

MATERIAL SAFETY DATA SHEET

AND SAFE HANDLING AND DISPOSAL INFORMATION



CLEAN ACROSS AMERICA AND
THROUGHOUT THE WORLD™
1-877-1-BUY-ZEP (1-877-428-9937)

ZEP MANUFACTURING COMPANY
P.O. BOX 2015
ATLANTA, GEORGIA 30301

SOLD TO:

(368)
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WOODLYN PA 19094-1411

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8151

SUPERSEDES:

AIR FAIR VANILLA

Prod No: F399 Liquid Odor Counteractant

SECTION I - EMERGENCY CONTACTS

TELEPHONE:
(404) 352-1680 BETWEEN 8:00 AM - 5:00 PM (EST)

MEDICAL EMERGENCY:
(770) 439-4200 NON OFFICE HOURS, WEEKENDS
(770) 432-2873 AND HOLIDAYS, PLEASE CALL
(770) 424-4789 LOCAL POISON CONTROL
(770) 424-2048
(770) 455-8160
(770) 552-8836

TRANSPORTATION EMERGENCY:
(770) 922-0923

CHEMTREC:
(800) 424-9300 TOLL FREE-CALLS RECORDED

DISTRICT OF COLUMBIA:
(202) 483-7616 ALL CALLS RECORDED

A15547

SECTION II - HAZARDOUS INGREDIENTS

DESIGNATIONS	(PPM)	EFFECTS (SEE NOTICE)	% IN PROD.
** NONYLPHENOXYPOLY(ETHYLENEOXY)ETHANOL ** npe; poly(oxy-1,2-ethanediy), alpha-(nonylphenyl)-omega-hydroxy; CAS# 9016-45-9; RTECS# MD0905000; OSHA PELN/D	N/D	EIR	< 10

SECTION III - HEALTH HAZARD DATA

SPECIAL NOTE: MSDS data pertains to the product as dispensed from the container. Adverse health effects would not be expected under recommended conditions of use (diluted) so long as prescribed safety precautions are practiced.

ACUTE EFFECTS OF OVEREXPOSURE:

Eye irritant. Eye contact may produce stinging, burning, inflammation, and in extreme cases may produce corneal damage. Prolonged exposure may be irritating to skin and upper respiratory tract.

Existing respiratory disorders or skin diseases may be aggravated by exposure.

CHRONIC EFFECTS OF OVEREXPOSURE:

There are no known effects from chronic exposure to this product.

None of the ingredients are listed as carcinogens by IARC, NTP, or OSHA.

EST'D PEL/TLV: Not established PRIMARY ROUTES OF ENTRY: Inh.

CODES: HEALTH 1; FLAM. 0; REACT. 0; PERS. PROTECT. B ; CHRONIC HAZ. NO

FIRST AID PROCEDURES:

SKIN: Flush contaminated skin with plenty of water. Consult a physician if irritation develops.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting upper and lower lids. Get medical attention at once.

INHALE: Move exposed person to fresh air. If irritation persists, get medical attention promptly.

INGEST: If this product is swallowed, do not induce vomiting. If victim is conscious give plenty of water to drink. Get medical attention at once.

SECTION IV - SPECIAL PROTECTION INFORMATION

PROTECTIVE CLOTHING: The use of neoprene, nitrile or natural rubber gloves is strongly recommended, especially for prolonged contact.

EYE PROTECTION: Use of tight-fitting safety glasses or goggles is strongly recommended, especially when wearing contact lenses.

RESPIRATORY PROTECTION: Avoid inhalation of spray mists, and do not direct spray toward people.

VENTILATION: No special measures are required.

