Safety Data Sheet
acc. to OSHA HCS

Print Date 06/11/2015 Revision Date 06/11/2015

· **Product Identifier**
· **Trade Name:** UR3005 Black A
· **Application of the Substance or Mixture:** Isocyanates

· **Details of the Supplier of the Safety Data Sheet (SDS)**
· **Manufacturer or Supplier:**
Resinlab, LLC
N109 W13300 Ellsworth Drive,
Germantown, WI 53022
1-800-388-8605
www.resinlab.com
· **Information Department:** Product Safety Department: msds@resinlab.com
· **Emergency Telephone Number:**
North America - Chemtrec: 1-800-424-9300 (24 hours)
International - Chemtrec: 01-703-527-3887 (24 hours)

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2 Hazard(s) identification

· **Hazard Classification**

GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

GHS07

Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335	May cause respiratory irritation.

· **Label Elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Pictogram(s)**

GHS07 GHS08

· **Signal Word** Danger

· **Hazard-determining Component(s)**
Diundecyl phthalate (DUP)
4,4'-diisocyanatodiphenylmethane (Wetted form)
Polymer of 4,4'-diisocyanatodiphenylmethane
Methylene diphenyl diisocyanate
· **Hazard statements**
Harmful if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

· **Precautionary statements**
Wear respiratory protection.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.

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Wear eye protection / face protection.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
If experiencing respiratory symptoms: Call a poison center/doctor.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a poison center/doctor if you feel unwell.
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Prevention**
In case of inadequate ventilation wear respiratory protection.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Do not eat, drink or smoke when using this product.

· **Disposal** *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Hazard Rating System**
· **NFPA System**
· **NFPA Ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 1

May demonstrate unusual reactivity with water.

· **HMIS System**
· **HMIS Ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 1

Changes or decomposes on exposure to moisture.

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** *Not applicable.*
· **vPvB:** *Not applicable.*

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3 Composition/information on ingredients

· **Chemical Characterization: Mixtures**
· **Composition/Information on Ingredients** *Void*

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· **Classification System:**
The Classifications were based on the Toxicological and Ecological Data of the substances/mixtures in the Section 11 and 12.

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4 First-aid measures

· **Description of First Aid Measures**

· **General Information**
Ensure medical personnel are aware of exposure and take precautions for their personal protection; see Section 8 for the information of personal protection.

· **After Inhalation**
Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing.
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Give artificial respiration if not breathing.
If breathing is difficult, administer oxygen.
Seek immediate medical advice.

· **After Skin Contact**
Remove all contaminated clothing and wash before reuse.
Wash contaminated skin with water and soap and rinse thoroughly.
Polyglycol based skin cleanser or corn oil may be more effective than soap and water.
Seek medical treatment in case of complaints.

· **After Eye Contact**
Immediately bathe eyes for 15 minutes under running water.
Seek immediate medical advice.

· **After Swallowing**
If victim is unconscious; never give anything by mouth.
If victim is conscious; rinse out mouth and give victim small amounts of water.
Do NOT induce vomiting.
Seek immediate medical advice.

· **After Exposure**
Move to fresh air at once.
Get medical advice/attention at once.

· **Information for Doctor** Have chemical containers, labels and/or (M)SDS ready when calling or visiting a medical center.

· **Indication of any Immediate Medical Attention and Special Treatment Needed**
After frequent or high intense exposure, the following medical tests are recommended:
eye tests
skin tests
Check section 11 Toxicological Information for further relevant information.

· **Additional Information**
For additional information, please consult the corresponding first aid measures in the most current version of Emergency Response Guidebook which is produced by the US Department of Transportation.

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5 Fire-fighting measures

· **Extinguishing Media**

· **Suitable Extinguishing Agent(s)**
Use fire fighting measures and extinguishing agents that suit the environment.
In case of fire, suitable extinguishing agents are:
Alcohol resistant foam.
Dry chemical or fire-extinguishing powder.
Carbon dioxide (CO_2).
Water spray or water fog.

· **Unsuitable Extinguishing Agent(s)** Water with full jet

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· **Firefighting Procedures**
Isolate fire and deny unnecessary entry.
Eliminate all ignition sources if safe to do so.
Do not extinguish fire unless flow can be stopped.
Fight fire remotely due to the risk of explosion.
Burning liquids may be moved by flushing with water; protect personnel and minimize property damage.
Fight fire from protected location or safe distance.
Contain fire water runoff if possible to prevent environmental pollution.

