

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Immunon Resin Mounting Medium

MSDS NUMBER: 230104

GENERAL USE: Mounting medium to be used in coverslipping histological specimens

PRODUCT DESCRIPTION: Clear flammable liquid.

Thermo
ELECTRON CORPORATION

MANUFACTURER'S NAME (Distributor in the Americas)

Thermo Electron Corporation

DATE PREPARED: February 25, 2004

SUPERSEDES: June 26, 2003

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ADDRESS (NUMBER, STREET, P.O. BOX)

171 Industry Drive

TELEPHONE NUMBER FOR INFORMATION

(412) 788-1133

(CITY, STATE AND ZIP CODE)

Pittsburgh, PA 15275

COUNTRY

USA

EMERGENCY TELEPHONE NUMBER

CHEM • TEL (800) 255-3924 Outside USA (813) 248-0585

DISTRIBUTOR'S NAME (Outside the Americas)

Thermo Electron Corporation

ADDRESS (NUMBER, STREET, P.O. BOX)

93/96 Chadwick Road, Astmoor

TELEPHONE NUMBER FOR INFORMATION

+44 (0) 1928 562547

(CITY, STATE AND ZIP CODE)

Runcorn, Cheshire WA7 1PR

COUNTRY

United Kingdom

EMERGENCY TELEPHONE NUMBER

CHEM • TEL (813) 248-0585

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	% (by weight)	CAS #	EINECS #	Hazard Symbol	RISK PHRASES Full Text Section 16
Toluene (a,b,c,f)	40 - 70	108-88-3	203-625-9	F, Xn	R-11, 20
Poly(butyl methacrylate-co-methyl methacrylate) (d)	30 - 60	25608-33-7	Not found	NC	Not classified
Butyl benzyl phthalate (a,c,e)	5 - 10	85-68-7	201-622-7	Xn	R-36/37/38, 40

(a,c) See Section 15

(b) Indicates that the Resource Conservation and Recovery Act (RCRA) has determined the waste for this chemical is listed as hazardous and must be handled according to regulations in 40 CFR 260-281.

(d) This product is not considered a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200). However, certain regulatory agencies, government agencies or states may require the listing of this product or the product is listed only for information.

(e) Product is listed or defined as a marine pollutant in IMDG Code or 49 CFR 172.101 Appendix B, List of Marine Pollutants and must be classified as an Environmentally Hazardous Substance, Class 9, in addition to any other defined hazards for this product.

(f) California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986, chemicals known to the state to cause cancer or reproductive toxicity. A person in the course of doing business must warn others who may consume, come into contact with, or otherwise be exposed to this chemical.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Colorless flammable liquid, potentially hazardous vapors. Can cause eye and skin irritation upon contact. Inhalation of vapors can cause anesthetic effect leading to death in poorly ventilated areas. Hazard symbols for this product - F, Xn Risk Phrases - R11 20

POTENTIAL HEALTH EFFECTS

INHALATION: High concentrations are irritating to the respiratory tract; may cause headache, dizziness, nausea, vomiting and malaise.

SKIN: Brief contact may cause slight irritation; prolonged contact may cause moderate irritation or dermatitis.

EYES: High vapor concentration or contact may cause irritation and discomfort.

INGESTION: May result in vomiting; aspiration of vomitus into the lungs must be avoided; DO NOT induce vomiting. Minute amounts aspirated into the lungs can produce severe lung injury, chemical pneumonitis, pulmonary edema or death.

CARCINOGENICITY

NTP? No IARC MONOGRAPHS? No OSHA REGULATED? No

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SECTION 4 - FIRST AID MEASURES

INHALATION: Remove affected person to fresh air; provide oxygen if breathing is difficult; if affected person is not breathing, administer CPR and seek emergency medical attention.

SKIN: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

EYES: Remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

INGESTION: DO NOT induce vomiting; if vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs; seek immediate medical attention. Vomiting may be induced only under the supervision of a physician.

SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS: Product is flammable. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide. Vapors may cause a flash fire or ignite explosively. Vapors may travel a considerable distance to a source of ignition and flash back.

EXTINGUISHING MEDIA

Carbon dioxide, water fog, dry chemical, chemical foam

FIRE FIGHTING PROCEDURES

Firefighters must wear full facepiece self - contained breathing apparatus in positive pressure mode. Do not use solid stream of water since stream will scatter and spread fire. Fine water spray can be used to keep fire - exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers can explode due to buildup of pressure when exposed to extreme heat. Do not use direct stream of water on pool fires as product may reignite on water surface. Caution - Material is flammable!

HAZARDOUS COMBUSTION PRODUCTS

Smoke, fumes, oxides of carbon

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: CAUTION - FLAMMABLE - Evacuate and ventilate area; confine and absorb into absorbent; place material into approved containers for disposal; for spills in excess of allowable limits (RQ) notify the National Response Center (800) 424 - 8802; refer to CERCLA 40 CFR 302 and SARA Title III, Section 313 40 CFR 372 for detailed instructions concerning reporting requirements. Do not discharge into lakes, ponds, streams or public waters.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. CAUTION - FLAMMABLE - keep away from all sources of ignition. "Empty" containers may contain residue which may form explosive vapors. Do not weld or cut near empty container that has not been professionally reconditioned. Use non-sparking tools when opening and closing containers. Maintain well ventilated work areas to minimize exposure when handling this material.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HAZARDOUS COMPONENTS	NIOSH				ACGIH			
	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3	TWA ppm	TWA mg/m3	STEL ppm	STEL mg/m3
Toluene (a,b,c,f)	100	375	150	560	50	188	--	--
Poly(butyl methacrylate-co-methyl methacrylate) (d)	not established				not established			
Butyl benzyl phthalate (a,c,e)	5				5			

PERSONAL PROTECTION:

RESPIRATORY PROTECTION (SPECIFY TYPE): None required while threshold limits (Section 2) are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.