SECTION V - PHYSICAL DATA

BOILING POINT (F):	212	SPECIFIC GRAVITY:	1.00
VAPOR PRESSURE (mmHg):	N/D	EVAPORATION RATE (WATER=1):	1.0
VAPOR DENSITY (AIR=1):	N/D	pH (CONCENTRATE):	5.0-6.0
SOLUBILITY IN WATER:	COMPLETE	pH (USE DILUTION OF 1:100):	6.0-7.0
VOC CONTENT (CONCENTRATE):	3.0% 0.25 lb/gal		
APPEARANCE AND ODOR:	A CLEAR, COLORLESS LIQUID WITH A VANILLA FRAGRANCE.		

SECTION VI - FIRE AND EXPLOSION DATA

FLASH POINT (F) (METHOD USED): None
 FLAMMABLE LIMITS: LEL: N/A UEL: N/A
 EXTINGUISHING MEDIA: Noncombustible.
 SPECIAL FIRE FIGHTING: Wear self-contained positive pres. breathing apparatus.
 UNUSUAL FIRE HAZARDS: None

APPROVED _____
 DATE _____
 EXT. (M) _____

SECTION VII - REACTIVITY DATA

STABILITY: Stable
 INCOMPATIBILITY (AVOID): None
 POLYMERIZATION: Will not occur.
 HAZARDOUS DECOMPOSITION: Carbon dioxide and carbon monoxide

DATE _____
 PREP. DATE 5-31-01

SECTION VIII - SPILL AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
 Observe safety procedures in section 4 & 9 during clean-up. Absorb spill on inert absorbent material (eg Zep-O-Zorb). Pick up and place residue in a suitable waste container or, if permitted, flush to sewer. Thoroughly rinse spill area with water.

WASTE DISPOSAL METHOD:

Liquid wastes are not permitted in landfills. This product is not considered a hazardous waste under RCRA. Unusable liquid may be absorbed on an inert absorbent material (eg. Zep-O-Zorb), drummed, and taken to a chemical or industrial landfill. In some areas disposal by flushing into a sanitary sewer with plenty of water may be permissible. Consult local, state, and federal agencies for proper disposal method in your area.

RCRA HAZ. WASTE NOS.: N/A

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN WHEN HANDLING AND STORING:
 - tightly closed container in a dry area at temps. between 40-120 degrees F.
 - product out of eyes.
 - avoid breathing spray mists.
 Clothing or shoes which become contaminated with substance should be removed promptly and not reworn until thoroughly cleaned.
 Keep out of the reach of children.

SECTION X - REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: DEODORANTS OR DISINFECTANTS, NOI, O/T MEDICINAL
 NOTE: DOT information applies to larger package sizes of affected products. For some products, DOT may require alternate names and labeling in accordance with packaging group requirements.

DOT HAZARD CLASS: DOT PACKING GROUP:

(Continued on Page: 2)

Product No: F399

SECTION X - REGULATORY INFORMATION (continued)

DOT I.D. NUMBER: DOT LABEL/PLACARD:
 EPA TSCA CHEMICAL INVENTORY - ALL INGREDIENTS ARE LISTED
 EPA CWA 40CFR PART 117 SUBSTANCE(RQ IN A SINGLE CONTAINER): NONE

NOTICE

Thank you for your interest in, and use of, Zep products. Zep Manufacturing Co. is pleased to be of service to you by supplying this Material Safety Data Sheet for your files. Zep Manufacturing is concerned for your health and safety. Zep products can be used safely with proper protective equipment and proper handling practices consistent with label instructions and the MSDS. Before using any Zep product, be sure to read the complete label and the Material Safety Data Sheet.

As a further word of caution, Zep wishes to advise that serious accidents have resulted from the misuse of "emptied" containers. "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, or other sources of ignition; they may explode or develop harmful vapors and possibly cause injury or death. Clean empty containers by triple rinsing with water or an appropriate solvent. Empty containers must be sent to a drum reconditioner before reuse.

TERMS AND ABBREVIATIONS LISTED ALPHABETICALLY BY SECTION**SECTION II: HAZARDOUS INGREDIENTS**

CAR: Carcinogen - A chemical listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA as a definite or possible human cancer causing agent.

CAS #: Chemical Abstract Services Registry Number - A universally accepted numbering system for chemical substances.

