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DISTRIBUTOR'S NAME:

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SECTION 1 -- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME...: ALUMINUM PIGMENTS OR POWDER

PRODUCT CLASS: SCREEN PRINTING RELATED MATERIAL

INK SERIES...: DIST

CODE: ALUMINUM

- H M I S C O D E S -
HEALTH - 1*
FLAMMABILITY - 3
REACTIVITY - 3
PPE - X

Item Description	WT lb/gal	VOC g/L	VOC lb/gal	% VOC volume	Item Description	WT lb/gal	VOC g/L	VOC lb/gal	% VOC volume
BPC90	22.5	0	.0	0	NSIPM501	22.5	0	.0	0
NSIPM520	22.5	0	.0	0	SIPM531	22.5	0	.0	0
215	22.5	0	.0	0	315	22.5	0	.0	0

SECTION 2 -- COMPOSITION, INFORMATION ON INGREDIENTS

CHEMICAL NAME; COMMON NAME; CAS NUMBER	PERCENT BY WEIGHT	OCCUPATIONAL EXPOSURE LIMITS		VAPOR PRESSURE IN mmHg	NOTES
		-----ACGIH----- TLV	-----OSHA----- PEL		
* ALUMINUM COMPOUNDS; CAS #: 7429-90-5	> 95	10 mg/m3	15 mg/m3 Total Dusts	N/A	(1)
SILICON DIOXIDE; AMORPHOUS SILICA; CAS #: 7631-86-9	0-3	10 mg/m3	6 mg/m3 Total dust	N/A	

* SUBJECT TO REPORTING REQUIREMENT OF SECTION 313 OF TITLE III OF SARA (40 CFR PART 372).

1) CAS # and exposure limits are for total aluminum dust. 5 mg/m3 exposure limit for respirable fraction.

SECTION 3 -- HAZARDS IDENTIFICATION

GENERAL HEALTH EFFECTS

THE FOLLOWING INFORMATION HAS BEEN DEVELOPED BASED UPON USING THE PRODUCT AS INTENDED BY THE MANUFACTURER. The potential health effects of this product are based on the hazards of its components. The use of this product in combination with other products may produce synergistic (additive) health effects. Cautionary labeling and material safety data sheets of all materials used with this product should be reviewed before use.

EYES
Eye contact with dusts or powders may cause mechanical or chemical irritation.

SKIN
Repeated or prolonged overexposure may cause skin irritation or dermatitis.

INHALATION
Inhalation may cause respiratory tract irritation.

INGESTION
Ingestion may cause gastrointestinal tract irritation.

CHRONIC EFFECTS/TARGET ORGANS
No Data Available

ANIMAL STUDIES
No Data Available

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Pregnant women and persons with pre-existing health disorders should consult their physician before using this product. Repeated and prolonged overexposure and/or individual sensitivity may increase the potential for and degree of adverse health effects. See Section 3 "Hazards Identification" for effects of certain hazardous ingredients.

ROUTES OF EXPOSURE

Primary exposure routes: Inhalation-Dermal (Contact/Absorption)-Ingestion

-----SECTION 4 -- FIRST AID MEASURES

EYES

After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If irritation persists have eyes examined and tested by medical personnel.

SKIN

In case of contact, immediately wash skin with a mild soap and plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Cool water is initially suggested to prevent the pores of the skin from opening. This will minimize both the area and time of skin contact. Lukewarm water may then be used to ensure all contaminants are removed. Skin should be monitored for reddening or chemical burns. Mild soap is suggested to help prevent abrading the skin or rubbing the chemicals into pores during cleansing. Get medical attention if irritation persists or significant contact has occurred. Thoroughly wash (or discard) clothing and shoes before reuse.

INHALATION

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention if breathing difficulty is experienced.

INGESTION

If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

OTHER COMMENTS

No Data Available

-----SECTION 5 -- FIRE FIGHTING MEASURES

FLASH POINT

Not applicable

OSHA FLAMMABILITY CLASSIFICATION (NFPA)

Not applicable

LEL - LOWER EXPLOSIVE LIMIT / UEL - UPPER EXPLOSIVE LIMIT

See information below

EXTINGUISHING MEDIA

Never use a fire extinguisher of any type on a burning aluminum powder fire. Burning aluminum powder creates a very serious danger because if it is disturbed in any manner that results in the formation of a cloud of aluminum dust, there is an extremely serious risk that the dust could explode. The only effective method of extinguishing an aluminum powder fire is to remove its source of oxygen, and allow the fire to burn itself out. Never use water or halogenated hydrocarbon extinguishers to attempt to extinguish an aluminum powder fire. Water reacts with burning aluminum to form highly flammable hydrogen gas which will spread the fire. Halogenated hydrocarbons will react violently with burning aluminum powder.

FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat. Water and finely divided aluminum react violently to form hydrogen gas. Aluminum burns at very high temperatures as a mass. Any disturbance that might create a dust cloud can result in explosion. Lower explosive limit of dry aluminum flake is 30 ounces per 1000 cubic feet. Halogenated hydrocarbons will react violently with burning aluminum powder/flake.

FIRE FIGHTING EQUIPMENT

Full protective equipment including self-contained breathing apparatus (SCBA) is recommended to protect firefighters.

SPECIAL FIRE FIGHTING PROCEDURES

If a fire should occur with aluminum powder on a flat surface, such as a floor or platform, use a long handled shovel made from non-sparking material such as aluminum, copper, or bronze, and using extreme caution so as not to generate a cloud of aluminum dust, very gently sprinkle a ring of fine, totally dry sand around the burning aluminum powder to prevent it from spreading. Allow the powder to cool to ambient temperature before collecting it for disposal. If a fire should occur in a drum of aluminum powder, use extreme caution and try to cover the drum with a flat cover as a means of cutting-off the supply of oxygen. Allow the drum to cool to ambient temperature before attempting to dispose of the burned contents.

-----SECTION 6 -- ACCIDENTAL RELEASE MEASURES

RELEASE MANAGEMENT MEASURES

Remove all sources of ignition (flames, hot surfaces and electrical, static or frictional sparks). Gently sprinkle the area with an inert floor sweeping compound, and using a natural hair bristle broom, gently sweep the material and transfer to a moisture proof, waste disposal container using a long-handled shovel made of nonsparking material. Seal the container for disposal.

SECTION 7 -- HANDLING AND STORAGE

HANDLING AND STORAGE METHODS

Use in a well ventilated area. Follow all MSDS/label precautions even after container is emptied; container may retain product residues. Store in closed containers in cool, dry, well ventilated area away from sources of ignition. Avoid any contact with water vapor. Do not store near oxidizers, acids, alkalies, water, halogenated hydrocarbons or combustible materials. Keep container closed when not in use. Avoid spillage and/or the creation of an aluminum dust cloud. Transfer aluminum with non-sparking tools only, and insure that all equipment is electrically grounded. Smoke in designated areas only. Avoid prolonged or repeated overexposure to this product. Keep out of reach of children. Follow label directions carefully. Do not take internally. Harmful or fatal if swallowed.

SECTION 8 -- EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION

If concentrations of hazardous ingredients exceed exposure limits listed in Section 2 an appropriate NIOSH (National Institute for Occupational Safety and Health) approved respirator with an organic vapor cartridge should be used. If material is handled under mist, spray or dust forming conditions, a P100 (99.97% efficiency) filter should be used in addition to the organic vapor cartridge. Protection provided by air-purifying respirators is limited. If no exposure limits are listed in Section 2, follow general safety guidelines in 29 CFR 1910.134 Respiratory Protection or other applicable respiratory standard.

SKIN PROTECTION

Use neoprene, nitrile or other gloves resistant to chemicals listed in Section 2. Contact a reputable safety supply company for appropriate gloves.

EYE PROTECTION

Use ANSI (American National Standards Institute) approved safety glasses, faceshield or splash proof goggles to prevent eye contact. Contact a reputable safety supply company for appropriate eye protection. The availability of an eye wash is highly recommended.

EXPOSURE GUIDELINES

See Section 2 "Composition, Information on Ingredients" for occupational exposure limits. Excessive concentrations of nuisance dusts or particulates not otherwise classified (PNOC) or regulated (PNOR) may reduce visibility and cause unpleasant deposits in the eyes, ears, and nasal passages. The TLV and PEL has been established for all non-toxic "nuisance dusts" that are not otherwise classified and refers to both organic and inorganic dusts. Exposure or generation of these dusts is not anticipated during normal printing operations. The use of dry pigments and powders, grinding or sanding of printed products may generate quantities of these particulates. Refer to Section 2 Composition, Information on Ingredients for exposure limits.

HYGIENIC PRACTICES

Wash with soap and water before eating, smoking or using toilet facilities. Separately wash or discard clothing and footwear before reuse. NEVER try to remove product from the skin by using solvent or thinner. Such action is likely to increase the possibility of undesirable effects. Remove contaminated clothing to prevent prolonged skin contact.

ENGINEERING CONTROLS

Use applicable engineering controls, work practices and personal protective equipment to ensure all concentrations are kept below the exposure limits listed in Section 2. Adequate controls should be implemented to ensure employee safety from fine mists which may be produced under some printing conditions.

