Safety
Data
Sheet

U·E·I Systems
A UEI® GROUP COMPANY

9090 Nieman • Overland Park, KS 66214 • (913) 541-0503 • Toll Free: 800-221-9059 • sales@ueisystems.com • ueisystems.com

Section 1 Chemical Product and Company Identification

Product Identifier Urethane Counter Casting Kit Part A

Product Number IR-CNT4031

General Use Used in making counters for stamping dies

Company Address UEI Systems®, a UEI Group Company
9090 Nieman Road
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Emergency Contact Number CHEMTEL – Available 24 hours/day, 7 days/week
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Section 2 Hazards Identification

GHS Classification

Hazard Class	Hazard Category	Route of Exposure
Acute Toxicity	4	Inhalation
Eye Damage/Irritation	2B	–
Skin Corrosion/Irritation	1B	–
Respiratory Sensitization	1	–
Carcinogenicity	2	–
Specific to Target Organ Toxicity (Single Exposure)	3	Respiratory
Specific to Target Organ Toxicity (Repeated Exposure)	2	Respiratory

GHS Labeling
Contains 4,4' Methylene bis (phenylisocyanate (101-68-8)
Polymethylene polyphenyl isocyanates (9016-87-9)

Danger

Hazard Statements Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
Harmful if inhaled
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause respiratory irritation
Suspected of causing cancer
May cause damage to (olfactory) organs through prolonged or repeated exposure (inhalation)

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Section 2 Hazards Identification, continued

Precautionary Statements

If medical advice is needed, have product container or label at hand.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
[In case of inadequate ventilation] wear respiratory protection.
If on skin: Wash with plenty of soap and water.
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: Call a **Poison Center** or doctor/physician.
Call a **Poison Center** or doctor/physician if you feel unwell.
Get medical advice/attention if you feel unwell.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

Storage Store locked up

Disposal Dispose of contents/container in according to local, state and federal laws.

Section 3 Hazardous Ingredients / Identity Information

Hazardous Components	CAS No.	%
4,4' Methylene bis (phenylisocyanate)(MDI)	101-68-8	15–35
Polymethylene polyphenyl isocyanates	9016-87-9	30–60

Section 4 First Aid Measures

In all cases, call a physician immediately.

Inhalation Remove source(s) of contamination and move victim to fresh air. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact physician immediately.

Eye Contact Flush eyes with plenty of water. If irritation persists, seek medical attention.

Skin Contact Wash off with soap and plenty of water. Take victim immediately to hospital.

Ingestion Do not induce vomiting unless instructed by a physician.
Never give anything by mouth to an unconscious person.

Section 5 Firefighting Measures

Flammable Classification Non-Flammable

Extinguishing Media Use dry chemical, carbon dioxide, water spray or foam extinguishers

Fire/Explosion No data available

Firefighting Equipment/Instructions Use water spray to cool fire-exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors. Either allow fire to burn under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam.

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Section 5 Firefighting Measures, continued

Further Information Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure demand or positive-pressure mode.

Section 6 Accidental Release Measures

Spill /Leak Procedures Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment. Only properly protected personnel should remain in the spill area; dike and contain spill; absorb or scrape up excess into suitable container for disposal; wash area with dilute ammonia solution. Stop or reduce discharge if it can be done safely.

Environmental Precautions Do not discharge into drains/surface waters/groundwater

Section 7 Handling and Storage

Handling Precautions Provide suitable ventilation. Avoid aerosol formation. When handling heated product, vapors of the product should be ventilated, and respiratory protection used. Use good general housekeeping procedures. Wash hands after use.

Storage Requirements Keep container(s) tightly closed and properly labeled. Store in cool, dry, well ventilated place away from heat, direct sunlight, strong oxidizers and any incompatibles. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous. Avoid water contamination.