CBL: Combustible - At temperatures between 100F and 200F chemical gives off enough vapor to ignite if a source of ignition is present as tested with a closed cup tester.

CNS: Central Nervous System depressant which reduces the activity of the brain and spinal cord.

COR: Corrosive - Causes irreversible injury to living tissue (e.g. burns).

DESIGNATIONS: Chemical and common names of hazardous ingredients.

EIR: Eye Irritant Only - Causes reversible reddening and/or inflammation of eye tissues.

EXPOSURE LIMITS: The time weighted average (TWA) airborne concentration at which most workers can be exposed without any expected adverse effects. Primary sources include ACGIH TLVs, and OSHA PELs (TWA, STEL and ceiling limits).

ACGIH: American Conference of Governmental Industrial Hygienists.

CEILING: The concentration that should not be exceeded in the workplace during any part of the working exposure.

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit - A set of time weighted average exposure values, established by OSHA, for a normal 8-hour day and a 40-hour work week.

PPM: Parts per million - unit of measure for exposure limits.

(S) SKIN: Skin contact with substance can contribute to overall exposure.

STEL: Short Term Exposure Limit - Maximum concentration for a continuous 15-minute exposure period.

TLV: Threshold Limit Value - A set of time weighted average exposure limits, established by the ACGIH, for a normal 8-hour day and a 40-hour work week.

FL: Flammable - At temperatures under 100F, chemical gives off

enough vapor to ignite if a source of ignition is present as tested with a closed cup tester.

HAZARDOUS INGREDIENTS: Chemical substances determined to be potential health or physical hazards based on the criteria established in the OSHA Hazard Communication Standard - 29 CFR 1910.1200

HTX: Highly toxic - the probable lethal dose for a 70kg (150 lb.) man and may be approximated as less than 6 teaspoons (2 tablespoons).

IRR: Irritant - Causes reversible effects in living tissues (e.g. inflammation) - primarily skin and eyes.

N/A: Not Applicable - Category is not appropriate for this product.

N/D: Not Determined - Insufficient information to make a determination for this item.

RTECS#: Registry of Toxic Effects of Chemical Substances - an unreviewed listing of published toxicology data on chemical substances.

SARA: Superfund Amendment and Reauthorization Act - Section 313 designates chemicals for possible reporting for the Toxics Release Inventory.

SEN: Sensitizer - Causes allergic reaction after repeated exposure.

TOX: Toxic - The probable lethal dose for a 70 kg (150 lb.) man is one ounce (2 tablespoons) or more.

(rev. 1/95)

SECTION III: HEALTH HAZARD DATA

ACUTE EFFECT: An adverse effect on the human body from a single exposure with symptoms developing almost immediately after exposure or within a relatively short time.

CHRONIC EFFECT: Adverse effects that are most likely to occur from repeated exposure over a long period of time.

EST D PEL/TLV: This estimated, time-weighted average, exposure limit, developed by using a formula provided by the ACGIH, pertains to airborne concentrations from the product as a whole. This value should serve as guide for providing safe workplace conditions to nearly all workers.

HMIS CODES: Hazardous Material Identification System - a rating system developed by the National Paint and Coating Association for estimating the hazard potential of a chemical under normal workplace conditions. These risk estimates are indicated by a numerical rating given in each of three hazard areas (Health/Flammability/Reactivity) ranging from a low of zero to a high of 4. The presence of a chronic hazard is indicated with a yes.

Consult HMIS training guides for Personal Protection letter codes which indicate necessary protective equipment.

PRIMARY ROUTE OF ENTRY: The way one or more hazardous ingredients may enter the body and cause a generalized-systemic or specific-organ toxic effect.

ING: Ingestion - A primary route of exposure through swallowing of material

INH: Inhalation - A primary route of exposure through breathing of vapors.

SKIN: A primary route of exposure through contact with the skin.

SECTION IV: SPECIAL PROTECTION INFORMATION

Where respiratory protection is recommended, use only MSHA and NIOSH approved respirators and dust masks.

