



## Esma-MetalWash E205

### Near-Neutral-ph Ultrasonic Cleaner (Concentrate)

**DESCRIPTION:** Esma-MetalWash E205 is a concentrated blend of near neutral alkaline builders, particle soil dispersants, water conditioners, polymers, and a synergistic blend of detergents designed to provide effective penetration and removal of even the most stubborn oils, greases, inks, and shop soils in conventional hot tank or ultrasonic cleaning.

Esma-MetalWash E205 is a suitable cleaner prior to electroplating, anodizing, painting of ferrous metal components, or other industrial coating processes. Esma-MetalWash E205 is highly recommended for use on soft metal components such as aluminum or zinc, as well as all ferrous alloys and plastics. The unique blend of detergents enables Esma-MetalWash E205 to outperform many caustic cleaners in ultrasonic applications and provides convenience of handling, extended tank life, and improves employee safety. Esma-MetalWash E205 can provide temporary flash rust protection for up to 30-days if the solution is not rinsed.

#### PROPERTIES:

Appearance	Clear yellow liquid
pH (100%)	8.5 – 9.0
Odor	Citrus orange, Very mild
Solubility	Complete
Flash Point	None
Biodegradability	Detergent portion is 100% biodegradable
Lbs./Gal	1.06
HMIS Rating	1,0,0

#### DIRECTIONS:

For use in ultrasonic tanks dilute to 5% solution (6 oz. per gallon)

For use in automatic ultrasonic wash machines which eliminate multiple cycle reuse dilute 1:128 (1 oz. per gallon)

General purpose soaking use 1-5% by volume in water  
Temperature: Ambient - 180°F

#### PRECAUTIONS:

May cause irritation to the eyes upon contact. Prolonged contact may cause skin irritation. FOR INDUSTRIAL USE ONLY! Refer to MSDS. \*\*AVOID CONTACT\*\*



ESMA Incorporated  
450 Taft Drive  
South Holland, IL 60473  
800-276-2466

# MATERIAL SAFETY DATA SHEET

Product Name : Esma-MetalWash E205

Date Issued : December 15, 2003

## SECTION 1 : PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Esma-MetalWash E205

**Chemical Synonym :** c242

**Formula :** Multi-component mixture

**Chemical Family:** Detergent blend

**Supplier:** ESMA Incorporated 450 Taft Dr. South Holland, IL 60473

Emergency Telephone: (708) 331-1855

## SECTION 2 : COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	CAS #	% (w/w)	ACGIH TLV (mg/m3)	
			TWA	STEL
Diethylene glycol n-butyl ether	112-34-5	< 10.0	-	-
Propylene Glycol	57-55-6	< 5.0	-	-
Triethanolamine	102-71-6	< 5.0	5	-
Sodium Tripolyphosphate	7758-29-4	< 5.0	-	-

Unlisted components are considered non-hazardous as per 29CFR1910.1200g2C. See section 15 for specific state right-to-know information if applicable.

## SECTION 3 : HAZARD IDENTIFICATION

**Emergency Overview :** Solutions and powders are severe eye irritants, and prolonged or repeated contact may cause skin irritation. Dusts and mists are irritating to the skin, mucous membranes, and upper respiratory tract. Read the entire MSDS for a more thorough evaluation of the hazards.

**POTENTIAL HEALTH EFFECTS:** Acute: May causes severe irritation to the eyes. Dusts and mists are irritating to the skin, mucous membranes, and upper respiratory tract.

Chronic: May cause irritation of the skin, respiratory airways, mucous membranes and eyes.

**Inhalation:** No test data found for this product.

**Skin Contact:** No test data found for this product.

**Eye Contact:** No test data found for this product.

**Ingestion:** No test data found for this product.

## SECTION 4 : FIRST AID MEASURES

**Eye Contact:** Immediately flush contacted area repeatedly with water for at least 15 minutes, holding eyelids open. Contact a physician for treatment.

**Skin Contact:** Immediately flush contacted area repeatedly with water for at least 15 minutes. If irritation persists, contact a physician for treatment. Clean contaminated clothing before reuse.

**Inhalation.** Inhalation is not an expected route of exposure. If respiratory irritation or distress occurs, remove victim to fresh air. If irritation persists, seek medical attention.

**Ingestion:** Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give 1-2 glasses of water to drink, if conscious and alert.

**Notes to physician :** treat symptomatically. No specific antidote available. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

## SECTION 5. FIRE FIGHTING MEASURES

**Flash Point :** None **Method Used:** N/A

**Flammable Limits:** LEL =N/A UEL =N/A

**Extinguishing Media.** None required.

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**Fire Fighting Procedures:** Use caution when fighting any fire. Adequate respiratory protection is essential.

**Unusual Fire and Explosion Hazards:** None known.

## SECTION 6 : ACCIDENTAL RELEASE MEASURES

**Steps to be taken in case material is released or spilled:**

**Small Spill:** Absorb with suitable absorbent such as sand or vermiculite.

**Large Spill:** Stop leak at source and contain spill with dike made of inert material such as sand or diatomaceous earth. Pump material to suitable container for possible reuse.

