

## MATERIAL SAFETY DATA SHEET

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### SECTION 1 PRODUCT AND COMPANY INFORMATION

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PRODUCT NAME: **CEN 105XXXXX 15AF9588 FF A16**

GENERAL USE: FRICTION MATERIAL

PRODUCT DESCRIPTION: MOLDED ARTICLES

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### SECTION 2 HAZARDS IDENTIFICATION

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#### EMERGENCY OVERVIEW:

FRICTION MATERIALS ARE NOT CONSIDERED HAZARDOUS, HOWEVER TOXIC AND IRRITATING MATERIALS AND/OR DUST MAY BE RELEASED IN A FIRE, MACHINING, GRINDING, ETC. DUST MAY PRODUCE PNEUMOCONIOSIS AND OTHER LUNG DAMAGE.

APPEARANCE/ODOR: ARTICLES, GRAY COLOR, ODORLESS POTENTIAL HEALTH EFFECTS:

HEALTH EFFECTS LISTED BELOW ARE ASSOCIATED WITH EXCESSIVE AMOUNT OF DUST THAT MAY OCCUR DURING MACHINING, GRINDING, ETC.

INHALATION: IRRITATION OR SORENESS IN THROAT, NOSE, AND RESPIRATORY TRACT.

SKIN: SOME PEOPLE MAY BE SENSITIVE TO CURED PHENOLIC RESIN AND CASHEW RESINS, SO PROLONGED OR REPEATED EXPOSURE MAY CAUSE SKIN IRRITATION.

EYES: DUST IN EYES MAY CAUSE IRRITATION, REDNESS, AND PAIN.

INGESTION: INGESTION MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA.

CHRONIC EFFECT: INHALATION OF DUST MAY CAUSE LUNG INJURY.

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	CONTENTS (%)
CURED PHENOLIC RESIN	NOT APPLICABLE	4 ~ 6
POLY-PARAPHENYLENE-	026125-61-1	2 ~ 5
TEREPHTHALAMIDE POTASSIUM HEXATITANATE	12056-51-8	9 ~ 18
BARIUM SULFATE	7727-43-7	28 ~ 35
CALCIUM HYDROXIDE	1305-62-0	2 ~ 4
GRAPHITE	7782-42-5	4 ~ 8
COPPER	7440-50-8	6 ~ 9
ROCK WOOL	NONE	9 ~ 12
OTHERS	NONE	3 ~ 25

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### SECTION 4 FIRST AID MEASURES

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IF ANY OF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION IMMEDIATELY.

SKIN: WASH SKIN WITH SOAP AND WATER. SEEK MEDICAL ATTENTION FOR PERSISTENT IRRITATION.

EYES: WASH EYES WITH COOL RUNNING WATER IF DUST BECOMES EMBEDDED.

SEEK MEDICAL ATTENTION IF REDDENING PERSISTS.

INHALATION: REMOVE VICTIM TO FRESH AIR.

INGESTION: RINSE THE MOUTH WITH WATER.

NOTE TO PHYSICIAN: NO SPECIAL FIRST AID OR MEDICAL TREATMENT PROCEDURES ARE REQUIRED.

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#### SECTION 5 FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: WATER SPLAY, DRY CHEMICAL POWDER, CO2

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#### SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: IN CASE DUST MAY OCCUR, USE PERSONAL PROTECTION EQUIPMENT.

ENVIRONMENTAL PRECAUTIONS: NOT APPLICABLE.

METHOD FOR CONTAINMENT: NOT APPLICABLE.

METHOD FOR CLEAN-UP: USE WET METHOD TO CLEAN UP DUST FROM PRODUCTS.

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#### SECTION 7 HANDLING AND STORAGE

HANDLING: AVOID BREATHING OR CREATING DUST.

STORAGE: AVOID TO CONTACT WITH WATER, AND PREVENT MOISTURE.

MSDS NO. KN-321E-2

#### SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION EXPOSURE GUIDELINES:

<b>INGREDIENTS</b>	<b>CAS #</b>	<b>ACGIH TLV (TWA)</b>
CURED PHENOLIC RESIN	NOT APPLICABLE	NONE
POLY-PARAPHENYLENE-	026125-61-1	0.5 f/cm <sup>3</sup>
TEREPHTHALAMIDE POTASSIUM HEXATITANATE	12056-51-8	NOT ESTABLISHED
BARIUM SULFATE	7727-43-7	10 mg/m <sup>3</sup>
CALCIUM HYDROXIDE	1305-32-0	5 mg/m <sup>3</sup>
GRAPHITE	7782-42-5	2 mg/m <sup>3</sup>
COPPER	7440-50-8	1 mg/m <sup>3</sup> (DUST/MIST)
ROCK WOOL	NONE	1 f/cm <sup>3</sup>
OTHERS	NONE	NONE

PERSONAL PROTECTIVE EQUIPMENT

EYE PROTECTION: SAFETY GLASSES ARE RECOMMENDED.

HAND PROTECTION: PROTECTIVE GLOVES.

RESPIRATORY PROTECTION: DUST RESPIRATOR ARE RECOMMENDED.

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#### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: SOLID

APPEARANCE AND ODOR: GRAY COLOR, ODORLESS

SPECIFIC GRAVITY: 2 ~3 SOLUBILITY IN WATER: NEGLIGIBLE

#### SECTION 10 STABILITY AND REACTIVITY

STABILITY: STABLE

CONDITION TO AVOID: KEEP AWAY FROM FIRE, HEAT, MOISTURE

MATERIAL TO AVOID: STRONG ACIDS, STRONG ALKALIS, STRONG OXIDIZERS AND REDUCERS.

HAZARDOUS DECOMPOSITION: TOXIC AND IRRITATING MATERIALS MAY BE RELEASED IN A FIRE.

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SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: NOT AVAILABLE.

CHRONIC TOXICITY: NOT AVAILABLE

SECTION 12 ECOLOGICAL INFORMATION

AQUATIC TOXICITY: NOT AVAILABLE

DEGRADABILITY: NOT AVAILABLE

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SECTION 13 DISPOSAL CONSIDERATIONS

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OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN DISPOSING THIS PRODUCT.

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SECTION 14 TRANSPORT INFORMATION

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NOT CLASSIFIED AS DANGEROUS MATERIAL.

NO SPECIAL PRECAUTIONS ARE REQUIRED.

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SECTION 15 REGULATORY INFORMATION

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NOT APPLICABLE TO ANY TYPE OF LAWS AND REGULATIONS RELATED TO THE CLASSIFICATION STANDARD OF HAZARD AND TOXICITY.

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SECTION 16 OTHER INFORMATION

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THE INFORMATION PRESENTED HEREIN WAS PREPARED FOR YOUR REFERENCE TO THE BEST OF OUR KNOWLEDGE. IT IS GIVEN IN GOOD FAITH BUT NO WARRANTY EXPRESSED OR IMPLIED IS MADE.

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