UR3005 Black A

Safety Data Sheet

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SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : UR3005 Black A

1.2. Recommended use and restrictions on use

Recommended use : Isocyanates

Restrictions on use : Product for industrial use only

1.3. Supplier

ResinLab, LLC
N109 W13300 Ellsworth Drive
Germantown, WI 53022 - United States
T 1-877-259-1669
msds@resinlab.com - www.resinlab.com

1.4. Emergency telephone number

Emergency number : CHEMTREC:1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Respiratory sensitization, Category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) :
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US) :
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face 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.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P302+P352 - If on skin: Wash with plenty of water.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a poison center or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Possible sensitizer, reacts with common materials such as water and alcohols releasing CO2.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Diundecyl phthalate (DUP)	(CAS-No.) 3648-20-2	30 – 50
Isocyanic acid, polymethylenepolyphenylene ester	(CAS-No.) 9016-87-9	30 – 50
4,4'-diisocyanatodiphenylmethane	(CAS-No.) 101-68-8	10 – 30
o-(p-isocyanatobenzyl)phenyl isocyanate	(CAS-No.) 5873-54-1	1 – 5
2,2'-methylenediphenyl diisocyanate	(CAS-No.) 2536-05-2	0.1 – 0.5

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : MDI vapors at concentrations above the PEL or TLV can cause asthma like symptoms. Persons with preexisting bronchial conditions may respond at concentrations below the TLV or PEL. These effects can be delayed for several hours and are usually reversible. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after inhalation : If inhaled: Remove person to fresh air and keep comfortable for breathing. Asthmatic sensitization can occur from a single large inhalation exposure or from repeated lower inhalation exposures. Observe OELs. Symptoms may be delayed. The affected person must rest and be kept under medical observation 48 Hours. If experiencing respiratory symptoms, call a doctor.

First-aid measures after skin contact : Polyglycol based skin cleansers such as Tam D or PEG 400 or corn oil may be more effective than using soap and water. If no corn oil or polyglycol-based skin cleanser available, Rinse immediately with plenty of water for 15 minutes. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after 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.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Rinse mouth out with water. Do not induce vomiting. Obtain medical attention. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Eye irritation.

Most Important Symptoms/Effects : Contains diisocyanate. Skin contact may aggravate existing condition, inhalation of aerosol or vapor above or at OEL may aggravate existing respiratory condition.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use water jet to extinguish. Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Nitrogen oxides,Toxic fumes may be released,Isocyanates,Isocyanate containing vapors,Carbon oxides (CO, CO2)

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Ventilate and remove ignition sources. Cover spill area with suitable absorbant material. Shovel into vented container. Repeat if necessary. Decontaminate spill area with a mixture of 90% water and 10% non ionic surfactant such as Tergitol.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)
Not applicable

4,4'-diisocyanatodiphenylmethane (101-68-8)		
ACGIH	Local name	Methylene bisphenyl isocyanate (MDI)
ACGIH	ACGIH OEL TWA	0.005 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: Resp sens
ACGIH	Regulatory reference	ACGIH 2024
OSHA	OSHA PEL (Ceiling)	0.2 mg/m³

4,4'-diisocyanatodiphenylmethane (101-68-8)		
OSHA	OSHA PEL (Ceiling)	0.02 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)
Not applicable

2,2'-methylenediphenyl diisocyanate (2536-05-2)
Not applicable

Diundecyl phthalate (DUP) (3648-20-2)
Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station, ventilate curing ovens to prevent emissions in the workplace.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses with side shields

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation, wear respiratory protection. When using a spray gun or other means to aerosolize the material, respiratory protection is recommended.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	Amber
Odor	:	characteristic
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	> 208 °C
Flash point	:	> 198 °C
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Density	:	1.11 g/cm³
Solubility	:	No data available

Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
VOC content		No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Contact with moisture, other materials that react with isocyanates or temperatures above 177C may cause polymerization.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Moisture.

10.5. Incompatible materials

Amines. Strong bases. Water. copper. alcohols.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Inhalation:dust,mist: Harmful if inhaled.

ATE US (dust, mist)	2.568 mg/l/4h

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
LD50 oral rat	> 10000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Literature study, Dermal)
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

4,4'-diisocyanatodiphenylmethane (101-68-8)	
LD50 oral rat	> 2000 mg/kg body weight (Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rabbit	> 9400 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s))
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
LD50 oral rat	> 2000 mg/kg body weight (Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rabbit	> 9400 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s))
LC50 Inhalation - Rat	387 mg/m³ air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male, Experimental value, Inhalation (aerosol))
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
LD50 oral rat	> 5000 mg/kg body weight (Rat, Read-across, Oral, 15 day(s))
LD50 dermal rabbit	> 9400 mg/kg body weight (24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s))
LC50 Inhalation - Rat	0.53 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male, Experimental value, Inhalation (dust))
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Diundecyl phthalate (DUP) (3648-20-2)	
LD50 oral rat	> 15800 mg/kg (Rat, Oral)
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 7900 mg/kg (Rabbit, Dermal)

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
IARC group	3 - Not classifiable

4,4'-diisocyanatodiphenylmethane (101-68-8)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.