OTHER PROTECTION

No Data Available

SECTION 9 -- PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE:

Silver colored powder

ODOR:

Wax like

PHYSICAL STATE:

Solid

pH

Not applicable

VAPOR PRESSURE

Not applicable

VAPOR DENSITY

Not applicable

BOILING POINT
Not applicable

FREEZING POINT
Not applicable

SOLUBILITY IN WATER
Insoluble

EVAPORATION RATE
Not applicable

PERCENT VOLATILE BY VOLUME: SEE SECTION ONE

WEIGHT PER GALLON: SEE SECTION ONE

VOC: SEE SECTION ONE

PHOTOCHEMICALLY REACTIVE
No

SECTION 10 -- STABILITY AND REACTIVITY

CHEMICAL STABILITY
Stable

CONDITIONS TO AVOID
Avoid excessive heat, ignition sources, sparks and open flame.

INCOMPATIBILITY WITH OTHER MATERIALS
Avoid any contact with oxidizing agents, acids, alkalies, water and halogenated hydrocarbons.

HAZARDOUS DECOMPOSITION PRODUCTS
Aluminum reacts with strong oxidizing agents, acids, alkalies and water to liberate hydrogen gas. When aluminum burns, aluminum oxide is formed.

HAZARDOUS POLYMERIZATION
Not anticipated during normal printing and storage conditions.

SECTION 11 -- TOXICOLOGICAL INFORMATION

EXPERIMENTAL TOXICITY DATA
Refer to Section 3 Hazards Identification for additional toxicological data.

SECTION 12 -- ECOLOGICAL INFORMATION

ECOTOXICITY
Because this product may be a mixture of chemicals, some of which may be ecologically toxic, it is strongly suggested that it not be disposed of into the environment, i.e. soil, water courses, lakes, landfills, sewers, etc.

ENVIRONMENTAL FATE
No Data Available

SECTION 13 -- DISPOSAL CONSIDERATIONS

DISPOSAL METHODS
Dispose of in accordance with applicable local, county, state, provincial and federal regulations. Emptied containers may retain hazardous properties. Empty containers should be disposed of in an environmentally safe manner in accordance with applicable regulations.

SECTION 14 -- TRANSPORT INFORMATION

TRANSPORT INFORMATION
DOT Proper Shipping Description: Aluminum Powder, Coated, 4.1, UN1309, PG II. Questions concerning transportation requirements should be directed to Nazdar's Regulatory Compliance Department 913-422-1735.

SECTION 15 -- REGULATORY INFORMATION

SARA TITLE III 313 INFORMATION

See Section 2 "Composition, Information on Ingredients" for applicable chemicals.

TOXIC SUBSTANCES CONTROL ACT STATUS

All ingredients in Section 2 are listed on the U.S. Environmental Protection Agency's Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substance List.

OTHER REGULATORY INFORMATION

OCCUPATIONAL SAFETY and HEALTH ADMINISTRATION (OSHA) - MSDS is compliant with Occupational Safety and Health Administration Hazard Communication Standard - 29 CFR 1910.1200. AMERICAN NATIONAL STANDARDS INSTITUTE - This MSDS follows the ANSI Z400.1-1998 format. WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS) - This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION (CANADA):

No Data Available

SECTION 16 -- OTHER INFORMATION

DISCLOSURE

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind express or implied is made with respect to the information contained herein. The data in this MSDS relates only to the specific material designated herein and does not apply to use in combination with any other material or process.

DEFINITIONS

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CEILING: (TLV-Ceiling and PEL Ceiling Limit) The ceiling exposure limit or concentration not to be exceeded for even brief times.

DOT: Department of Transportation

HMIS: The Hazardous Materials Identification System (HMIS) developed by the National Paint and Coatings Association (NPCA) to provide information on the acute health hazards, reactivity and flammability of products encountered in the workplace at room temperatures.

HMIS codes assigned for this product are only suggested ratings based on anticipated normal screen printing applications. The employer has the ultimate responsibility for assigning these ratings and should fully evaluate the MSDS, work practices and environmental conditions prior to assigning the appropriate ratings.

HMIS rating involves data interpretations that may vary from company to company.

HMIS Personal Protection Index of "X-Ask your supervisor" is given on this MSDS due to varying work conditions which may dictate different levels of protection. Please review this MSDS before determining appropriate protective equipment and beginning work.

IARC: International Agency for Research on Cancer

NFPA: National Fire Protection Association

NTP: National Toxicology Program

STEL: Short-Term Exposure Limit: ACGIH terminology for the short-term exposure limit or maximum concentration for a continuous exposure period of 15 minutes.

TLV: Threshold Limit Value. A term ACGIH uses to express the airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects.

TWA: Time-Weighted Average

VOC: Volatile Organic Compound