

## Safety Data Sheet

Product Trade Name:

**MP-330 (Manganese Phosphate)**

**\*\*\* Section 1 - Chemical Product and Company Identification \*\*\***

Product Trade Name: **MP-330 (Manganese Phosphate)**

Manufacturer Information  
Du-Lite Corporation  
171 River Road  
Middletown, CT 06457

Contact Phone: (860)-347-2505  
8:00 AM - 5:00 PM

CHEM-TEL Phone: (800) 255-3924 24 Hours

**Recommended Use:** Chemical for producing manganese phosphate coating on steel

**Restrictions on Use:** See Incompatibility, Section 10

**\*\*\* Section 2 - Hazards Identification \*\*\***

**OSHA Hazard Communication Standard:** Considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Classified as Dangerous Goods for transport purposes.

**Hazard Classification:**

Acute Aquatic Hazard Category 3 | Acute Toxicity (Oral) Category 4 | Carcinogen Category 1A | Chronic Aquatic Hazard Category 3 | Metal Corrosion Category 1 | Reproductive Toxicity Category 1B | Respiratory Sensitizer Category 1A | Serious Eye Damage Category 1 | Skin Corrosion/Irritation Category 1A | Skin Sensitizer Category 1 | STOT - RE Category 2 | STOT - SE (Resp. Irr.) Category 3

**Labeling:**



**Signal Word:**

**DANGER!**

**Hazard Statements:**

May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause cancer. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

**PREVENTION:**

Obtain special instructions before use. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. [In case of inadequate ventilation] wear respiratory protection. Keep only in original packaging. Do not eat, drink or smoke when using this product. Avoid release to the environment. Contaminated work clothing should not be allowed out of the workplace.

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**FIRST AID/IN CASE OF FIRE:**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/ attention. Immediately call a POISON CENTER/doctor/... Specific treatment (see advice in Section 4). If experiencing respiratory symptoms: Call a POISON CENTER/doctor/... IF ON SKIN: Wash with plenty of water/... If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. IF SWALLOWED: Call a POISON CENTER/ doctor/...if you feel unwell.

**STORAGE:**

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

**DISPOSAL:**

Dispose of contents/container in accordance with all local, regional, national and/or international regulations.

**Hazards Not Otherwise Classified:** N.A.

**Percent of Ingredients of Unknown Toxicity:** N.A.

## \*\*\* Section 3 - Composition / Information on Ingredients \*\*\*

HAZARDOUS INGREDIENT	CAS #	PERCENT
PHOSPHORIC ACID	7664-38-2	1 - 10%
NITRIC ACID	7697-37-2	1 - 10%
MANGANESE DIHYDROGEN PHOSPHATE	18718-07-5	20 - 30%
NICKEL (II) NITRATE	13478-00-7	<1%

\*per CFR 29, Part 1910.1200; ingredients listed only if deemed hazardous and comprise 1% or greater of the composition (0.1% or greater for carcinogens).

**Component Related Regulatory Information:** This product may be regulated, have exposure limits or other information identified.

## \*\*\* Section 4 - First Aid Measures \*\*\*

If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. If skin or hair contact occurs: Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. If swallowed do NOT induce vomiting.

## \*\*\* Section 5 - Fire Fighting Measures \*\*\*

**Flash Point:** None.

**Flammable Limits:** None.

**Upper Flammable Limit** N.A.

**Lower Flammable Limit** N.A.

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**Extinguishing Media, PPE and Guidance for FireFighter:** Water spray or fog. Foam. Alert Fire Department and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course.

**Fire and Explosion Hazards:** Non combustible. Not considered to be a significant fire risk. Acids may react with metals to produce hydrogen, a highly flammable and explosive gas. Hazardous fumes may be released under thermal decomposition.