· **Special Hazards Arising in Fire**
Will not burn unless preheated.
In case of fire, following can be released:
Carbon dioxide (CO_2) and Carbon monoxide (CO)

· **Advice for Firefighters**
If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).
As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

· **Additional Information** Ensure adequate and functional fire fighting facilities equipped in working area at all times.

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6 Accidental release measures

· **Personal Precautions**
Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.
Ensure personnel take precautions for their personal protection during clean up; see Section 8 for the specific requirements.

· **Environmental Precautions** Keep away from sewage system or other water courses.

· **Cleaning Up Methods**
Ensure adequate ventilation.
Eliminate all ignition sources.
Keep unauthorized personnel away.
For large spills:
Shut off source of leak if safe to do so.
Dike and contain.
Remove with vacuum trucks or pump to storage/salvage vessels.
Allow molten product to cool.
Absorb residues with liquid-binding materials.
For small spills:
Ventilate and wash area after clean-up is complete.
Collect spills in suitable and properly labeled containers.
Do not use solvents unless following safe handling practices and within the recommended exposure guidelines.
Dispose contaminated chemicals as waste according to Section 13.

· **Additional Information** No further relevant information.

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7 Handling and storage

· **Handling**
· **Precautions for Safe Handling**
Caution! May change or decompose on exposure to water, but there is little or no potential for heat generation or explosion.
Keep away from moisture, water and other aqueous solution.
Keep containers filled with dry inert gas to minimize any risks when handling.
Obtain special instruction before use; do not handle until all safety precautions have been read and understood.
Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.
Wear respiratory protection when handling.
Ensure good ventilation and/or exhaustion at workplace.
Keep away from incompatible material(s).
Avoid any release into the environment.
Observe all the personal protection requirements in Section 8.

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· **Information about Protection Against Explosions and Fires**
Will not burn unless preheated.
Keep away from heat, sparks, open flame and other ignition sources during handling.

· **Storage**
· **Requirements to be Met by Storerooms and Receptacles**
Caution! Store in a dry and cool place although does not readily produce flammable hydrogen (H_2) or violent reaction when in contact with water.
Keep stored away from moisture or under dry inert gas to minimize any risks.
Keep moist with non-aqueous liquid; avoid being dried out.
Store in a well-ventilated place; provide ventilation for receptacles.
Keep stored in accordance with local, regional, national, and international regulations.
· **Information about Storage in One Common Storage Facility**
Store away from incompatible material(s).
Store away from foodstuffs.
Avoid release to the environment.

· **Additional Information** No further relevant information.

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8 Exposure controls/personal protection

· **Engineering Measures or Controls**
· **Exposure Limit Values that Require Monitoring at the Workplace**
The substance/mixture does not contain any relevant quantities of substances with critical values that have to be monitored at the workplace.
· **Other Engineering Measures or Controls**
Ventilation rates should be matched to conditions.
If applicable, use process enclosure(s), local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

· **Personal Protective**
· **General Protective and Hygienic Measures**
Avoid any contact with eye.
Do not eat, drink or smoke during work.
Keep food, drink or feed away from working area.
Contaminated work clothing is not allowed out of workplace.
Clean hands and exposed skin thoroughly after work and before breaks.

· **Personal Protective Equipment (PPE)**
· **Breathing Equipment**
Due to the wetted form, no breathing equipment is required.
Respirator protection must be worn in cases where there are inadequately ventilated environments, and/or when the mixture is heated, sprayed, or aerosolized.
· **Hand Protection**

Protective gloves

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.
Suggested glove type(s):
Nitrile Gloves
Butyl Rubber Gloves
· **Eye Protection**

Tightly sealed goggles

· **Body Protection** No relevant information.

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· **Additional Information**
All protective clothing (suits, gloves, footwear, headgear) should be clean, available every day, and put on before work.
The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

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9 Physical and chemical properties

· **Information on Basic Physical and Chemical Properties**

· **Appearance:**	
· **Form:**	Liquid
· **Color:**	Dark amber
· **Odor:**	Musty
· **Odor Threshold:**	Not determined.
· **PH-Value:**	Not determined.
· **Change in Condition:**	
· **Melting Point:**	Not determined.
· **Boiling Point:**	523 °C (973 °F)
· **Flash Point:**	> 199 °C (> 390 °F)
· **Decomposition Temperature:**	Not determined.
· **Flammability:**	Not determined.
· **Explosion:**	Not determined.
· **Explosion Limits:**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Vapor Pressure:**	Not determined.
· **Density at 25 °C (77 °F):**	1.11 g/cm³ (9.263 lbs/gal)
· **Solubility in or Miscibility with**	
· **Water:**	Not miscible or difficult to mix.
· **Viscosity:**	
· **Dynamic at 20 °C (68 °F):**	200 mPas
· **Kinematic:**	Not determined.
· **Additional Information**	No further relevant information.