**Solid spill:** Sweep up and return to container.

## SECTION 7 : HANDLING AND STORAGE

**Handling:** Avoid breathing vapors and mists. Avoid direct or prolonged contact with skin and eyes. In cold weather, liquids may stratify and freeze. This does not damage the product. If freezing occurs, thaw and remix before using. Frozen material may be thawed in a warm room. Avoid localized overheating. Vent drums while heating. Mix thoroughly to assure homogeneity. Handle with care. Wash thoroughly after handling.

**Storage Requirements:** Keep container closed. Store in an area that is dry and well-ventilated, away from incompatible materials (see section 10). For Industrial and commercial use only!

## SECTION 8 : EXPOSURE CONTROLS I PERSONAL PROTECTION

**Respiratory Protection.** None required.

**Ventilation I Local Exhaust :** General room ventilation.

**Ventilation / Mechanical Recommendations:** None required.

**Skin Protection:** Vinyl or rubber protective gloves.

**Eye Protection:** Goggles or face shield.

**Other Protective Equipment:** Vinyl apron (optional).

**Exposure Guidelines:** See section 2 for ACGIH recommendations for each hazardous ingredient.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance/Odor:** Clear liquid, Odor mild solvent.

**Water Solubility:** Complete

**Specific Gravity:** 1.04

**% volatile:** N/A

**Boiling Point (°F):** 212+

**Vapor Density (air=1):** N/A

**pH (1 %):** 9.0 - 10.0

**Evaporation Rate (water=1):** 1

**Vapor Pressure (mmHg):** N/A

## SECTION 10: STABILITY AND REACTIVITY

**Hazardous Decomposition Products:** None. **Chemical Stability:** Stable.

**Conditions to Avoid:** Avoid contact with hot solutions, splashing solutions, prolonged skin contact.

**Incompatibility with other Substances:** Acids, oxidizers

**Hazardous Polymerization:** Will not occur.

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Product Name : *Esmo-MetalWash E205*

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## SECTION 11 : TOXICOLOGICAL INFORMATION

**Toxicological Data:** Toxicological studies were not performed on the blended product, although it is considered to be a severe eye irritant, and moderately irritating to the skin.

**Toxicological Data ( as Diethylene glycol n-butyl ether ) :**

Skin : LD50 (rabbits) = 4000 mg/kg

Ingestion : oral LD50 (rats) = 5660 mg/kg

**Toxicological Data (as Propylene Glycol):**

Skin: LD50 (rabbits)= >1 0,000 mg/kg

Ingestion : oral LD50 (rats) = 20,000 - 34,000 mg/kg

**Toxicological Data (as Triethanolamine) :**

Oral LD50 (rat) : believed to be > 2.00 - 5.00 g/kg, slightly toxic Inhalation : believed to be practically non-toxic.

Dermal LD50(rabbit) : believed to be > 2.00 g/kg, practically non-toxic.

**Irritation Index, estimation of Irritation (species):**

Skin (Draize) believed to be > 0.500 - 3.00/8.0 (rabbit) slightly irritating

Eyes (Draize) believed to be 25.00 - 50.00/11 10 (rabbit) moderately irritating Sensitization : Not determined

**Toxicological Data ( as Sodium Tripolyphosphate ) :**

Acute Dermal LD50: Not available

Oral LD50 (rat) = 41 00 mg/kg

Inhalation LC50: Not available

**Carcinogenicity:** This product does not contain any materials considered to be carcinogenous according to **OSHA, NTP, IARC,** or **ACGIH.**

## SECTION 12 : ECOLOGICAL INFORMATION

**Exotoxicological Information:** No data found for this product.

**Environmental Effects:** No data found for this product.

**Persistence and Degradation:** No data found for this product.

**Exotoxicological Information (as Diethylene glycol n-butyl ether) :**

**Movement & Partitioning :** Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Log octanol/water partition coefficient (log Pow) is 0.56. Potential for mobility in soil is high (Koc between 50 and 150). Log soil organic carbon partition coefficient (log Koc) is estimated to be 1.52E-9 atm.m<sup>3</sup>/mol.

**Degradation & Persistence :** Biodegradation under aerobic static laboratory conditions is high (BOD<sub>20</sub> or BOD<sub>28</sub>/ThOD greater than 40%). Degradation is expected in the atmospheric environment within minutes to hours. Biochemical oxygen demand : 5 day = 0.05 p/p; 10 day = 0.39 p/p; 20 day = 1.08 p/p. THOD (theoretical Oxygen Demand) is calculated to be 2.17 p/p. Biodegradation rate may increase in soil and/or water with acclimation.

**Ecotoxicity :** Material is practically non-toxic to aquatic organisms on an acute basis (LC<sub>50</sub> > 100 mg/[ in most sensitive species).

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## **Environmental Fate (as Propylene Glycol) :**

**Movement and Partitioning :** Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Log octanol/water partition coefficient (log Pow) = -0.92. Henry's Law Constant (H) = 1.2E-8 atm. m<sup>3</sup>/mole.

