



Safety Data Sheet

Checkerspot® Cast PU: Iso Prepolymer

SECTION 1: Identification

1.1 GHS Product identifier

Product name Checkerspot® Cast PU: Iso Prepolymer

Product numbers 1003 1004 1069 2147 2249

1.2 Other means of identification

CPU-1070-003-A CPU-1070-004-A CPU-1070-069-A CPU-1070-147-A CPU-1070-249-A

1.3 Recommended use of the chemical and restrictions on use

Recommended use: Research purposes only.

Restrictions on use: The product must not be used in applications other than those identified above, without first seeking advice of the supplier.

1.4 Supplier's details

Name Checkerspot, Inc.
Address 1250 Marina Village Pkwy
Alameda CA 94501
USA

Telephone (510) 842-0557
email EHS@checkerspot.com

1.5 Emergency phone number

CHEMTREC (USA) 1-800-424-9300
CHEMTREC (International) +1-703-527-3887

SECTION 2: Hazard identification

General hazard statement

The toxicological properties of this substance have not been fully investigated.

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Acute toxicity, inhalation, Cat. 4
- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 2B
- Sensitization, respiratory, Cat. 1

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- Sensitization, skin, Cat. 1
- Specific target organ toxicity (single exposure), Cat. 3

2.2 GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H315+H320

Causes skin and eye irritation

H317

May cause an allergic skin reaction

H332

Harmful if inhaled

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335

May cause respiratory irritation

Precautionary statement(s)

P261

Avoid breathing dust/fume/gas/mist/vapors/spray.

P264

Wash skin thoroughly after handling.

P271

Use only outdoors or in a well-ventilated area.

P272

Contaminated work clothing must not be allowed out of the workplace.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P285

In case of inadequate ventilation wear respiratory protection.

P302+P352

IF ON SKIN: Wash with plenty of soap and water.

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes.

P312

Remove contact lenses if present and easy to do. Continue rinsing.

P333+P313

Call a POISON CENTER/doctor if you feel unwell.

P337+P313

If skin irritation or rash occurs: Get medical advice/attention.

P342+P311

If eye irritation persists: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P362

Take off contaminated clothing and wash it before reuse.

P403+P233

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

P405

Store locked up.

P501

Dispose of contents/container to an approved facility in accordance with local, regional, national, and international regulations.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

1. Algal Oil Polyol

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Concentration 5 - 50 % (weight)

2. 4,4' Diphenylmethanediisocyanate, isomere, homologue and mixtures (pMDI)

Concentration 15 - 35 % (weight)
EC no. 618-498-9
CAS no. 9016-87-9

3. 4,4'-Methylenediphenyl diisocyanate (MDI)

Concentration 10 - 25 % (weight)
EC no. 202-966-0
CAS no. 101-68-8

4. Other Proprietary Ingredients

Concentration 0.1 - 25 % (weight)

Trade secret statement (OSHA 1910.1200(i))

The specific chemical identity and/or exact percentage (concentration) of composition for certain ingredients has been withheld as a trade secret.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Have a product container or label with you when calling a poison control center or doctor.
If inhaled	Remove to fresh air. If breathing is difficult, get medical attention.
In case of skin contact	Remove contaminated clothing. Rinse skin with water. Repeated exposure to skin may elicit allergic reaction.
In case of eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.
If swallowed	Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

No additional information available.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

NOTE TO PHYSICIAN: No specific antidote, treat symptomatically.

SECTION 5: Fire-fighting measures

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5.1 Suitable extinguishing media

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Exercise caution when extinguishing large volumes with water as this will cause evolution of CO₂ gas.

5.2 Specific hazards arising from the chemical

Combustion products may include: carbon oxides, nitrogen oxides, hydrocarbons and HCN.

5.3 Special protective actions for fire-fighters

FIRE FIGHTING INSTRUCTIONS: Evacuate area and fight fire upwind from a safe distance. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff. Minimize use of water to prevent environmental contamination and CO₂ generation. Exercise caution when fighting fire with water as interaction between hot polymeric MDI and water can be violent!

FIRE FIGHTING EQUIPMENT: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. PVC boots, gloves, safety helmet and protective clothing should be worn.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

IN CASE OF SPILLS OR LEAKS: Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

6.2 Environmental precautions

This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Minimize use of water to prevent environmental contamination.

6.3 Methods and materials for containment and cleaning up

SMALL SPILL: Use appropriate tools to put the spilled material in a convenient waste disposal container. Wash the spill site with water and dispose of according to federal, state, local and regional authority requirements.

LARGE SPILL: Soak up with inert absorbent material and collect in a suitable waste disposal container. Wash the spill site with water and dispose of according to federal, state, local and regional authority requirements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear proper safety equipment specified in Section 8 when mixing, loading or otherwise handling concentrate. Remove PPE and wash hands after handling this product. Smoking, eating and drinking should be prohibited in the application area.