4,4'-diisocyanatodiphenylmethane (101-68-8)	
STOT-single exposure	May cause respiratory irritation.

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
STOT-single exposure	May cause respiratory irritation.

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

4,4'-diisocyanatodiphenylmethane (101-68-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Diundecyl phthalate (DUP) (3648-20-2)	
LOAEL (oral,rat,90 days)	500 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified

Symptoms/effects after inhalation : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Eye irritation.

Most Important Symptoms/Effects : Contains diisocyanate. Skin contact may aggravate existing condition, inhalation of aerosol or vapor above or at OEL may aggravate existing respiratory condition.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
LC50 - Other aquatic organisms [1]	> 1000 mg/l (96 h, Literature study)

4,4'-diisocyanatodiphenylmethane (101-68-8)	
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
LC50 - Fish [1]	> 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration)
EC50 - Crustacea [1]	> 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect)
ErC50 algae	> 1640 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Read-across, GLP)
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
LC50 - Fish [1]	> 100 mg/l (96 h, Pisces, Fresh water, Read-across)
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Diundecyl phthalate (DUP) (3648-20-2)	
EC50 - Crustacea [1]	> 0.02 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	0.059 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	0.3 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '155 d'

12.2. Persistence and degradability

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Persistence and degradability	Not readily biodegradable in water.

4,4'-diisocyanatodiphenylmethane (101-68-8)	
Persistence and degradability	Not readily biodegradable in water.

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
Persistence and degradability	Not readily biodegradable in water.

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
Persistence and degradability	Not readily biodegradable in water.

Diundecyl phthalate (DUP) (3648-20-2)	
Persistence and degradability	Biodegradability in soil: no data available. Biodegradable in water.

12.3. Bioaccumulative potential

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
BCF - Fish [1]	268 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	10 (Calculated, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

4,4'-diisocyanatodiphenylmethane (101-68-8)	
BCF - Fish [1]	92 – 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	4.5 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
BCF - Fish [1]	92 – 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
Partition coefficient n-octanol/water (Log Pow)	4.5 (Read-across, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
BCF - Fish [1]	92 – 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across)
Partition coefficient n-octanol/water (Log Pow)	5.22 (QSAR, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Diundecyl phthalate (DUP) (3648-20-2)	
Partition coefficient n-octanol/water (Log Pow)	4.95 – 12.1
Bioaccumulative potential	Bioaccumable.

12.4. Mobility in soil

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	9.1 – 11 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.

4,4'-diisocyanatodiphenylmethane (101-68-8)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.5 – 5.5 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.5 – 5.5 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.5 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description (DOT) : NA3082 Other regulated substances, liquid, n.o.s. (4,4'-diisocyanatodiphenylmethane), 9, III

UN-No.(DOT) : NA3082

Proper Shipping Name (DOT) : Other regulated substances, liquid, n.o.s.
4,4'-diisocyanatodiphenylmethane

Class (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT)	:	9 - Class 9 (Miscellaneous dangerous materials)

Dangerous for the environment	:	Yes
Marine pollutant	:	Yes

DOT Packaging Non Bulk (49 CFR 173.xxx)	:	203
DOT Packaging Bulk (49 CFR 173.xxx)	:	241
DOT Symbols	:	D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102)	:	A189 - Except where the defining criteria of another class or division are met, concentrations of formaldehyde solution: a. With less than 25 percent but not less than 10 percent formaldehyde, must be described as UN3334, Aviation regulated liquid, n.o.s; and b. With less than 10 percent formaldehyde, are not subject to this subchapter. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	155
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	No limit
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
Other information	:	No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Isocyanic acid, polymethylenepolyphenylene ester	CAS-No. 9016-87-9	30 – 50%
4,4'-diisocyanatodiphenylmethane	CAS-No. 101-68-8	10 – 30%

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

4,4'-diisocyanatodiphenylmethane (101-68-8)	
Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	5000 lb

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

2,2'-methylenediphenyl diisocyanate (2536-05-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Diundecyl phthalate (DUP) (3648-20-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)
Listed on the Canadian DSL (Domestic Substances List)

4,4'-diisocyanatodiphenylmethane (101-68-8)
Listed on the Canadian DSL (Domestic Substances List)

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)
Listed on the Canadian DSL (Domestic Substances List)

2,2'-methylenediphenyl diisocyanate (2536-05-2)
Listed on the Canadian DSL (Domestic Substances List)

Diundecyl phthalate (DUP) (3648-20-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Contains no substance(s) listed on the REACH Candidate List

4,4'-diisocyanatodiphenylmethane (101-68-8)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

2,2'-methylenediphenyl diisocyanate (2536-05-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Diundecyl phthalate (DUP) (3648-20-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

4,4'-diisocyanatodiphenylmethane (101-68-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

2,2'-methylenediphenyl diisocyanate (2536-05-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Diundecyl phthalate (DUP) (3648-20-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Isocyanic acid, polymethylenepolyphenylene ester(9016-87-9)	U.S. - New Jersey - Right to Know Hazardous Substance List
4,4'-diisocyanatodiphenylmethane(101-68-8)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 04/04/2024

Full text of hazard classes and H-statements:

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

SDS US - ResinLab

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.