Material Safety Data Sheet

Tox No. : 160320

Product: D9097 (FRICTION MATERIAL)  
(POST_PRODUCTION_ONLY)

Print Date : 01/29/16

Tox Status : C2

Last Reviewed : 03/06/03

Language: English

====================================== PRODUCT IDENTIFICATION =======================================

Material Class: METALS, MISC.

Supplier:  NISSHINBO INDUSTRIES INC   (GSDB: BE2HA)
31-11,NINGYO-CHO, 2-CHOME,
CHUO-KU, TOKYO ,   103-8650
JAPAN
Telephone: 810-997-1000

This material has not been identified against a material Specification.

====================================== CHEMICAL AND PHYSICAL PROPERTIES =======================================

Appearance :  Physical State         SOLID
               Form               -
               Color             BROWN/GRAY
Specific Gravity (Relative Density)  1-3
Boiling Point                           N.AP
Flash Point                              N.AP
pH full strength                        N.AP
pH diluted                              Not Applicable
Odor                                     ODORLESS
Odor Threshold                           -
Viscosity                                N.AP
Vapor Density                            N.AP
Vapor Pressure                           N.AP
Evaporation Rate                        -
Freezing Point                           N.AP
Explosion Properties :  UEL              N.AP
                            LEL              N.AP
Auto-ignition Temperature               N.AP
Solubility                               NEGLIGIBLE IN WATER
Partition Coefficient                    -
### HAZARDOUS AND OTHER DISCLOSED INGREDIENTS

<table>
<thead>
<tr>
<th>Percent Range</th>
<th>Exposure Limits - TWA</th>
<th>CAS number</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;10-30</td>
<td>10 mg/m³ (Total Dust asBaSO₄)/SameAsTLV</td>
<td>7727-43-7</td>
<td>BARIUM SULFATE</td>
</tr>
<tr>
<td>&gt;10-30</td>
<td>10/15 mg/m³</td>
<td>471-34-1</td>
<td>CALCIUM CARBONATE</td>
</tr>
<tr>
<td>&gt;10-30</td>
<td>5/5 mg/m³</td>
<td>1305-62-0</td>
<td>CALCIUM HYDROXIDE</td>
</tr>
<tr>
<td>&gt;5-10</td>
<td>10/10 mg/m³</td>
<td>1332-58-7</td>
<td>KAOLIN [HYDRATED ALUMINUM SILICATE]</td>
</tr>
<tr>
<td>&gt;5-10</td>
<td>Not Regulated</td>
<td>100-97-0</td>
<td>HEXAMETHYLENETETRAMINE</td>
</tr>
<tr>
<td>1-5</td>
<td>3.5/3.5 ppm</td>
<td>108-95-2</td>
<td>PHENOL</td>
</tr>
<tr>
<td>1-5</td>
<td>10/6 mg/m³</td>
<td>1333-86-4</td>
<td>CARBON BLACK</td>
</tr>
<tr>
<td>1-5</td>
<td>2/2 mg/m³ Resp Dust</td>
<td>7631-86-9</td>
<td>SILICA, AMORPHOUS</td>
</tr>
<tr>
<td>1-5</td>
<td>2/2 mg/m³ Resp Dust</td>
<td>14807-96-6</td>
<td>TALC</td>
</tr>
</tbody>
</table>

Exposure Limit Abbreviations

- **TWA**=Time Weighted Average
- **C**=Ceiling
- **S**=Short Term Exposure
- **Sk**=Skin
- **Sol**=Soluble Compounds
- **Fu**=Fumes
- **Insol**=Insoluble Compounds
- **Du**=Dust
- **I**=IARC
- **Resp**=Respirable

* See chemical fact sheets (CFS) for additional details on these ingredients.
+ For more information on 7727-43-7, see CFS for  .

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### REGULATORY INFORMATION

Non-asbestos containing friction material.

This product contains an ingredient(s) considered to be a hazardous substance by the State of Pennsylvania (Pennsylvania Worker and Community Right to Know Act).