PROTECTIVE GLOVES: Neoprene or rubber gloves with cuffs.

EYE PROTECTION: Protective eyeglasses or chemical safety goggles. Refer to 29 CFR 1910.133 or European Standard EN166.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety eyebath nearby

WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR Colorless liquid, characteristic hydrocarbon odor	VAPOR PRESSURE 38 mm Hg @ 20° C
pH Not applicable	SPECIFIC GRAVITY (WATER = 1) 0.960
BOILING POINT / BOILING RANGE 230° F (110° C)	SOLUBILITY IN WATER Negligible
FLASH POINT 45° F (7.2° C) TCC	VISCOSITY Not specified
FLAMMABLE LIMITS LEL: 1.2% UEL: 7.0%	VAPOR DENSITY (AIR = 1) > 1
AUTOIGNITION TEMPERATURE 995° F (535° C)	EVAPORATION RATE (n-Butyl acetate = 1) 1.5

SECTION 10 - STABILITY AND REACTIVITY

STABILITY UNSTABLE: STABLE: XXX	CONDITIONS TO AVOID: Extreme temperatures, open flames, sparks
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids	
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced.	
HAZARDOUS POLYMERIZATION MAY OCCUR: WILL NOT OCCUR: XXX	CONDITIONS TO AVOID: None

SECTION 11 - TOXICOLOGICAL INFORMATION

Hazardous Components	CAS # EINECS #	LD50 of Ingredient (Specify Species and Route)	LC50 of Ingredient (Specify Species)
Toluene (a,b,c,f)	108-88-3 203-625-9	5000 mg / kg Oral - rat	7525 ppm / 4H Inhalation - mouse
Poly(butyl methacrylate-co-methyl methacrylate) (d)	25608-33-7 Not found	Not established	Not established
Butyl benzyl phthalate (a,c,e)	85-68-7 201-622-7	20,400 mg / kg Oral - rat	6.7 mg / l / 4H Inhalation - rat

SECTION 12 - ECOLOGICAL INFORMATION

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. Butyl benzyl phthalate, one of the ingredients in this mixture, is classified as a Marine Pollutant.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: According to the European Waste Catalogue, waste codes are application specific and should be assigned by the user based on the application for which the product is used. Dispose of in accordance with Local, State, and Federal Regulations. This product may produce hazardous vapors or fumes in a closed disposal container creating a dangerous environment. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway.

SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Resin solution, flammable	IATA HAZARD CLASS / Pack Group: 3 / II
DOT HAZARD CLASS / Pack Group: 3 / II	IMDG HAZARD CLASS: 3 / II
REFERENCE: 49 CFR 173.150, .202, .242	RID/ADR Dangerous Goods Code: 3
UN / NA IDENTIFICATION NUMBER: UN 1866	UN TDG Class / Pack Group: 3 / II
LABEL: FLAMMABLE LIQUID	
HAZARD SYMBOLS: F	

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

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SECTION 15 - REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act)

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

SARA TITLE III (USA - Superfund Amendments and Reauthorization Act)

311/312 Hazard Categories
Immediate health, Fire hazard

313 Reportable Ingredients:

(a) A "Yes" in the SARA TITLE III column in Section 2 indicates a toxic chemical subject to annual reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CERCLA (USA - Comprehensive Response Compensation and Liability Act)

(c) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture = 4,000 lbs) or greater amounts, according to 40 CFR 302.

CPR (Canadian Controlled Products Regulations)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

IDL (Canadian Ingredient Disclosure List)

Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 2.

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)

Components of this product identified by CAS number are listed on the DSL or NDSL and may or may not be listed in Section 2 of this document. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.

EINECS (European Inventory of Existing Commercial Chemical Substances)

Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

WGK Water Quality Index: 2

RISK PHRASES:

R11 Highly flammable.
R20 Harmful by inhalation

SYMBOL(S) REQUIRED FOR LABEL

Flammable Harmful



SAFETY PHRASES:

S16 Keep away from sources of ignition - No smoking.
S25 Avoid contact with eyes.
S29 Do not empty into drains.
S33 Take precautionary measures against static discharges.

SECTION 16 - OTHER INFORMATION

Notes & full R-Phrase text

R11 Highly flammable.
R20 Harmful by inhalation
R36/37/38 Irritating to eyes, respiratory system and skin
R40 Possible risk of irreversible effects.

HMIS HAZARD RATINGS

HEALTH	2	0 = INSIGNIFICANT	3 = HIGH
FLAMMABILITY	3	1 = SLIGHT	4 = EXTREME
REACTIVITY	0	2 = MODERATE	
PERSONAL PROTECTIVE EQUIPMENT	B	Safety Glasses, Gloves	

REVISION SUMMARY:

This MSDS has been revised in the following sections: Section 2, ingredient % correction

MSDS Prepared by: Chem-Tel, Inc.
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The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.