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10 Stability and reactivity

· **Physical Hazard(s)** Not a regulated reactive or physical hazard under GHS.

· **Hazardous Reactivity and Chemical Stability**
May decompose, condense, or self-react under conditions of high temperature and/or pressure; but there is little or no potential for heat generation or explosion, or readily undergo hazardous polymerization in the absence of inhibitors.

· **Thermal Decomposition and Conditions to be Avoided**
Keep away from incompatible material(s).
Thermally decomposes during fire or high heat; keep away from heat, sparks, open flame and other ignition sources.

· **Possibility of Other Hazardous Reaction(s)**
May slowly react with water and release carbon dioxide (CO_2).
May react with strong oxidizing acids to potentially cause a fire.

· **Incompatible Material(s)**
Oxidizing agents
Amines.

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Alcohols
Water
Acids
Bases (Alkalis)

· **Hazardous Decomposition Product(s)**
Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.

· **Hazardous Polymerization Product(s)** No relevant information.

· **Additional Information** No further relevant information.

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11 Toxicological information

For detailed Toxilogical Information please email the Product Safety Department.

· **Acute Toxicity**

· **Oral**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane		
Oral	LD50	(Read-across from CAS 101-68-8) 2200 mg/kg (LD50; mouse) Reference: ChemID Full Record (2011).
3648-20-2 Diundecyl phthalate (DUP)		
Oral	LD50	> 15800 mg/kg (rat) (No mortality found) The substance was not classified as an acute oral hazard. Reference: ECHA (2011).

· **Potential Health Effect(s):**
Harmful if swallowed.
See acute inhalative effect(s) for further information

· **Dermal**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane		
Dermal	LD50	(Read-across from CAS 101-68-8) LD50 > 9400 mg/kg (rabbit) (OECD TG 402) Reference: ECHA (2011).
3648-20-2 Diundecyl phthalate (DUP)		
Dermal	LD50	(rat) (LD0(OECD TG 402) ≥2000 mg/kg: No mortality found) No mortality or any health effects found in males or females; the substance was not classified as an acute dermal hazard. Reference: ECHA (2011).

· **Potential Health Effect(s):**
Not a classified acute dermal hazard.
See acute inhalative effect(s) for further information.

· **Inhalative**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane		
Inhalative	LC50/4 h	1.5 mg/l (Test species: n/a) ATE Mix (inhal): 1.5 mg/l 4h for dust/mist test atmosphere, calculation method. The substance was tested in a different form than what is placed on the market and because of that a modified classification for acute inhalation toxicity is justified. Reference: Vendor SDS 0.39 mg/l (rat) (as dust; test detail not available) The substance was classified as a fatal inhalative hazard (Category 2: dusts) by GHS-J, and a serious hazard (Health: 3) by HMIS. Due to the wetted form, inhalative effects of the substance can be seen as negligible. Reference: GHS-J (2006) and OECD SIAM (2003) and HMIS (2001).
3648-20-2 Diundecyl phthalate (DUP)		
Inhalative	LC50/4 h	(rat) (No mortality found at the saturated concentration) LC0/6 hours (150 °C) > 1.8 mg/L No mortality was observed up to the saturated vapor concentration of 1.8 mg/L; the substance was not classified as an acute inhalative hazard. Reference: ECHA (2011).

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· **Potential Health Effect(s):**
Harmful if inhaled.
While not a classified acute inhalative hazard due to wetted form, the product may cause the following symptoms when heated, sprayed, or aerosolized:

· **Skin Corrosion or Irritation**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane	
Corrosion/Irritation	(Read-across from CAS 101-68-8) (rabbit) (OECD TG 404; post-exposure: 14 days) erythema: 2.03/4 (max. 4); not fully reversible within 14 days; edema: 1.43/4 (max. 4); not fully reversible within 14 days. The substance was classified as irritating to rabbit skin. Reference: ECHA (2011).
3648-20-2 Diundecyl phthalate (DUP)	
Corrosion/Irritation	slightly irrit. (rabbit) (Federal Register 1500.51.1973) Erythema: 1/1 (Max. 1; 1 out of 6 animals at 24 hrs; 4 out of 6 animals at 48 hrs) Edema: 0 (6 out of 6 animals) The substance was determined to be slightly irritating to skin (Category 3). Reference: ECHA (2011).