This product contains an ingredient(s) considered to be a hazardous substance(s) by the State of New Jersey.

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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### SIGNAL WORD

- **Xi** CAUTION

- **Xn** >WARNING

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### HEALTH HAZARD INFORMATION
This product may be harmful by inhalation. This material contains an ingredient which is a cancer-suspect agent. Prolonged or repeated contact with this product may lead to various skin disorders such as dermatitis or folliculitis. Dust from dried material may cause eye, skin and respiratory tract irritation. Health hazards do not arise unless abrasive, heat or other reforming processes are applied to this product. Chronic lung disease and/or damage may result from prolonged/repeated breathing of the dust of this material. If ingested, this product may cause gastrointestinal irritation. This product may cause irritation to the eyes, respiratory system, and skin.

Overexposure to some hazardous ingredients in this product has been found to affect certain body organs and systems in experimental animals and/or humans. These include: Skin, Eyes, and Respiratory System. Medical conditions which may be aggravated by exposure to this product are pre-existing disorders of the: Skin, Eyes, and Respiratory System

Based on the composition of the product identified by the supplier, selected portions of the acute toxicity information from RTECS are as follows:

471-34-1  CALCIUM CARBONATE  
Oral, adult rat, LD50 = 6450 mg/kg
1305-62-0  CALCIUM HYDROXIDE  
Oral, adult rat, LD50 = 7340 mg/kg
108-95-2  PHENOL  
Inhalation, adult rat, LC50 = 316 mg/m3  
Oral, adult rat, LD50 = 317 mg/kg  
Skin, adult rat, LD50 = 669 mg/kg
7631-86-9  SILICA, AMORPHOUS  
Oral, adult rat, LD50 = 3160 mg/kg
7757-82-6  SODIUM SULFATE  
Oral, mouse, LD50 = 5989 mg/kg

This product is not combustible. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. Use water to cool fire-exposed containers, structures, and to protect personnel. EXTINGUISHER INFORMATION: Dry chemical, foam, water fog.

Hazardous polymerization will not occur. This is a stable material.

=(A)================================ SAFE HANDLING AND STORAGE ===============================
Do not breathe dust.
Avoid getting this material into contact with your eyes.
Use this product with adequate ventilation.
Avoid prolonged or repeated skin contact with this material.
Guard against dust accumulation of this material.
When using this material, do not eat, drink or smoke.

**(B)------------------------------- PROTECTIVE MEASURES --------------------------------------**

Wear safety glasses.
If exhaust ventilation is needed, and not available, contact Corporate Industrial Hygiene for specific details.
Use a HEPA dust particulate filter respirator for concentrations exceeding the Occupational Exposure Limit.
Use local exhaust.
Use of impervious gloves is recommended, such as neoprene.
Use of protective coveralls and long sleeves is recommended.

**(C)----------------------------- SPILLS, LEAKS AND DISPOSAL -----------------------------------**

Wear appropriate protective equipment and clothing during clean-up.
Do not allow this material to drain into sewers/water supplies.
Remove soiled clothing and launder before reuse.
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulation.
Avoid excessive skin contact with the spilled material.
Dust should be collected by vacuuming with a HEPA-filter equipped vacuum or by wet mopping.
Do not use compressed air or dry brushing for cleaning dust.
Avoid inhalation of vapor, fumes, dust and/or mist from the spilled material.

============================= FIRST AID TREATMENT =============================

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contaminated clothing and wash before reuse.
For skin contact, wash immediately with soap and water.
If the material is swallowed, get immediate medical attention or advice.
Wash thoroughly after handling.
If inhalation of gas/fume/vapor/dust/mist from the material is excessive (air concentration is greater than the TLV or health effects are noticed), immediately remove the affected person(s) to fresh air.
If irritation persists, get medical attention.