**Degradation and Persistence :** Biodegradation under aerobic static laboratory conditions is high (BOD<sub>20</sub> or BOD<sub>28</sub>/ThOD > 40%). Biodegradation is expected to be achievable in a secondary wastewater treatment plant. 5-day biochemical oxygen demand (BOD<sub>20</sub>) = 1.16 p/p. 20-day biochemical oxygen demand (BOD<sub>20</sub>) = 1.45 plp. Theoretical oxygen demand (THOD) is calculated to be 1.68 p/p. Inhibitory concentration (IC<sub>50</sub>) in OCED Activated Sludge Respiration Inhibition Test (OCED Test No. 209) > 1 gm/L. Degradation is expected in the atmospheric environment within minutes to hours.

**Ecotoxicity :** Material is practically non-toxic to aquatic organisms on an acute basis (LC<sub>50</sub> > 100 mg/L in most sensitive species):

Acute LC<sub>50</sub> (fathead minnow) = 46500 - 54900 mg/L.

Acute LC<sub>50</sub> (guppy) = > 10000 mg/L

Acute LC<sub>50</sub> (water flea) = 4850 - 34400 mg/L Acute LC<sub>50</sub> (rainbow trout) = 44 mg/L

## **Exotoxicological Information (as Triethanolamine):**

Aquatic Toxicity : Triethanolamine is expected to have low toxicity to aquatic species.

Mobility : Triethanolamine is not expected to selectively partition and absorb to soil or sediments.

Persistence and Biodegradability : Triethanolamine is readily biodegradable and is not expected to persist in the environment.

Potential to Bioaccumulate : Triethanolamine is not expected to bioaccumulate.

Remarks: None.

**Ecological Information (as Sodium Tripolyphosphate) : No data.**

## **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Neutralize spent solutions to an acceptable pH level. Allow oils to separate and decant if possible. Detergent portion is 100% biodegradable. This product contains **Glycol Ethers**. Do not dump into any sewers, on the ground, or into any body of water. All disposal practices must be in compliance with all Federal, State/Provincial, and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

**Is the unused product a RCRA hazardous waste (40CFR261.33) if discarded?** No

**If yes, the RCRA ID number is :** N/A

## **SECTION 14: TRANSPORTATION INFORMATION**

**Transportation Emergency Telephone Number:** 24 hour number: (607)737-6737

**DOT Proper Shipping Name:** Compound, cleaning, liquid, NOIBN

**DOT Hazard Class I Product Identification Number I Packing Group I DOT Label:** NOIBN

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## SECTION I5: REGULATORY INFORMATION

### US FEDERAL REGULATIONS :

**TSCA (Toxic Substances Control Act) Status** - TSCA (United States) The intentional ingredients of this product are listed.

**CERCLA RQ - 40 CFR 302.4(a)** : This product contains Glycol Ether(s) which, although included as a broad category on the CERCLA hazardous substance list, has not been assigned a reportable quantity.

**SARA 302 Components - 40 CFR 355 Appendix A** : none

**SARA 3111312 Classification - 40 CFR 370.2** :

Immediate health hazard, delayed health hazard : (as Diethylene glycol n-butyl ether) acute, chronic (as Triethanolamine)

**SARA 313 Components - 40 CFR 372.65:**

<u>Section 313 Component(s)</u>	<u>CAS #</u>	<u>%</u>
Glycol Ether None	None	< 10.0

**OSHA Process Safety Management 29CFR 1910** : none

**EPA Accidental Release Prevention 40 CFR 68** : none

### INTERNATIONAL REGULATIONS:

Inventory listings:

**Triethanolamine** is listed on the following inventories:

Canadian Domestic Substance List (DSL), European Inventory of Existing Chemical Substances (**EINECS**), European List of Notified Chemical Substances (**ELINCS**), Australian Inventory of Chemical Substances (**AICS**), Japan Ministry of international trade and Industry (MITI) inventory. (Canada) WHMIS Information : the classification for Triethanolamine is : Class D, Div 2, Subdiv B : Irritant

### STATE AND LOCAL REGULATIONS:

**California Safe Drinking Water Act (Prop. 65) Listing** . None listed

**Other Regulations / Legislation which apply to this product:**

(as **glycol others**) : Pennsylvania (Worker & Community Right To know Act), Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List.

(as **Propylene Glycol**) : Pennsylvania Hazardous Substance

(as **Sodium Tripolyphosphate**) : Massachusetts Substance List, New Jersey Right to Know Hazardous Substance List, Pennsylvania Hazardous Substance List

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## **SECTION 16 : OTHER INFORMATION**

**NFPA Rating :**    **HEALTH:1**    **FLAMMABILITY:0**    **REACTIVITY:0**

NFPA hazard degree designation 704: 4 = extreme, 3 = high, 2 = moderate, 1 = slight, 0 = none

*Information and data compiled to compose this MSDS is correct to the best of our knowledge as of the printed date, and is offered solely for your consideration, investigation, and verification.*