

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/12/2020

Reviewed on 08/12/2020

1 Identification

- **Product identifier**
- **Trade name:** Divergent Prime and Block
- *Application of the substance / the mixture* Polyurethane resin
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Divergent Adhesives, LLC
176 Glenwood LN.
Gray Court, SC 29645

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

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

Carc. 2 H351 Suspected of causing cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



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).

- *Hazard pictograms*



GHS07 GHS08

- *Signal word* Danger

- *Hazard-determining components of labeling:*

diphenylmethane-4,4'-di-isocyanate

Aromatisches Polyisocyanat-Prepolymer

diphenylmethane-2,4'-diisocyanate

diphenylmethane-2,2'-diisocyanate

diphenylmethanediisocyanate, isomeres and homologues

LUBIO UV 6

- *Hazard statements*

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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

H317 May cause an allergic skin reaction.

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H351 Suspected of causing cancer.
 H335 May cause respiratory irritation.
 H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P264 Wash thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P285 In case of inadequate ventilation wear respiratory protection.
 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. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2
 Fire = 1
 Reactivity = 0

· **WHMIS-ratings (scale 0 - 4)**



Health = *2
 Fire = 1
 Reactivity = 0

· **Results of PBT and vPvB assessment**

- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

72088-97-2	Aromatisches Polyisocyanat-Prepolymer	25-50%
101-68-8	diphenylmethane-4,4'-di-isocyanate	10-25%
5873-54-1	diphenylmethane-2,4'-diisocyanate	10-25%
67815-87-6	Aromatisches Polyisocyanat-Prepolymer	2.5-10%
2536-05-2	diphenylmethane-2,2'-diisocyanate	≤2.5%
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	≤2.5%
41556-26-7	LUBIO UV 6	≤2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**

If skin irritation continues, consult a doctor.

Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** Do not induce vomiting; immediately call for medical help.

- **Information for doctor:**

· *Most important symptoms and effects, both acute and delayed* No further relevant information available.

· *Danger* Danger of impaired breathing.

· *Indication of any immediate medical attention and special treatment needed*

No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire fighting measures that suit the environment.

- **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

- **Advice for firefighters**

- **Protective equipment:**

Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

Mount respiratory protective device.

Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Wear protective clothing.

- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals**PAC-1:**

101-68-8	diphenylmethane-4,4'-di-isocyanate	0.45 mg/m ³
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	0.15 mg/m ³
77-58-7	dibutyltin dilaurate	1.1 mg/m ³

PAC-2:

101-68-8	diphenylmethane-4,4'-di-isocyanate	5 mg/m ³
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3.6 mg/m ³
77-58-7	dibutyltin dilaurate	8 mg/m ³

PAC-3:

101-68-8	diphenylmethane-4,4'-di-isocyanate	55 mg/m ³
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	22 mg/m ³
77-58-7	dibutyltin dilaurate	48 mg/m ³

7 Handling and storage

Handling:**Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Information about protection against explosions and fires: Keep respiratory protective device available.**Conditions for safe storage, including any incompatibilities****Storage:***Requirements to be met by storerooms and receptacles:* No special requirements.*Information about storage in one common storage facility:* Not required.*Further information about storage conditions:*

Protect from humidity and water.

Keep receptacle tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.**Control parameters****Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

101-68-8 diphenylmethane-4,4'-di-isocyanate

PEL	Ceiling limit value: 0.2 mg/m ³ , 0.02 ppm
REL	Long-term value: 0.05 mg/m ³ , 0.005 ppm Ceiling limit value: 0.2* mg/m ³ , 0.02* ppm *10-min
TLV	Long-term value: 0.051 mg/m ³ , 0.005 ppm

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· *Additional information:* The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· *General protective and hygienic measures:*

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.

· *Breathing equipment:*

- Not necessary if room is well-ventilated.
- Use suitable respiratory protective device in case of insufficient ventilation.

· *Protection of hands:* Not required.

· *Material of gloves*

- Butyl rubber, BR
- Natural rubber, NR
- Nitrile rubber, NBR

· *Eye protection:*



Tightly sealed goggles

· *Body protection:* Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· *Appearance:*

Form: Fluid

Color: Amber colored

· *Odor:* Characteristic

· *Odor threshold:* Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Boiling point/Boiling range: 208 °C (406.4 °F)

· **Flash point:** 201 °C (393.8 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 330 °C (626 °F)

· *Decomposition temperature:* Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: 0.4 Vol %

Upper: Not determined.

· **Vapor pressure:** Not determined.

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- **Density at 20 °C (68 °F):** 1.1 g/cm³ (9.1795 lbs/gal)
- *Relative density* Not determined.
- *Vapor density* Not determined.
- *Evaporation rate* Not determined.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic at 20 °C (68 °F):* 800 mPas
 - Kinematic:* Not determined.
- **Solvent content:**
 - VOC Content:* 0.00 %
 - 0.00 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
 - Thermal decomposition / conditions to be avoided:* No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
 - Exothermic reaction with amines and alcohols; reacts with water forming CO₂; in closed containers, risk of bursting owing to increase of pressure.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· *LD/LC50 values that are relevant for classification:*

72088-97-2 Aromatisches Polyisocyanat-Prepolymer

Oral	LD50	>5,000 mg/kg (Ratte)
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101-68-8 diphenylmethane-4,4'-di-isocyanate

Oral	LD50	>2,000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
Dermal	LD50	>9,400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
Inhalative	LC50/ 4h	0.368 mg/l (Ratte)