· **Potential Health Effect(s):**
Causes skin irritation.
In contact with skin, may cause:
redness and pain

· **Eye Serious Damage or Irritation**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane	
Damage/Irritation	(Read-across from CAS 101-68-8) (rabbit) (post-exposure: 8 days) cornea and iris : 0.05/4 (Max. 4; 30 seconds contact); fully reversible in 48 hours; conjunctivae: (0.61 or 0.78)/3 (Max. 3; 30 seconds contact); not fully reversible in 8 days; chemosis: (0.56 or 0.61)/4 (Max. 4; 30 seconds contact); not fully reversible in 8 days. The substance was therefore classified to be an eye irritant (Category 2A). Reference: ECHA (2011).
3648-20-2 Diundecyl phthalate (DUP)	
Damage/Irritation	slightly irrit. (rabbit) (0.1mL pure substance) conjunctivae = 4, 3.3, and 0 (at 1, 24, and 48 hrs respectively; Max. 110; mean scores of all animals) cornea = 0 (1+24+48 hrs; mean score of all animals) iris = 0 (1+24+48 hrs; mean score of all animals) The substance was slightly irritating to rabbit eyes (Category 2B). Reference: ECHA (2011).

· **Potential Health Effect(s):**
Causes serious eye irritation.
In contact with eye, may cause:
redness and pain

· **Respiratory or Skin Sensitization**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane		
Sensitization	Skin	(Read-across from CAS 101-68-8) (guinea pig) (OECD TG 406) - No positive reaction was observed. (human) - there were skin sensitization results reported in human victims caused by the substance. For safety reason, the substance was classified as a skin sensitizer. Reference: ECHA (2011) and OECD SIAM (2003).
	Respiratory	(Read-across from CAS 101-68-8) sensitizing (guinea pig) (intradermal injection and topical application) An antibody response in respiratory system and a pulmonary hypersensitivity were observed in some of the treated humans. Due to wetted form of the substance, inhalative effects can be seen as negligible. Reference: ECHA (2011).
3648-20-2 Diundecyl phthalate (DUP)		
Sensitization	Skin	not sensitizing (Human) (Repeated insult patch test) No positive reaction was observed in 104 panelists after a repeated administration of 0.2 mL pure substance for 96 hours. Reference: ECHA (2011).

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Respiratory	(No data available)

· **Potential Health Effect(s):**
May cause an allergic skin reaction.
No further relevant information for respiratory sensitization; classification is not possible.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Germ Cell Mutagenicity**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane

Mutagenicity	(Read-across from CAS 101-68-8) In Vitro (AMES tests; Salmonella typhimurium) - negative with and without metabolic activation In Vitro (AMES tests; Escherichia coli) - negative without metabolic activation Reference: CCRIS (2011).

3648-20-2 Diundecyl phthalate (DUP)

Mutagenicity	negative (Human) (In Vitro (mammalian chromosome aberration)) In Vitro (mammalian chromosome aberration test with OECD TG 473 in human lymphocytes) - negative with and without metabolic activation In Vitro (mammalian chromosome aberration test with OECD TG 476 in mouse lymphoma cells) - negative with and without metabolic activation In Vitro (bacterial reverse mutation assay with OECD TG 471 in Salmonella typhimurium) - negative with and without metabolic activation Reference: ECHA (2011).

· **Potential Health Effect(s):** Not a known Germ Cell Mutagen.

· **Carcinogenicity**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane

Carcinogenicity	(Read-across from CAS 101-68-8) (rat) - After repeated inhalation with 6.0 mg/m³ of the polymeric MDI for 2 years, some occurrences of pulmonary tumors (6 adenomas and 1 adenocarcinoma in males, and 2 adenomas in females) were reported. However, due to wetted form of the substance, inhalative effects can be seen as negligible. (Test species: N/a) - The substance was not listed as a carcinogen by OSHA, ACGIH, NTP or IARC. When considering all of the evidence, the substance was considered to be of unlikely relevance of carcinogenicity to humans. Reference: ECHA (2011).