MSHA: Mine Safety and Health Administration

NIOSH: National Institute for Occupational Safety and Health

SECTION V: PHYSICAL DATA

EVAPORATION RATE: Refers to the rate of change from the liquid state to the vapor state at ambient temperature and pressure in comparison to a given substance (e.g. water).

pH: A value representing the acidity or alkalinity of an aqueous solution (Acidic pH = 1; Neutral pH = 7; Alkaline pH = 14)

VOC CONTENT: The percentage or amount in pounds per gallon of the product that is regulated as a Volatile Organic Compound under the Clean Air Act of 1990 and various state jurisdictions.

SOLUBILITY IN WATER: A description of the ability of the product to dissolve in water.

SECTION VII: REACTIVITY DATA

HAZARDOUS DECOMPOSITION: Breakdown products expected to be produced upon product decomposition by extreme heat or fire.

INCOMPATIBILITY: Material contact by extreme heat and the conditions to avoid to prevent hazardous reactions.

POLYMERIZATION: Indicates the tendency of the product's molecules to combine with themselves in a chemical reaction, releasing excess pressure and heat.

STABILITY: Indicates the susceptibility of the product to spontaneously and dangerously decompose.

SECTION VIII: SPILL AND DISPOSAL PROCEDURES

RCA WASTE NOS: RCRA (Resource Conservation and Recovery Act) waste codes (40 CFR 261) applicable to the disposal of spilled or unusable product from the original container.

SECTION X: TRANSPORTATION DATA

CWA: Clean Water Act - Federal Law which regulates chemical releases to bodies of water.

RQ: Reportable Quantity - The amount of the specific ingredient that, when spilled to the ground and can enter a storm sewer or natural watershed, must be reported to the National Response Center, and other regulatory agencies.

TSCA: Toxic Substances Control Act - a federal law requiring all commercial chemical substances to appear on an inventory maintained by the EPA.

DISCLAIMER

All statements, technical information and recommendations contained herein are based on available scientific tests or data which we believe to be reliable. The accuracy and completeness of such data are not warranted or guaranteed. We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. Zep assumes no liability or responsibility for loss or damage resulting from the improper use or handling of our products, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the products label and Material Safety Data Sheet.

(rev. 1/98)

MATERIAL SAFETY DATA SHEET

ZSA35
2C052, 2C054, 2C056
2C058, 2C062, 2C064
2C066, 2C071, 2C080

DATE REVISED: 06/15/95

(Essentially Similar to U.S. Department of Labor Suggested Form
for Hazard Communication Compliance)

Classifications: Health=1; Fire=0; Reactivity=0
Hazard RATINGS: 4=Extreme; 3=High; 2=Moderate; 1=Slight; 0=Insignificant

I. Product Identification

Product Name: **ALLOY RODS ATON ARC 2018AC LOW HYDROGEN ELECTRODES**
Manufacturer: THE ESAB GROUP, INC.
Address: 801 Wilson Avenue, P. O. Box 517
Hanover, PA 17331
Telephone No.: 1-717-637-8911
Emergency No.: 1-717-637-8911

II. Packaging Information

Stock No.	Electrode Diameter	Package Type
2C052	3/32"	50 lb Hermetically Sealed Can
2C054	1/8"	50 lb Hermetically Sealed Can
2C056	5/32"	50 lb Hermetically Sealed Can
2C064	3/32"	Quad Pac
2C066	1/8"	Quad Pac
2C071	5/32"	Quad Pac
2C080	3/32"	Value Pac
2C058	1/8"	Value Pac
2C062	5/32"	Value Pac

III. Components

- 2-3% Manganese
- Calcium Carbonate
- Calcium Fluoride
- Silicon
- Titanium Dioxide
- Aluminum Oxide
- Silica Binder
- Iron

AWS Classification: A5.1, E7018

THE ESAB GROUP requests the users of these products to study this Material Safety Data Sheet (MSDS) and become aware of the product hazards and safety information. To promote the safe use of these products a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety information, (2) furnish this same information to each of its customers for these products, and (3) request that such customers notify their employees and customers for these products, of the same product hazards and safety information.

