



Whitford Corporation, Box 2347, West Chester, PA 19380-0110 • Tel: (610) 296-3200 • Fax: (610) 647-4849

HMS: H=3*, F=1, R=0, PPE=J

* = Chronic health effects may occur

MATERIAL SAFETY DATA SHEET
for
COATINGS, RESINS, and RELATED MATERIALS

SECTION I - PRODUCT IDENTIFICATION

Corporate Address:
47 PARK AVENUE
ELVERSON, PA 19520

Trade Name & Synonyms:
ALCHEMETAL

24-Hr Emergency Tel No: 610-286-3500

Formula:
D5353 AQUEOUS AC-78

P.C. Number: **D5353**

Date of Preparation: 01 June 2006

FAX: 610-286-3510

Supercedes: None

**IMPORTANT: BEFORE USING ALCHEMETAL D5353 AQUEOUS AC-78,
HAVE ALL PROCESSING PERSONNEL READ THIS DOCUMENT!**

SECTION II - HAZARDOUS INGREDIENTS AND OCCUPATIONAL EXPOSURE LIMITS

Chemical(s) with CAS RN and vapor pressure (if applicable)	OSHA PEL	ACGIH TLV	Manufacturer's Recommendation
NICKEL 7440-02-0	TWA = 1 mg/m ³	TWA = 1.5 mg/m ³	No recommendation
NICKEL OXIDE 1313-99-1	TWA = 1 mg/m ³	TWA = 0.2 mg/m ³	No recommendation
N-METHYLPYRROLIDONE (NMP) 872-50-4 0.3 mm Hg at 20 C	Not established	Not established	No recommendation
FURFURYL ALCOHOL 98-00-0 1.00 mm Hg at 31 C	(skin) TWA = 10 ppm, 40 mg/m ³ .	(skin) TWA = 10 ppm STEL = 15 ppm	No recommendation
DIMETHYLAMINOETHANOL (DMAE) 108-01-0 4.0 mm Hg at 20 C	Not established	Not established	No recommendation

SECTION III - PHYSICAL DATA

Appearance Viscous, metallic-gray, liquid.
Boiling point (range) . . 100 TO 202 degrees C
Vapor density Heavier than air
Evaporation rate Slower than ether
Specific gravity (H2O = 1) 2.11
Percent volatile by volume 76.3 %
Volatile organics (VOC) 2.40 Lbs VOC/Gal less water

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Lower Explosive Limit (%): 1.30

Flash point (Method Used): 94 degrees C (Setaflash)

Extinguishing Media:

Use carbon dioxide (CO2), alcohol foam, dry chemical, or water spray/water fog extinguishing systems.

Special Fire Fighting Procedures:

Firemen and emergency responders: wear full turnout gear or Level A equipment including positive-pressure, self-contained breathing apparatus (SCBA). If evacuation of personnel is necessary, evacuate to an upwind area. Decontaminate personnel and equipment with a water wash-down after fire and smoke exposure.

Unusual Fire and Explosion Hazards:

The product vapor is heavier than air and may travel a considerable distance to a source of ignition and flashback.

SECTION V - HEALTH HAZARD DATA

Primary Route(s) of Entry and Exposure:

Inhalation: Yes Skin absorption: Yes Ingestion: Yes Skin or eye contact: Yes

Carcinogenicity: The following chemicals comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA or ACGIH.