Section 8 Component Exposure Limits

Components with Workplace Control Parameters

Hazardous Components	CAS No.	%	OSHA (PEL/TWA)	ACGIH TLV
4,4' Methylene bis (phenylisocyanate)(MDI)	101-68-8	15–35	CLV 0.02 ppm 0.2 mg/m^3	TWA 0.005 ppm
Polymethylene polyphenyl isocyanates	9016-87-9	30–60	CLV 0.02 ppm 0.2 mg/m^3	TWA 0.005 ppm

Respiratory Protection Local exhaust ventilation is required when using this product. Should a respirator be needed, follow OSHA respirator regulations 29 CFR 1910.134 and European Standards EN 141, 143 and 371; wear an MSHA/NIOSH or European Standards EN 141, 143 and 371 approved respirators equipped with organic vapor cartridges.

Hand Protection Chemical resistant protective gloves should be worn to prevent all skin contact. Suitable materials may include chloroprene rubber, nitrile rubber, chlorinated polyethylene, polyvinyl chloride, butyl rubber, depending upon conditions of use.

Eye Protection Safety glasses with side shields per OSHA eye- and face-protection regulations 29 CFR 1910.133 and European Standard EN166. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Other Protective Clothing/Equipment Additional protective clothing or equipment may be required. Provide eye bath and safety shower.

Comments Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Wash thoroughly after handling.

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Section 9 Physical and Chemical Properties

Appearance	Amber liquid	**Odor Threshold**	Musty odor
pH	NA (Non-aqueous)	**Boiling Point**	> 390° F (199° C)
Melting Point/Freezing Point	37° F (3° C)	**Solubility (H_2O)**	No data available
Specific Gravity	1.2 (H_2O = 1 at 4° C)	**Density**	No data available
Evaporation Rate	No data available	**Decomposition Temperature**	No data available
Auto Ignition	No data available	**Flammability Limit**	f.p. at or above 200°F (93° C)
Flash Point	>300° F (149° C)	**% Volatile**	Nil
Vapor Density	>1 (Air = 1)	**Vapor Pressure**	<0.00016 mmHg (68° F [20° C])
VOC	No data available	**Flammability Class**	No data available
Viscosity	600 centipose	**Partition Coefficient**	No data available
Water Solubility	Insoluble		

Section 10 Chemical Stability and Reactivity

Stability These products are stable at room temperature in closed containers under normal storage and handling conditions.

Hazardous Polymerization Polymerization may occur. Reacts with water with formation of carbon dioxide. Risk of bursting.

Incompatibility Water (and moisture), amines, strong acids and bases, alcohols

Hazardous Decomposition/ By-Products Thermal oxidative decomposition can produce carbon oxides, nitrogen oxide, hydrogen cyanide, aromatic isocyanates, gases/vapors and traces of incompletely burned carbon compounds.

Section 11 Toxicological Information

Assessment of irritating effects: irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

Skin Corrosion/Irritation Draize test (rabbit): irritating (based on MDI)

Serious Eye Damage/Irritation Draize test (rabbit): irritating (based on MDI)

Respiratory/Skin Sensitization **Buehler test (guinea pig):** sensitizing
Mouse Local Lymph Node Assay (LLNA): sensitizing, can cause skin sensitization.
Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Germ Cell Mutagenicity No data available

Carcinogenicity A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.

IARC 3 – Group 3: not classifiable as to its carcinogenicity to humans (Polymethylene polyphenyl isocyanates)
ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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Section 11 Toxicological Information, continued

Reproductive Toxicity
Repeated inhalation uptake of the substance did not cause damage to the reproductive organs. Assessment of teratogenicity showed that the substance did not cause malformations in animal studies, however toxicity to development was observed at high doses that were toxic to the parental animals.