3648-20-2 Diundecyl phthalate (DUP)

Carcinogenicity	negative (Test species: n/a) (not listed as a Carcinogen by NTP, IARC or OSHA)

· **Potential Health Effect(s):** Not a known Carcinogen.

· **Reproductive Toxicity**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane

Reproductive Toxi.	(No data available)

3648-20-2 Diundecyl phthalate (DUP)

Reproductive Toxi.	(No data available)

· **Potential Health Effect(s):** No relevant information; classification is not possible.

· **Specific Target Organ Toxicity - Single Exposure**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane

STOT-Single	(Read-across from CAS 101-68-8) (Test species: human) Target organs: None There were human case reports that the substance induced respiratory irritation. Due to wetted form of the substance, inhalative effects can be seen as negligible. Reference: GHS-J (2006) and OECD SIAM (2003).

3648-20-2 Diundecyl phthalate (DUP)

STOT-Single	Target: None (rat) (No abnormal health effects found) No significant abnormal health effects were observed after a single administration with 15800 mg/kg (oral), 2000 mg/kg (dermal), or 1.8 mg/L (inhalation) of the substance. It was therefore not expected to pose a target organ hazard upon single or short-term exposure. Reference: ECHA (2011).

· **Potential Health Effect(s):** Not a known hazard to organs upon single exposure.

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· **Specific Target Organ Toxicity - Repeated Exposure**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane	
STOT-Repeated	(Read-across from CAS 101-68-8) Target organs: None Human cases showed effects including restrictions of pulmonary function, a decline in pulmonary diffusing capacity, asthma, hypersensitivity pneumonitis, pleuritis, and progressive fibrosing alveolitis after chronic exposure to even low concentration levels of the substance. However, due to wetted form of the substance, inhalative effects can be seen as negligible. Reference: ECHA (2011) and OECD SIAM (2003).
3648-20-2 Diundecyl phthalate (DUP)	
STOT-Repeated	Target: None (rat) (No systemic effect found after repeated oral doses) At 2.5% (> 2500 mg/bw/day; Diet period: 21 days) daily diet group, the substance caused a moderate proliferation of peroxisomes in livers of the rats. However, the dose level was out of the guidance range values. Reference: ECHA (2011).

· **Potential Health Effect(s):** Not a known hazard to organs upon repeated exposure.

· **Aspiration Hazard**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane	
Aspiration Hazard	(No data available)
3648-20-2 Diundecyl phthalate (DUP)	
Aspiration Hazard	(No data available)

· **Potential Health Effect(s):** No relevant information; classification is not possible.

· **Additional Information** No further relevant information.

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12 Ecological information

· **Aquatic Environmental Toxicity**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane	
Algae Toxicity	(Read-across from CAS 101-68-8) EC50 (3 days) > 1640 mg/l (Scenedesmus subspicatus; OECD TG 201)
Crustacean Toxicity	(Read-across from CAS 101-68-8) > 1000 mg/l (daphnia magna (water flea)) (EC50 (24 hrs), OECD TG 202)
Fish Toxicity	(Read-across from CAS 101-68-8) > 3000 mg/l (Oryzias latipes (Rice fish)) (LC0 (96 hrs), OECD TG 203) The substance is therefore not classified as hazardous to aquatic organisms based on the classification criteria. Reference: ECHA (2011).
3648-20-2 Diundecyl phthalate (DUP)	
Algae Toxicity	3.3 mg/l (Pseudokirchneriella subcapitata) (NOEC (8 days; Maximum dose: 3.3 mg/l)) EC50 (72 hrs; OECD TG 201) = 3.3 m/l (Maximum test concentration)
Crustacean Toxicity	0.059 mg/l (Daphnia magna (water flea)) (NOEC (21 days; Maximum dose: 0.059 mg/l)) LC50 (48 hrs; EPA OTS 797.1300) > 0.022 mg/L
Fish Toxicity	0.3 mg/l (Oncorhynchus mykiss (Rainbow trout)) (NOEC(155 days); EPA OPPTS 850.1400; Max.: 0.3mg/l) LC50 (96 hrs; EPA-660/3-75-009) > 1.4 mg/L No death was observed at water solubility of the substance (1.0 mg/L at 25℃), it was therefore not classified as hazardous to aquatic environment. Reference: ECHA (2011).