=============================== SPECIAL REMARKS ===============================

This product is for industrial use only by qualified personnel (one who understands the hazards prior to use). Therefore, before using or handling this product, read and understand the MSDS.
This product contains a material identified as a hazardous ingredient which poses a hazard only if the product is dried and a dust is formed.
This material contains AMORPHOUS SILICA and/or MICA group minerals. These silicates may be contaminated with CRYSTALLINE SILICA which can cause chronic lung disease (Silicosis) and/or lung cancer with prolonged/repeated breathing of dust.
Also AMORPHOUS SILICAS may transform to crystalline when subjected to temperatures exceeding 1800 F. Therefore, the content of crystalline silica may be higher than originally stated in the INGREDIENTS section. Users should observe good industrial hygiene and work practices to reduce exposure...
when handling after service products. This product contains one or more non-asbestos fibers, such as glasswool, glass filaments, fiberglass, wollastonite, rockwool, slagwool, aramid fibers, ceramic fibers, or other man-made fibers. Although relatively little is known about the long term health effects from exposure to dust from friction materials, studies of respirable fibers, which are physically similar to asbestos, suggest the potential for chronic lung disease, including fibrosis, with overexposure.

Inhalation of non-asbestiform cosmetic grade talc for 2 years at 6 and 18 mg/m^3 produced clear evidence of carcinogenicity in female rats (lung and adrenal tumors) and some evidence of carcinogenicity in male rats (adrenal tumors). No evidence of carcinogenicity was demonstrated in male and female mice exposed under the same conditions. Microscopic examination of the lungs or rats and mice exposed to talc revealed additional exposure related effects primarily associated with inflammatory response.

This product contains carbon black which has been shown to cause cancer in laboratory animals by inhalation and is listed as a suspect carcinogen by IARC (Group 2B). The carbon black that caused cancer contained polynuclear aromatic hydrocarbons (PAH), whereas carbon black containing no PAH produced no cancer.

--------------------- ENVIRONMENTAL INFORMATION: ECOLOGY ---------------------

Material contains a chemical which is a Ford Motor Company Material of Concern. Use and release of this material should be minimized to the greatest extent possible.

This product contains a chemical which is restricted above a specific concentration threshold by the Ford Motor Company Restricted Substance Management Standard (RSMS), WSS-M99P9999-A1. Consult the RSMS for restricted applications. If used in a restricted application, prior notification to and acknowledgement from Ford Motor Company is required.

This product contains a chemical which is restricted at any concentration by the Ford Motor Company Restricted Substance Management Standard (RSMS), WSS-M99P9999-A1. Consult the RSMS for restricted applications. If used in a restricted application, prior notification to and acknowledgement from Ford Motor Company is required.

Material contains a chemical which is a Hazardous Air Pollutant (HAP), regulated by the United States Clean Air Act.

--------------------- Transport Information ---------------------

U.S. Department of Transportation (DOT) 49 - CFR 172.101
This product is not regulated as a dangerous good.

Canadian Transportation of Dangerous Goods (T.D.G.) -TDGR
This product is not regulated as a dangerous good.

Secretary of Communication and Transportation (SCT)- NOM-002-SCT2/1994 (Mexico)
This product is not regulated as a dangerous good.

International and Domestic Air Transportation - ICAO & IATA Section 4.2
This product is not regulated as a dangerous good.

International Water Transportation - IMDG Code Amendment 31-02
This product is not regulated as a dangerous good.

--------------------- PREPARATION INFORMATION ---------------------

The chemical identification and properties for this material were provided by the manufacturer. For Canadian locations, a manufacturer's MSDS is available upon request.
n request. Health and safety information has been evaluated by:

The Occupational and Environmental Health Sciences Department,
Ford Motor Company
National Parts General Office,
MD74, 29500 Plymouth Road,
Livonia, MI 48150, USA.

For emergency information dial:

(313) 322-4133 9:00am to 5:00pm EST Monday through Friday
-or- (313) 323-2222 anytime

Date of Preparation: 03/06/03