IV. Hazardous Ingredients

IMPAIRED: This section covers the materials from which this product is manufactured. The fumes and gases produced during normal use of these products are covered in Section V. The term HAZARDOUS should be interpreted as a term required and defined by Laws, Statutes or Regulations, and does not necessarily imply the existence of any hazard when the products are used as directed by THE ESAB GROUP.

CAS No.	SARA	OSHA - PEL(1994)		
		ACGIH TLV (1994-95)	TWA	STEL
Iron Oxide (1344-28-1)	10 (Dust)	10 (Dust)	5 (Respirable)	--
Calcium Carbonate (1317-65-3)	10 (Dust)	10 (Dust)	5 (Respirable)	--
Fluorospinel (7789-75-5)	2.5 (as F)	2.5 (as F)	2.5 (as F)	--
Iron (7439-89-6)	5 (Oxide Fume)	5 (Oxide Fume)	10 (Total Particulate)	--
Manganese (7439-96-5)	0.2	0.2	1 (Fume)	3
Silicate Binder (6834-92-0 & 10006-28-7)	10	10	5 (Respirable)	--
Silicon (7440-21-3)	10 (Dust)	10 (Dust)	5 (Respirable)	--
Titanium Dioxide (13463-67-7)	10 (Dust)	10 (Dust)	5 (Respirable)	--

NOTE: In the ingredients table, an asterisk (*) after the CAS number indicates a toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (SARA) and 40 CFR Part 372.

V. Physical Data

As shipped, these products are nonflammable, nonexplosive, nonreactive, and nonhazardous

Physical State: GAS () LIQUID () SOLID (X)

Odor and Appearance: Flux coated steel core wire, odorless.

VI. Fire & Explosion Hazard

Flammable/Explosive: NO (X) YES ()
Under what conditions: Only the packaging for this product will burn.

Extinguishing Media: This product will not burn. However, welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning materials and fire situation. See ANSI Z49.1 "Safety in Welding and Cutting" and "Safe Practices" Code: SP published by the American Welding Society, P. O. Box 151040, Miami, FL 33135, and NFPA 51B "Cutting and Welding Processes" published by the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269 for additional fire prevention and protection information.

VII. Reactivity Data

Stability: Stable (X) Unstable () Polymerization will not occur
Incompatible products: None currently known

Hazardous decomposition products: Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the material being worked, the process, procedures and consumables used, and conditions which also influence the composition and quantity of the

fumes and gases to which workers may be exposed include: coatings on the material being worked (such as paint, plating or galvanizing), the number of welding operations and the volume of the work area, the quality and amount of ventilation, the position of the workers head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning or painting activities). When the materials are consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section II. Decomposition products of normal operation include those originating from the volatilization, reaction or oxidation of the ingredients, plus those from the material being worked and the coatings etc. noted above.

Reasonably expected decomposition products from normal use of these products include a complex of the oxides and fluorides of the materials listed in Section II, as well as carbon monoxide, carbon dioxide, ozone and nitrogen oxides (refer to "Characterization of Arc Welding Fume", available from the American Welding Society). THE TLV FOR MANGANESE (0.2 mg/m3) WILL BE REACHED BEFORE THE GENERAL LIMIT FOR WELDING FUMES OF 5 mg/m3 IS REACHED. The only way to determine the true identity of the decomposition products is by sampling and analysis. The composition and quantity of the fumes and gases to which a worker may be overexposed can be determined from a sample obtained from inside the welder's helmet, if worn, or in the workers breathing zone. See ANSI/AWS F1.1 Method for Sampling Airborne Particles Generated by Welding and Allied Processes, available from the American Welding Society.