7.2 Conditions for safe storage, including any incompatibilities

Keep container in a dry, well-ventilated area. Keep container closed. Keep away from food, drink, and animal feed.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

4,4'-Methylenediphenyl diisocyanate (MDI) (CAS: 101-68-8)

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PEL (Inhalation): 0.02 ppm, 0.2 mg/m³ (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 0.005 ppm (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): 0.05 mg/m³, (C) 0.2 mg/m³ [10-min] (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

TLV® (Inhalation): 0.005 ppm (ACGIH)
Respiratory sensitizer

8.2 Appropriate engineering controls

Proper ventilation is required when handling or using this product to avoid the generation of dust, fume, or mist. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Material should be stored between 60-90 °F (15-32 °C).

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Chemical safety goggles or glasses with side shields.

Skin protection

CLOTHING - Long-sleeved shirt and long pants, chemical-resistant footwear, plus socks.

GLOVES - The following protective materials are recommended: chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC), viton.

Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. In emergency, non-routine and unknown exposure situations, including confined space entries, a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied air respirator (SAR) with auxiliary self-contained air supply should be used.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Dark brown liquid
Color	Dark brown
Odor	Characteristic, musty
Odor threshold	No data available
Melting point/freezing point	-1.34 °F / -18.52 °C
Boiling point	511 °F / 266 °C
Flammability	Not flammable

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Lower and upper explosion limit/flammability limit	Not applicable
Flash point	430 °F / 221 °C
Auto-ignition temperature	1031 °F / 555 °C
Decomposition temperature	>570 °F / 300 °C
pH	No data available
Kinematic viscosity	No data available
Solubility	Not soluble in water
Partition coefficient n-octanol/water (log value)	No data available
Vapor pressure	No data available
Evaporation rate	No data available
Density and/or relative density	No data available
Relative vapor density	No data available

Particle characteristics

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

This product is stable when stored at normal ambient temperatures. May decompose if heated to high temperatures.

10.3 Possibility of hazardous reactions

Reaction with water (moisture) produces CO₂-gas. Exothermic reaction with materials containing active hydrogen groups.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Acids, amines, bases, metals, water

10.6 Hazardous decomposition products

Combustion products may include: carbon oxides, nitrogen oxides, hydrocarbons and HCN. In the event of extreme heat (>932 °F / 500 °C), aniline is suspected of being formed.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

No data available.

Skin corrosion/irritation

May cause skin irritation.

Serious eye damage/irritation

May cause mild eye irritation.

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Respiratory or skin sensitization

May cause sensitization by inhalation.
May cause sensitization by skin contact.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Specific target organ toxicity (STOT) - single exposure

No data available.

Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

May cause sensitization by inhalation.

SECTION 12: Ecological information

Toxicity

No data available.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

This product, solutions and any by-products must be disposed of in accordance with federal, state and local environmental control regulations. Do not contaminate water, food or feed by storage or disposal.

Packaging disposal

This material and its container must be disposed of in a safe way via a licensed waste disposal contractor. Empty containers or liners may retain some product residues. Do not reuse containers.

Waste treatment

The generation of waste should be avoided or minimized wherever possible.

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Sewage disposal

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Other disposal recommendations

No additional information available.

SECTION 14: Transport information

DOT (US)

Not a DOT controlled material (United States) for quantities under 5000 lbs.

IMDG

Not dangerous goods.

IATA

Not dangerous goods.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Toxic Substances Control Act (TSCA) Inventory

Not listed. TSCA Research and Development Use Only for industrial uses. TSCA exempt for food-contact and cosmetic use.

Canadian Domestic Substances List (DSL)

Not all ingredients listed.

SARA 311/312 Hazards

Refer to hazard classification information in Section 2.

SARA 313 Components

Diphenylmethanediisocyanate CAS number: 9016-87-9

4,4'-methylenediphenyl diisocyanate CAS number: 101-68-8

Massachusetts Right To Know Components

Not listed.

New Jersey Right To Know Components

Methylene bisphenyl isocyanate CAS number: 101-68-8

Methylene diphenyl diisocyanate (polymeric) CAS number: 9016-87-9

Pennsylvania Right To Know Components

Benzene, 1,1'-methylenebis[4-isocyanato- CAS number: 101-68-8

California Prop. 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

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SECTION 16: Other information

Version: 3.0
Revision Date: 08/02/2023

16.1 Further information/disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Checkerspot, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Checkerspot, Inc. has been advised of the possibility of such damages.

16.2 Preparation information

Abbreviations and acronyms
ACGIH: American Conference of Governmental Industrial Hygienists
CAS no.: Chemical Abstracts Service Number
Cat.: Category
CFR: Code of Federal Regulations
DOT: Department of Transportation
EC no.: European Community Number
GHS: Globally Harmonized System
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
NIOSH: National Institute for Occupational Safety & Health
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
PPE: Personal Protective Equipment
REL: Recommended Exposure Limit
SARA: Superfund Amendments and Reauthorization Act
TLV: Threshold Limit Value