<u>Chemical</u>	<u>Reference</u>	<u>Category</u>
NICKEL	NTP	ANTICIPATED CARCINOGEN
	IARC	POSSIBLE HUMAN CARCINOGEN (GROUP 2B)
	ACGIH	CONFIRMED HUMAN CARCINOGEN
NICKEL OXIDE	NTP	ANTICIPATED CARCINOGEN
	ACGIH	CONFIRMED HUMAN CARCINOGEN

Effects of Overexposure, NICKEL:

Inhalation -	Epidemiological studies of workers exposed to dust and fumes generated in the production of stainless steel, nickel alloys, and nickel powder have not indicated the presence of a significant respiratory cancer hazard.
Skin contact -	Repeated contact with metallic nickel may cause nickel sensitivity and allergic skin rashes. Skin contact may cause an allergic skin rash in previously sensitized individuals.
Skin absorption -	No data found.
Eye contact -	No data found.
Ingestion -	NIOSH has concluded that nickel and its inorganic compounds are not carcinogenic when ingested. The US FDA has affirmed that nickel is Generally Recognized As Safe (GRAS) as a direct human food ingredient.
Systemic & other effects -	No data found.
Supplemental health information -	<p>The NTP has listed nickel as reasonably anticipated to be a carcinogen based on the production of injection-site tumors. The IARC found there was inadequate evidence that metallic nickel is carcinogenic to humans, but since there was sufficient evidence that it is carcinogenic to animals, IARC concluded that metallic nickel is possibly carcinogenic to humans (Group 2B).</p> <p>Repeated intratracheal instillation of nickel powder produced an increased incidence of malignant lung tumors in rats. However, nickel powder did not produce an increased incidence of malignant lung tumors in hamsters when administered at maximum tolerated dose. Single intratracheal instillations of nickel powder in hamsters at doses near LD50 produced an increased incidence of fibrosarcomas, mesotheliomas and rhabdomyosarcomas. Nickel metal powder has caused tumors at the site of injection in rodents; however, studies do not suggest a significant risk for humans from nickel-containing prostheses.</p>

Effects of Overexposure, NICKEL OXIDE:

Inhalation -	Temporary irritation of the respiratory tract may result from excessive overexposure.
Skin contact -	No data found.
Skin absorption -	No data found.
Eye contact -	This material is an inert dust hazard and may cause mechanical irritation to the eyes.
Ingestion -	No data found.
Systemic & other effects -	No data found.
Supplemental health information -	Both the NTP Third Annual Report on Carcinogens and IARC Monographs cite limited evidence for carcinogenicity to humans of certain nickel compounds and sufficient evidence for carcinogenicity to animals. However, both state it is not possible to identify which specific nickel compounds might be carcinogenic to humans. Nickel, as found in this pigment, is not listed in the groups of compounds thought to be carcinogenic to either humans or animals.

Effects of Overexposure, N-METHYLPYRROLIDONE (NMP):

Inhalation -	May cause irritation of the respiratory tract.
Skin contact -	NMP is a moderate skin irritant and may cause delayed skin irritation. Human experience has demonstrated redness, cracking and blistering of skin through repeated or prolonged contact.
Skin absorption -	No significant signs or symptoms indicative of any health hazard are expected to occur as a result of skin absorption exposure.
Eye contact -	Eye contact with NMP may cause moderate eye irritation including burning sensation, tearing, redness or swelling. May cause temporary corneal clouding.
Ingestion -	NMP may be a health hazard if ingested in large quantities. Symptoms include nausea, dizziness, and vomiting.
Systemic & other effects -	No relevant human data found.

Supplemental health information - NMP was reported to effect pregnancy and/or fetal development in laboratory animals. Recently completed studies and an independent, expert review of previous studies confirm that NMP is not a mutagen, teratogen, carcinogen, or reproductive toxin.

Effects of Overexposure, FURFURYL ALCOHOL:

Inhalation - Vapors and mists of this material may cause headache, irritation of the respiratory tract, and central nervous system depression.

Skin contact - This material may cause irritation of the skin, skin rash, and allergic reactions.

Skin absorption - Furfuryl alcohol is harmful via skin absorption.

Eye contact - Vapors and mists may cause eye irritation.

Ingestion - May cause irritation of mouth and stomach, and central nervous system depression with weakness, headache, diarrhea, dizziness, drowsiness, nausea, vomiting, unconsciousness with convulsions, coma and death due to respiratory failure. Small amounts may stimulate respiration while large amounts may depress respiration and reduce body temperature.