5873-54-1 diphenylmethane-2,4'-diisocyanate

Oral	LD50	>2,000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
Dermal	LD50	>9,400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
Inhalative	LC50	0.31 mg/l (Ratte) (4h, Aerosol)

67815-87-6 Aromatisches Polyisocyanat-Prepolymer

Oral	LD50	≥5,000 mg/kg (Ratte) (OECD- Prüfrichtlinie 423)
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2536-05-2 diphenylmethane-2,2'-diisocyanate

Oral	LD50	>2,000 mg/kg (Ratte) (Richtlinie 84/449/EWG, B.1)
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Dermal	LD50	>9,400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
9016-87-9 diphenylmethanediisocyanate, isomeres and homologues		
Oral	LD50	>2,000 mg/kg (Ratte)
Dermal	LD50	>9,400 mg/kg (rab) (OECD- Prüfrichtlinie 402)
Inhalative	LC50/48 h	490 mg/l (Ratte) (als Aerosol, Exposition)

- **Primary irritant effect:**

- *on the skin:* No irritant effect.

- *on the eye:* Irritating effect.

- **Sensitization:**

- Sensitization possible through inhalation.

- Sensitization possible through skin contact.

- **Additional toxicological information:**

- The product shows the following dangers according to internally approved calculation methods for preparations:

- Harmful

- Irritant

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
101-68-8	diphenylmethane-4,4'-di-isocyanate	3
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	3

- **NTP (National Toxicology Program)**

- None of the ingredients is listed.

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

- None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

101-68-8 diphenylmethane-4,4'-di-isocyanate		
LC50/ 96h	>1,000 mg/l (Danio rerio (Zebrafisch)) (OECD- Prüfrichtlinie 203)	
EC50	>1,000 mg/l (Daphnia magna Wasserfloh) (OECD- Prüfrichtlinie 202)	
NOEC	>10 mg/l (Daphnia magna Wasserfloh) (OECD- Prüfrichtlinie 202 (Fortpflanzung))	
9016-87-9 diphenylmethanediisocyanate, isomeres and homologues		
LC0	>1,000 mg/l (Fisch) (96h)	
EC50	>1,000 mg/l (Daphnia magna Wasserfloh) (OECD-Prüfrichtlinie 202)	

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

- Water hazard class 1 (Self-assessment): slightly hazardous for water

- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** If product has aged or solidified conventional means of disposal are acceptable.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Void
- **Packing group**
- **DOT, ADR, IMDG, IATA** Void
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** Void

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- *Sara*

· *Section 355 (extremely hazardous substances):*

None of the ingredient is listed.

· *Section 313 (Specific toxic chemical listings):*

101-68-8 diphenylmethane-4,4'-di-isocyanate

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

· *TSCA (Toxic Substances Control Act):*

72088-97-2 Aromatisches Polyisocyanat-Prepolymer

ACTIVE

101-68-8 diphenylmethane-4,4'-di-isocyanate

ACTIVE

5873-54-1 diphenylmethane-2,4'-diisocyanate

ACTIVE

67815-87-6 Aromatisches Polyisocyanat-Prepolymer

ACTIVE

2536-05-2 diphenylmethane-2,2'-diisocyanate

ACTIVE

9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

ACTIVE

6425-39-4 2,2'-dimorpholinyl-diethyl ether

ACTIVE

125643-61-0 A mixture of isomers of: C7-9-alkyl-3-(3,5-di-trans-butyl-4-hydroxyphenyl) propionate

ACTIVE

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41556-26-7	LUBIO UV 6	ACTIVE
· <i>Hazardous Air Pollutants</i>		
101-68-8	diphenylmethane-4,4'-di-isocyanate	
· <i>Proposition 65</i>		
· <i>Chemicals known to cause cancer:</i>		
None of the ingredients is listed.		
· <i>Chemicals known to cause reproductive toxicity for females:</i>		
None of the ingredients is listed.		
· <i>Chemicals known to cause reproductive toxicity for males:</i>		
None of the ingredients is listed.		
· <i>Chemicals known to cause developmental toxicity:</i>		
None of the ingredients is listed.		
· <i>Canadian Ingredient disclosure list</i>		
· <i>Limit 0,1%</i>		
101-68-8	diphenylmethane-4,4'-di-isocyanate	
· <i>Limit 1%</i>		
None of the ingredients is listed.		
· <i>Carcinogenicity categories</i>		
· <i>EPA (Environmental Protection Agency)</i>		
101-68-8	diphenylmethane-4,4'-di-isocyanate	D, CBD
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	CBD
· <i>TLV (Threshold Limit Value established by ACGIH)</i>		
77-58-7	dibutyltin dilaurate	A4
· <i>MAK (German Maximum Workplace Concentration)</i>		
101-68-8	diphenylmethane-4,4'-di-isocyanate	4
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	4
· <i>NIOSH-Ca (National Institute for Occupational Safety and Health)</i>		
None of the ingredients is listed.		

· **National regulations:**

· *Technical instructions (air):*

Class	Share in %
I	25-50

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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 SDS:** Technical Department
- **Date of preparation / last revision** 08/12/2020 / 65

· **Abbreviations and acronyms:**

Acute Tox. 4: Acute toxicity – Category 4
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
 Resp. Sens. 1: Respiratory sensitisation – Category 1
 Skin Sens. 1: Skin sensitisation – Category 1

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Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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