**Decomposition Products:** Oxides of nitrogen and phosphorus under thermal decomposition.

## \*\*\* Section 6 - Accidental Release Measures \*\*\*

**Containment and Clean up procedures must be conducted in accordance with all local, state, and federal regulations.**

**Containment and Clean-Up Procedures:** Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. Check regularly for spills and leaks. Clean up all spills immediately. Clear area of personnel and move upwind. Alert Fire Department and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus.

## \*\*\* Section 7 - Handling and Storage \*\*\*

**Handling and Storage Procedures:** Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Emptied containers of this product may contain hazardous vapors and residue. Clean thoroughly before reusing or discarding. Do not use a welding torch to cut container. Do not use for water or food storage.

## \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

### Exposure Guidelines:

**A. General Product Information:** Follow all applicable exposure limits. Keep formation of airborne mists to a minimum.

### B. Component Exposure Limits:

CAS #	HAZARDOUS INGREDIENT	OSHA PEL(mg/m3)	ACGIH TLV(mg/m3)
18718-07-5	Manganese Dihydrogen Phosphate	5.0 STEL (as Mn)	0.2 (as Mn)
13138-45-9	Nickel Nitrate	1.0 (as NI)	0.1 (as NI)
7697-37-2	Nitric Acid	2.0 ppm	2.0 ppm
7664-38-2	Phosphoric Acid	1	1

\*OSHA-PEL and ACGIH-TLV are 8-Hour TWA unless otherwise noted.

\*per CFR 29, Part 1910.1200; ingredients listed only if deemed hazardous and comprise 1% or greater of the composition (0.1% or greater for carcinogens).

**Engineering Controls:** Set up ventilation to effectively remove and prevent buildup of any dust, vapor or mist generated from the handling of this product.

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## PERSONAL PROTECTIVE EQUIPMENT

**Eyes/Face Protective Equipment:** Wear appropriate eye protection to prevent eye contact.

**Skin Protection:** Wear appropriate personal protective clothing to prevent skin contact. The worker should immediately wash the skin when it becomes contaminated. Remove wet or significantly contaminated work clothing and replace.

**Respiratory Protection:** If ventilation is not sufficient to effectively prevent buildup of dust, mists or vapors, provide appropriate NIOSH/MSHA respiratory protection.

**Personal Protective Equipment:** Provide eyewash fountains in areas where there is any possibility that workers could be exposed to the substance; this is irrespective of the recommendation involving the wearing of eye protection.

Provide facilities for quickly drenching the body within the immediate work area for emergency use where there is a possibility of exposure. Depending on the specific circumstances, a deluge shower, a sink or hose could be considered adequate.

## \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

**Physical State:** Liquid

**Color:** Green liquid.

**pH:** <1.0

**Specific Gravity:** 1.37

**Evaporation Rate:** N.E.

**Solubility Water:** completely miscible.

**Vapor Density:** N.E.

**Vapor Pressure:** N.E.

**Octanol-Water Coefficient:** N.E.

**Boiling Point:** >212 F

**Melting Point:** Not Available

**Flash Point:** Not Available

**Auto-Ignition Temperature:** N.E.

**Decomposition Temperature:** N.E.

**Flammability Limits - Low:** N.A.

**Hi:** N.A.

## \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

**Chemical Stability:** Contact with alkaline material liberates heat Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerization will not occur. Solutions of hydrogen peroxide slowly decompose, releasing oxygen, and so are often stabilized by the addition of acetanilide, etc.

**Conditions to Avoid:** None

**Incompatibility:** strong alkali, sulfides, cyanides.

**Decomposition Products:** See section 5

**Hazardous Polymerization:** Will not occur.

## \*\*\* Section 11 - Toxicological Information \*\*\*

**Route of Exposure:** Eye/skin contact, inhalation.

**Acute Toxicity:**

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## A: General Product Information

**Eye Contact:** If applied to the eyes, this material causes severe eye damage. Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely. Hydrogen peroxide concentrations above 10% are corrosive to the eye and may cause corneal ulceration even days after exposure.