Systemic & other effects - No data found.

Supplemental information - No data found.

Effects of Overexposure, DIMETHYLAMINOETHANOL (DMAE):

Inhalation - Vapors and aerosols will cause severe irritation of the respiratory tract. DMAE has a strong objectionable odor that may cause nausea, vomiting, headache or dizziness.

Skin contact - Short contact periods will severely irritate skin. Repeated or prolonged contact will result in skin burns. Skin sensitization may develop after repeated or prolonged contact with the skin.

Skin absorption - DMAE can be absorbed through the skin. Adverse effects similar to inhalation may occur.

Eye contact - This material will induce chemical burns on contact with eyes. Contact may cause blindness.

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Ingestion -	This material is classified as "slightly toxic" by ingestion. Severe irritation of the mouth, esophagus, and stomach can develop following ingestion of DMAE. Adverse effects similar to inhalation may occur.
Supplemental health information -	One case of asthmatic symptoms from DMAE exposure which included sneezing, coughing and wheezing following inhalation has been reported.

Emergency & First Aid Procedures:

Inhalation: If overcome by product vapors, mists or processing fumes, remove the person from exposure immediately; call a physician. If breathing is irregular or stopped, start resuscitation. Administer oxygen if a qualified person is available.

Skin contact: In case of skin contact, remove contaminated clothing. Flush the skin with large amounts of water, then wash the skin with soap and water.

Eye contact: In case of eye contact, flush the eyes with water for 15 minutes. If contact lenses are worn, quickly remove them, then flush the eyes with water. Have a physician examine the eyes.

Ingestion: If material is ingested, seek immediate medical attention. If vomiting occurs, keep the head below the hips to prevent aspiration of liquid into the lungs.

SECTION VI - REACTIVITY DATA

Stability:
- stable

Incompatibility (Materials to Avoid):
- strong oxidizing agents, acids, and alkali/base/caustic solutions
- ammonium nitrate, perchlorates, phosphorous, selenium, and sulfur

Hazardous Decomposition Products:
- oxides of nickel
- oxides of carbon
- oxides of nitrogen

Hazardous Polymerization:
- will not occur

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:

Spill Supervisor: Ensure cleanup personnel wear all appropriate Personal Protective Equipment, including respiratory protection. If this product has a numerical flashpoint, remove all ignition sources; if the flashpoint is none, this precaution is unnecessary. Keep nonessential personnel away from the contaminated area.

Prevent this material from entering sewers and watercourses by diking or impounding the spilled material. Advise authorities if the product has entered or may enter, sewers, watercourses, or extensive land areas.

Ventilate the contaminated area. If this product has a numerical flashpoint, use nonsparking (bronze, aluminum, plastic, wood) tools to clean up the spill. If the flashpoint is none, use conventional steel tools (or those just described) to clean up the spill. EXCEPTIONS: If this product is Ultralon DCO Acid or a Xylar coating, (except Xylar 500), use plastic shovels/scoops/rubber squeegees to clean up the spill because of the products' acid content. Use the recommended tool type to mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne and solvent-borne coatings. Use an absorbent like sand, earth or clay for Ultralon DCO Acid and Xylar coatings (except Xylar 500). Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes.

Label the waste container. Dispose of waste in compliance with all Federal, state, regional, and local regulations.

Waste Disposal Method:

As the US EPA, state, regional and other regulatory agencies may have jurisdiction over the disposal of your facility's hazardous waste, it is incumbent upon you, the waste generator, to learn of and satisfy all the requirements which affect you. Dispose of hazardous waste at a properly permitted disposal facility. Ensure conformity to all applicable waste disposal regulations.

The US EPA Hazardous Waste Numbers which follow are applicable to the unadulterated product if it enters the "waste stream." Refer to Title 40 of the Code of Federal Regulations, Part 261 (40 CFR 261). This part of the Code identifies wastes which are subject to regulation under various sections of the Code and which are subject to the notification requirements of Section 3010 of the Resource Conservation and Recovery Act (RCRA).