· **Aquatic Environmental Toxicity Assessment:** Not a known Environmental hazard to aquatic life.

· **Degradability and Stability**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane	
Biodegradation	(Read-across from CAS 101-68-8) non-biodegrad. (Test species: n/a) (OECD TG 301; 4 weeks; 100 mg/L of the substance)

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Persistence	(Read-across from CAS 101-68-8) The substance is not persistent.
Photodegradation	(Read-across from CAS 101-68-8) 1.16E-11 cm³/molecule•sec (OH radical) Half-life = 0.92 day; however, photolysis in water is negligible. Reference: CHRIP (2011), Canada DSL (2007), and ECHA (2011).
Stability in water	(No data available)
3648-20-2 Diundecyl phthalate (DUP)	
Biodegradation	readily biodeg. (Test species: n/a) (Biodegradation (28 days; OECD TG 301B)=69%) The substance is readily biodegradable. Reference: ECHA (2011).
Persistence	(Test species: n/a) (The substance is not persistent) Reference: Canada DSL (2007).
Photodegradation	2.91E-11 cm³/molecule-sec (OH radical) (Calculated by AOPWIN) Half-life (5E5 OH/cm³) = 13.25 hours Reference: ECHA (2011).
Stability in water	stable (Test species: n/a) (Half-life (PH=7; 25 °C; HYDROWIN) = 7.7 yrs) Half-life (PH=8; 25 °C;Calculated by HYDROWIN) = 281.03 days Reference: ECHA (2011).

· **Bioaccumulation and Distribution**

9016-87-9 Polymer of 4,4'-diisocyanatodiphenylmethane	
BCF	(Read-across from CAS 101-68-8) 92 (Cyprinus carpio) (Chemical concentration: 0.8 µg/L; 28 days) 200 (Chemical concentration: 0.08 µg/L; 28 days) It is not or low bioaccumulative in aquatic environment. Reference: CHRIP (2011).
Koc	(No data available)
LogPow	(Read-across from CAS 101-68-8) 4.51 (Test species: n/a) (OECD TG 117) Reference: ECHA (2011).
3648-20-2 Diundecyl phthalate (DUP)	
BCF	21.4 (Test species: n/a) (Calculated by BCFBAF or EPIWIN) Reference: ECHA (2011) and Canada DSL (2007).
Koc	≥ 2.5E21 L/kg (Test species: n/a) LogKoc (Soil; OECD TG 121) = ca. 21.41 LogKoc (Sewage sludge; OECD TG 121) = ca. 23.21 Reference: ECHA (2011).
LogPow	4.95 (Test species: n/a) (The substance is not bioaccumulative)

· **Degradability and Bioaccumulation Assessment:** Non-rapidly degradable, and low bioaccumulative.

· **Additional Information** No further relevant information.

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13 Disposal considerations

· **Hazardous Waste List**

· **Description:** It may be necessary to contain and dispose of the substance/mixture as a hazardous waste.

· **Waste Treatment Recommendation:**

Generation of waste should be avoided or minimized wherever possible.
Chemical waste, even small quantities, is neither allowed to be poured down drains, sewage system or waterways; nor disposed with household garbage.
Dispose of contents/containers in accordance with local, regional, national, and international regulations.

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· **Unused and Uncontaminated Packagings**
· **Recommendation** Dispose of according to your local waste regulations.

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14 Transport information

· **UN-Number**	Not regulated for transport; not applicable.
· **DOT, ADR, ADN, IMDG, IATA**	Void
· **UN Proper Shipping Name**	
· **DOT, ADR, IMDG, IATA**	Void
· **Transport hazard class(es)**	Not regulated for transport; not applicable.
· **DOT, ADR, ADN, IMDG, IATA**	
· **Class**	Void
· **Packing group**	Not regulated for transport; not applicable.
· **DOT, ADR, IMDG, IATA**	Void
· **Environmental Hazards:**	Not applicable.
· **Special Precautions:**	Not applicable.
· **Transport in Bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	-

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15 Regulatory information

· **USA Regulation Lists**
· **SARA (Superfund Amendments and Reauthorization Act of 1986)**

· **Section 302 (Extremely Hazardous Substances)**

None of the ingredients is listed.

