0	5*-15** mg/m^3	5.0 mg/m^3
Carbon Black	1333-86-4	3.5mg/m^3	3.0 mg/m^3
Copper	7440-50-8	1 mg/m^3	1 mg/m^3
Graphite	7782-42-5	15mppcf	2.0 mg/m^3
Iron Oxide	1309-37-1	10.0 mg/m^3	5 mg/m^3
Magnesium Oxide	1309-48-4	15* mg/m^3	10.0 mg/m^3
Talc	14807-96-6	20mppcf	2.0 mg/m^3
Zinc Oxide	1314-13-2	5*-15** mg/m^3	2.0mg/m^3

Respiratory Protection (Specify Type): NIOSH approved for pneumoconiosis-fibrosis producing dusts and dusts with TLV not less than 0.05 mg/m^3

Ventilation:

Local Exhaust: For Dust exposure exceeding TLV.

Mechanical (General): Remove dust with HEPA vacuum system

Special: NA/NK

Other: NA/NK

Protective Gloves: Suggested for sensitive persons.

Eye Protection: Should not be needed for normal handling of product but is good practice where dust is propelled.

Protective Clothing or Equipment: Long sleeved shirts or other protective clothing may be beneficial to prevent skin contact of sensitive persons.

Work/Hygienic Practices**:** Employees should be properly instructed in the use of control measures as indicated above when there is a need for it. If dust from this product is produced, unnecessary accumulation of dust should be avoided.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N/A

Specific Gravity (H_2O-1): 1.5 to 3.6

Vapor Pressure (mm Hg.): N/A

Melting Point: NK/NA

Vapor Density (Air - 1): N/A

Evaporation Rate (Butyl Acetate-1): N/A

Solubility in Water: None

Appearance: Rigid hard Solid

Odor: light phenolic odor

Color: Various colors, including grey, green, brown, red and black

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable at normal temperatures and storage conditions

Condition to Avoid: NA/NK

Incompatibility (Materials to Avoid): NK

Conditions to Avoid: NA/NK

Hazardous Polymerization: Will not occur. This product is fully cured.

Hazardous Decomposition or By-Products: Oxides of carbon, nitrogen, hydrocarbons, ammonia and other trace organic compounds.

SECTION 11 - TOXICOLOGICAL INFORMATION

The toxicological information given below are primarily associated with airborne particles or fumes that may be generated from processing operations (machining, riveting, drilling, or over heating etc).

Route(s) of Entry:

Inhalation: Yes

Skin: NK/NA

Ingestion: NK/NA

Health Hazards (Acute and Chronic):

Synthetic Vitreous fiber may cause mechanical irritation of mouth, nose, throat, eye, and skin. Graphite may cause pneumoconiosis, other lung damage and/or irritation of the eye. Dust of autoclaved lime may cause irritations or injury to eyes, skin or respiratory tract.

Carcinogenicity [(3)]:

NTP: No

IRAC Regulated: No

OSHA Regulated: No

Signs and symptoms of Exposure:

Synthetic Vitreous Fibers: Itching and possible irritation of upper respiratory tract.

Calcium Hydroxide: Irritation or burning sensations and burns to wet skin.

Mineral Wool Fiber: Skin, eyes or respiratory tract.

Graphite Dust: Eye irritation and coughing, wheezing, shortness of breath, impaired pulmonary functions.

Medical Conditions Generally Aggravated By Exposure: NK/NA

SECTION 12 - ECOLOGICAL INFORMATION

No ecological data available. Product is Article.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste should be disposed of in accordance with all applicable Federal, 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. However, the regulation pertains to only airborne, unbound particles of respirable size. In this product no direct exposure to carbon black and silica occurs as they are present in bound form in resin matrix composite.

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
Copper and Compounds	7440-50-8	>1
Zinc and Compounds	7440-66-6, 1314-13-2, 1314-98-3	>1
Chromium (III) compounds	1308-38-9	>1

RCRA Hazardous Waste Code: N/A

CERCLA Hazardous Substances: This product contains chemicals which in the raw state are 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

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 (2017)
Fibers/cc:	Fibers per cubic centimeter of sampled air.
Mg/m^3:	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
TWA:	Time Weighted Average (i.e., 8 hours)

ISSUED BY: SCAN-PAC MANUFACTURING INC.

ISSUE DATE: 10/20/2020

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 definition of an "article" and are exempt from the Hazard Communication Standard, 29 C.F.R. 191031200.

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 Safety Data Sheet has been prepared solely for the purpose of complying with 29 C.F.R. 1910.1200, if deemed necessary be the recipient hereof. 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.

(2) This section lists the ingredients which have been determined, for the purpose of 29 C.F.R. 1910.1200, to be health hazards and which comprise 1% or greater of the composition (except that chemicals identified as carcinogens are listed if the concentrations are 0.1% or greater). In addition, this section lists the ingredients, which have been determined for purpose of 29 C.F.R. 1910.1200, to present a physical hazard when present in the mixture. 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 herein contain asbestos free material and some products will not contain all hazardous components listed.

(3) Indicates whether the chemical is listed in the National Toxicology Program (NTP) Annual Report on Carcinogens or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs or by OSHA.