- None

SECTION VIII - SAFE HANDLING & USE INFORMATION

Respiratory Protection:

Respiratory protection may not be needed if local exhaust is sufficient to maintain levels of hazardous ingredients below occupational exposure limits. If needed, use a NIOSH/MSHA approved respirator equipped with organic vapor cartridges and high-efficiency, particulate air (HEPA) filters.

Do not use respirators beyond their capabilities. For emergencies and unknown concentrations, use supplied-air respiratory protection or a positive-pressure, self-contained, breathing apparatus (SCBA).

Ventilation:

Use only with adequate ventilation, i.e., ventilation in compliance with occupational exposure limits. Ensure processing (curing) ovens are properly vented to prevent the introduction of processing fumes into the workplace.

Local Exhaust:

Local exhaust is recommended to ensure adequate ventilation.

Mechanical (General):

Use explosion-proof equipment and good manufacturing practice.

Special:

Safety showers and eyewash fountains should be readily available to personnel who handle this material. Enforce "No Smoking" rules. If this product has a numerical flashpoint, do not handle it in close proximity to unshielded light fixtures.

Protective Gloves:

Wear chemical-resistant gloves (butyl rubber or neoprene). Protective gloves should be inspected frequently and discarded when they exhibit cuts, pinholes, or signs of excessive wear.

Eye Protection:

Wear splash goggles. If extra protection is needed, wear a face shield over the splash goggles. Face shields are effective only if worn in addition to splash goggles.

Other Protective Equipment:

Wear a chemical-resistant, butyl-rubber apron and other protective clothing, as deemed appropriate, to avoid skin contact with material.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be Taken When Handling and Storing:

Wear all appropriate Personal Protective Equipment. Wear respiratory protection or ensure adequate ventilation at all times. Use this product in a manner which minimizes splashes and/or the creation of dust.

Protect from freezing. Keep containers closed when not in use. Do not handle or store material near heat, sparks, open flames, or other sources of ignition. Store at room temperatures, i.e., 40 to 95 F (4 to 35 C).

Other Precautions:

Good personal hygiene and good housekeeping are important. Wear fresh clothing daily. Contaminated clothes and shoes must not be worn home. Launder contaminated clothing before reuse. Remove contaminated shoes; clean and dry before reuse.

Do not smoke or eat in the work area. Thoroughly wash hands and face before eating. Take every precaution to avoid inhalation and ingestion of product residue.

Do not use compressed air to clean contaminated floors or equipment. Surfaces should be cleaned by vacuuming or wet scrubbing. Vacuum cleaners should be suitable for use in an industrial environment (explosion proof, if necessary) and equipped with high-efficiency, particulate air (HEPA) filters).

Avoid breathing product vapors, spray mist, and residue. Avoid breathing processing fumes. Avoid skin contact. Avoid eye contact. Avoid ingestion.

Spilled material may cause the floor or contaminated area to become slippery.

SECTION X - REGULATORY INFORMATION

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

CHEMICAL	CAS NUMBER	PERCENTAGE
NICKEL	7440-02-0	59.820000
NICKEL COMPOUND	1313-99-1	0.180000
N-METHYL-2-PYRROLIDONE	872-50-4	1.824425

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Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs), under the reporting requirements of 40 CFR 61. This product contains the following HAPs:

CHEMICAL	CAS NUMBER	PERCENTAGE
NICKEL	7440-02-0	59.820000
Nickel Compound	1313-99-1	0.180000
1,4-Dioxane	123-91-1	0.000003
Ethylene oxide	75-21-8	0.000000
4,4'-Methylenedianiline	101-77-9	0.007645

TOXIC SUBSTANCES CONTROL ACT (TSCA): All chemicals in this product appear in the Toxic Substance Control Act Chemical Substance Inventory.

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