· **Section 313 (Toxics Release Inventory (TRI) reporting)**

9016-87-9	Polymer of 4,4'-diisocyanatodiphenylmethane	50-60%

· **Section 311/312 (Hazardous Chemical Inventory Reporting)**

None of the ingredients is listed.

· **Hazard Abbreviations for SARA 311/312**
A - Acute Health Hazard
C - Chronic Health Hazard
F - Fire Hazard
R - Reactive Hazard
S - Sudden Release of Pressure Hazard

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Proposition 65**

· **Chemicals Known to Cause Cancer**

None of the ingredients is listed.

· **Chemicals Known to Cause Reproductive Toxicity for Females**

None of the ingredients is listed.

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· **Chemicals Known to Cause Reproductive Toxicity for Males**

None of the ingredients is listed.

· **Chemicals Known to Cause Developmental Toxicity**

None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

9016-87-9	Polymer of 4,4'-diisocyanatodiphenylmethane	CBD

· **IARC (International Agency for Research on Cancer)**

9016-87-9	Polymer of 4,4'-diisocyanatodiphenylmethane	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value Established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **International Regulation Lists**

· **Canadian Domestic Substance Listings:**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **Chinese Chemical Inventory of Existing Chemical Substances:**

All ingredients are listed.

· **Japanese Existing and New Chemical Substance List:**

All ingredients are listed.

· **Korean Existing Chemical Inventory:**

All ingredients are listed.

· **European Pre-registered substances:**

All ingredients are listed.

· **REACh - Substances of Very High Concern (SVHC) List:**

None of the ingredients is listed.

· **Restriction of Hazardous Substances Directive (RoHS) list:**

None of the ingredients is listed.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department Issuing (M)SDS:** Product Safety Department

· **Contact:** msds@resinlab.com

· **Abbreviations and acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists
ACToR: US EPA Aggregated Computational Toxicology Resource
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road
BCF: Bioconcentration Factor

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CAS: Chemical Abstracts Service (division of the American Chemical Society)
CCRIS: US NLM TOXNET Chemical Carcinogenesis Research Information System
ChemID (Full Record): US NLM Chemical Information Database (or its Full Record) designed to help search for information by chemical name or structure
CHRIP: Japan NITE Information on Biodegradation and Bioconcentration of the Existing Chemical Substances in the Chemical Risk Information Platform
DOT: US Department of Transportation
DSL: Canada Domestic Substance List
ECHA: European Chemicals Agency's Dissemination portal with information on chemical substances registered under REACH
ESIS: European Chemical Substances Information System
HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System
HSDB: US NLM TOXNET Hazardous Substances Databank
HSNO CCID: New Zealand Hazardous Substances and New Organisms Chemical Classification Information Database
IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)
IATA-DGR: Dangerous Goods Regulations (DGR) by the International Air Transport Association (IATA)
ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)
ICSC: International Chemical Safety Cards
IMDG: International Maritime Dangerous Goods; the principal international rules for International Carriage of Dangerous Goods by SEA under the Recommendations on the Transport of Dangerous Goods by United Nations (RTDG)
IUCLID: EU REACh International Uniform Chemical Information Database
Koc: Partition coefficient, soil Organic Carbon to water
LC50/LD50: Lethal Concentration/Dose, 50 percent
N/a: Not available or Not applicable
NFPA: US National Fire Protection Association
NIOSH: US National Institute of Occupational Safety and Health
NITE: National Institute of Technology and Evaluation, Japan
NLM TOXNET: US National Library of Medicine Toxicology Data Network
OECD: Organisation for Economic Co-operation and Development
OSHA: US Occupational Safety and Health Administration
P: Marine Pollutant
RCRA: Resource Conservation and Recovery Act (USA)
REACh: EU Registry, Evaluation and Authorisation of Chemicals
RID: the Regulations Concerning the International Carriage of Dangerous Goods by Rail; published by the Central Office for International Carriage by Rail (OTIF)
RTDG: the Recommendations on the Transport of Dangerous Goods by United Nations (UN)
RTECS: US Registry of Toxic Effects of Chemical Substances
SARA: US Superfund Amendments and Reauthorization Act
SIDS: OECD existing chemicals Screening Information Data Sets
SVHC: EU ECHA Substance of Very High Concern
TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions (SCAPA) of US Department of Energy (DOE)
TOXLINE: US NLM bibliographic database search system
TSCA: US Toxic Substance Control Act

· **Date of preparation / last revision** *06/11/2015 / 2*