VI. Physical and Health Hazard Data

Electric arc working may create one or more of the following health or physical hazards. Fumes and gases can be dangerous to your health. Electric shock can kill you. Arc rays can injure eyes and burn skin. Noise can damage hearing.

Route of overexposure: The primary route of entry of the decomposition products is by inhalation. Skin contact, eye contact, and ingestion are possible. Absorption by skin contact is unlikely. When these products are used as recommended by THE ESAB GROUP, and ventilation maintains exposure to the decomposition products below the limits recommended in this section, overexposure is unlikely.

Effects of acute (short term) overexposure to the gases, fumes and dusts may include irritation of the eyes, lungs, nose and throat. Some toxic gases associated with welding may cause pulmonary edema, asphyxiation, and death. Acute overexposure may include signs and symptoms such as watery eyes, nose and throat irritation, headache, dizziness, difficulty in breathing, frequent coughing, or chest pain.

Pre-existing Medical Conditions Aggravated by Overexposure: Individuals with allergies or impaired respiratory function may have symptoms worsened by exposure to welding fumes. However, such reaction cannot be predicted due to the variation in composition and quantity of the decomposition products.

Effects of chronic (long term) overexposure to air contaminants may lead to their accumulation in the lungs, a condition which may be seen as dense areas on chest X-rays. The severity of the change is proportional to the length of the exposure. The changes seen are not necessarily associated with symptoms or signs of reduced lung function or disease. In addition, the changes on X-rays may be caused by non-work factors such as smoking, etc. Overexposure to manganese compounds may affect the central nervous system, symptoms of which are languor, sleepiness, muscular weakness, emotional disturbances and spastic gait.

Exposure limits for the ingredients are listed in Section II. The 1989 OSHA TWA for welding fume is 5 mg/m3. TLV-TWA's should be used as a guide in the control of health hazards and not as fine lines between safe and excessive concentrations. When these products are used as recommended by THE ESAB GROUP, and the preventive measures taught in this MSDS are followed, overexposure to hazardous substances will not occur.

Emergency First Aid Measures: In case of emergency, call for medical aid. Employ first aid technique recommended by the Red Cross. IF BREATHING IS DIFFICULT, give oxygen and call for a physician. FOR ELECTRIC SHOCK, disconnect and turn off the power. If not breathing, begin artificial respiration, preferably mouth-to-mouth. If no detectable pulse, begin Cardio Pulmonary Resuscitation (CPR). Immediately call a physician. FOR ARC BURN, apply cold, clean compresses and call a physician.

Carcinogenic Assessment (NTP Annual Report, IARC Monographs, Other): NONE.

VII. Precautions for Safe Handling and Use/Applicable Control Measures

Read and understand the manufacturer's instructions and the precautionary label on this product. See American National Standard Z-49.1 "Safety in Welding and Cutting" published by the American Welding Society, P. O. Box 351040, Miami, FL 33135 and OSHA Publication 2206 (29 C.F.R. 1910), U.S. Government Printing Office, Washington, D.C. 20402 for more detail on many of the following:

Ventilation: Use enough ventilation, local exhaust at the arc, or both, to keep the fumes and gases below the TLV's in the worker's breathing zone and the general area. Train the welder to keep his head out of the fumes.

Respiratory Protection: Use respirable fume respirator or air supplied respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below TLV.

Eye Protection: Wear helmet or use face shield with filter lens. As a rule of thumb, start with a shade which is too dark to see the weld zone. Then go to the next lighter shade which gives sufficient view of the weld zone. Provide protective screens and flash goggles, if necessary, to shield others.

Protective Clothing: Wear head, hand and body protection which help to prevent injury from radiation, sparks and electrical shock. See ANSI Z-49.1. At a minimum, this includes welder's gloves and a protective face shield and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the welder not to touch live electrical parts and to insulate himself from work and ground.

Procedure for Cleanup of Spills or Leaks: NOT APPLICABLE

Waste Disposal Method: Prevent waste from contaminating surrounding environment. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with Federal, State and Local regulations.