Specific Target Organ Toxicity Single Exposure
Causes temporary irritation of the respiratory tract

Specific Target Organ Toxicity Repeated Exposure
No data available

Aspiration Hazard
No data available

Acute Toxicity
LD50 oral (rat): > 8,000 mg/kg (based on MDI)
LC50 inhalation (rat): >8 mg/l (OECD Guideline 403)
LD50 dermal (rabbit): >37,600 mg/kg (based on MDI)

Chronic Exposure
NOAEL: 0.8 mg/m3; LOAEL: 4 mg/m3 (based on MDI)

Section 12 Ecological Information

Toxicity

Component	Species	Exposure Time	LC50/EC50/IC50
4,4' Methylene bis (phenylisocyanate) (MDI) (101-68-8)	*Brachydanio rerio* (zebrafish)	96 hrs	LC0 >4,000 mg/l
	Daphnia Magna (water flea)	24 hrs	EC50 4,000 mg/l
	Scenedesmus subspicatus (algae)	72 hrs	EC0 6,560 mg/l (growth rate)

Persistence/Degradability
Poorly biodegradable. This product is unstable in water.
The elimination data also refer to products of hydrolysis.

Bioaccumulative Potential
Significant accumulation in organisms is not to be expected.
Bioconcentration factor > 200 (28 d)

Mobility in Soil
Adsorption to solid soil phase is not expected

Other Adverse Effects
The substance will not evaporate into the atmosphere from the water surface

Section 13 Disposal Considerations

Disposal Instructions
Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws. Empty containers retain product residue which may exhibit hazards of material, therefore to not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

Section 14 Transportation Information

DOT (US)	IMDG	IATA
Not Regulated	**Not Regulated**	**Not Regulated**

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Section 15 Regulatory Information

TSCA Inventory Status (40 CFR710) All components of this formulation are listed in the TSCA inventory.

EPCRA 311/312 (Hazard Categories) Acute, Chronic

EPCRA 313

Component	CAS-No	Concentration
4,4' Methylene bis (phenylisocyanate)(MDI)	101-68-8	20–30
Polymethylene polyphenyl isocyanates	9016-87-9	40–50

California Prop 65 This product does not intentionally contain any chemicals which have been identified by the state of California to cause cancer, birth defects or other reproductive harm.

Section 16 Other Information

UEI Systems®. provides the information contained herein in good faith. It is believed to be correct. However it is not all-inclusive and should be used only as a guide. Individuals receiving this information must exercise their independent judgement in determining its appropriateness for a particular purpose. UEI Systems shall not be held liable for any damage resulting from handling or from contact with this product. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources.

Abbreviations
PEL Permissible Exposure Limit
TLV Threshold Limit Value

End Notes

1. SARA - Signed into law in 1986, the Superfund Amendments and Reauthorization Act (SARA) is an extension of CERCLA, and is intended to encourage and support local and state emergency planning efforts. SARA provides citizens and local governments with information about potential chemical hazards, and calls for facilities that store hazardous materials to provide officials and citizens with data on the type and amount on hand at specific locations. This field states whether a material is listed or not listed in section 372.65 of SARA. EHS - This states if a material is listed or not listed in Appendix B to part 355, the SARA Extremely Hazardous Substances (EHS) section. RQ is the reportable quantity. TPQ is the Threshold Planning Quantity.

2. RCRA - The Resource Conservation and Recovery Act enacted in 1976 and subsequently amended, controls solid-waste disposal and encourages recycling. This states whether a material is listed or not listed under this regulation. If listed the Hazardous Waste Number and waste characterization assigned by RCRA is also provided.

3. CERCLA - Enacted in 1980 and amended thereafter, the Comprehensive Environmental Response, Compensation, and Liability Act provides for identification and cleanup of hazardous materials released on land, into the air, waterways, and groundwater. It covers areas affected by newly released materials and older leaking or abandoned dump sites. This states whether a material is listed or not listed in CERCLA Table 302.4. If listed the section(s) that it is listed under and the Reportable Quantity (RQ) are also provided.

4. TSCA - The Toxic Substances Control Act controls the exposure to and use of raw industrial chemicals not subject to other laws. This states whether the chemical is listed or not listed under this regulation.

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