**Skin Contact:** Skin contact with the material may be harmful; systemic effects may result following absorption. Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

**Skin Absorption:** No information available for this product.

**Ingestion:** Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and esophagus. Immediate pain and difficulties in swallowing and speaking may also be evident. Poisonings rarely occur after oral administration of manganese salts because they are poorly absorbed from the gut.

**Inhalation:** Inhalation of vapors or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage.

**Chronic Hazards:** Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Studies show that inhaling this substance for over a long period (e.g. in an occupational setting) may increase the risk of cancer. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

**Medical Conditions Aggravated by Exposure:** The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's edema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

## Carcinogenicity:

### a: Component Carcinogenicity:

Nickel Nitrate.

**NTP:** Yes.  
**OSHA:** No.

**IARC:** Yes.

## \*\*\* Section 12 - Ecological Information \*\*\*

### Ecotoxicity:

#### A: General Product Information

No information available for this product.

#### B. Component Analysis - Ecotoxicity - Aquatic Toxicity:

Phosphoric Acid: LC50 (Mosquito Fish) = 138 mg/L/96H.

**Persistence and Mobility:** No information available for this product

**Environmental:** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

**Mobility in Soil:** No information available.

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## \*\*\* Section 13 - Disposal Considerations \*\*\*

Wastes must be tested using methods described in 40 CFR Part 261. It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous wastes. State and local regulations may differ from Federal disposal regulations. Dispose of waste material according to Local, State, Federal and Provincial Environmental Regulations.

## \*\*\* Section 14 - Transportation Information \*\*\*

**US DOT Information:** UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S (NITRIC ACID, PHOSPHORIC ACID), 8, PG II

**Marine Pollutant:** No

**IMDG Classification:** UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, PHOSPHORIC ACID), 8, PGII

**IATA Classification:** UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, PHOSPHORIC ACID), 8, ,PGII

The data provided in this section is for information only and may not be specific for the package size or mode of transportation. See package label for further details.

## \*\*\* Section 15 - Regulatory Information \*\*\*

### US Federal Regulations

#### A: General Product Information

No additional information available.

#### B: Component Analysis

This material may contain chemicals, requiring identification under SARA Section 302 (40 CFR 355 Appendix A, SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

<b>HAZARDOUS COMPONENT</b>	<b>CERCLA RQ LBS.</b>	<b>SECT 302 TPQ LBS.</b>	<b>SECT 313* TOXIC</b>	<b>Maximum %</b>
Manganese Dihydrogen Phosphate	N.A.	N.A.	Yes	40
Nickel Nitrate	100	N.A.	Yes	<1.0
Nitric Acid	1000	1000	Yes	10
Phosphoric Acid	5000	N.A.	No	10

**Sara 311/312 Hazards:**

<b>Immediate (Acute)</b>	TRUE
<b>Chronic*</b>	TRUE
<b>Fire</b>	TRUE
<b>Sudden Release-of-Pressure</b>	FALSE
<b>Reactive</b>	TRUE

### State Regulations

#### A: General Product Information

No additional information available.

### Other Regulations

#### A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

#### B: Component Analysis - Inventory

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Product Trade Name: **MP-330 (Manganese Phosphate)**

**\*\*\* Section 16 - Other Information \*\*\***

**Revision Date:**

Rev. 3, October 10, 2015

**Key/Legend:**

ACGIH = American Conference of Governmental Industrial Hygienists	NFPA = National Fire Protection Association
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act	NIOSH = National Institute for Occupational Safety and Health
EPA = Environmental Protection Agency	NTP = National Toxicology Program
HMS = Hazardous Material Identification System	OSHA = Occupational Safety and Health Administration
IARC = International Agency for Research on Cancer	SARA = Superfund Amendments and Reauthorization Act
MSHA = Mine Safety and Health Administration	TSCA = Toxic Substance Control Act

The information presented herein is believed to be factual as it has been derived from the works and opinions of persons believed to be qualified experts; however, nothing contained in this information is to be taken as a warranty or representation for which Du-Lite Corporation bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.

This is the end of SDS for MP-330 (Manganese Phosphate)