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Safety Data Sheet
DH18 SLOW HARDENER

1. Identification

Product identifier used on the label

DH18 SLOW HARDENER

Recommended use of the chemical and restriction on use
Recommended use*: for industrial use only

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Synonyms: Paint Related Material

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Corr./Irrit.	2	Skin corrosion/irritation
Skin Sens.	1	Skin sensitization
Aquatic Acute	3	Hazardous to the aquatic environment - acute
Resp. Sens.	1	Respiratory sensitization
Flam. Liq.	3	Flammable liquids

Label elements

Pictogram:



Signal Word:
Danger

Hazard Statement:

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264	Wash with plenty of water and soap thoroughly after handling.
P242	Use only non-sparking tools.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P243	Take action to prevent static discharges.
P233	Keep container tightly closed.
P285	In case of inadequate ventilation wear respiratory protection.
P240	Ground and bond container and receiving equipment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.

Precautionary Statements (Response):

P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P370 + P378	In case of fire: Use water spray for extinction.
P363	Wash contaminated clothing before reuse.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P321	Specific treatment (see on this label).
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P341	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.

Precautionary Statements (Storage):

P403 + P235	Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

No applicable information available.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name
103-09-3	>= 10.0 - < 15.0%	2-ethylhexyl acetate
28182-81-2	>= 25.0 - < 50.0%	Hexane, 1,6-diisocyanato-, homopolymer
53880-05-0	>= 10.0 - < 15.0%	Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-, homopolymer
112-07-2	>= 10.0 - < 15.0%	2-butoxyethyl acetate
123-86-4	>= 15.0 - < 20.0%	n-Butyl acetate
4098-71-9	>= 0.1 - < 0.2%	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air. If breathing difficulties develop, aid in breathing and seek immediate medical attention.

If on skin:
Immediately wash thoroughly with soap and water, seek medical attention.

If in eyes:
Flush with copious amounts of water for at least 15 minutes. Hold eyelids open to facilitate rinsing. If irritation develops, seek medical attention. Seek medical attention.

If swallowed:
Immediate medical attention required. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Rinse mouth and then drink plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
carbon dioxide, foam, dry powder, water spray

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
Vapors and/or decomposition products are irritant and/or toxic. If product is heated above decomposition temperature acrid smoke and fumes will be released.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Avoid water contamination in closed containers of confined areas, because carbon dioxide gas is generated. Notify proper authorities. Do not flood burning material with water due to potential spreading of fire. Flash fire may occur. Run-off water from fire may cause pollution. Contain contaminated water/firefighting water. Remove product from areas of fire, or otherwise cool sealed containers with water in order to avoid pressure build up due to heat. Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Extinguish sources of ignition nearby and downwind. Avoid prolonged inhalation. Wear suitable personal protective clothing and equipment. Ensure adequate ventilation.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

A spill of or in excess of the reportable quantity requires notification to state, local and national emergency authorities.

Methods and material for containment and cleaning up

Dike spillage. Wash down spill area with decontamination solution. Spill area can be decontaminated with the following recommended decontamination solution: Allow solution to stand for at least 10 minutes. Remove containers to a safe place, cover loosely, and allow to stand for 24 to 48 hours before sealing and disposing. Shovel into open container. Add additional decontamination solution to waste container. Mixture of 80 % water and 20 % non-ionic surfactant, or 90 - 95 % water, 3 - 8 % concentrated ammonia and 2 % detergent.

7. Handling and Storage

Precautions for safe handling

Handle and open container with care. Avoid water contamination in closed containers of confined areas, because carbon dioxide gas is generated. WARNING: Empty containers may still contain hazardous residue. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve

pressure, open vent and let stand for 48 hours before resealing. Do not reseal container if contamination of the product is suspected. Use static lines when mixing and transferring material. Do not puncture, drop, or slide containers. Store in a well-ventilated place. Keep cool. Ensure adequate ventilation. Avoid contact with the skin, eyes and clothing.

Proper ventilation and respiratory protection is required when sanding, flame cutting, welding or brazing coated surfaces. Do not apply to hot surfaces.

Protection against fire and explosion:
Risk of explosion if heated under confinement. Use antistatic tools. Exhaust fans should be explosion proof. Avoid all sources of ignition: heat, sparks, open flame. Provide adequate ventilation to remove solvent vapors from lower levels or work areas and to prevent solvent contact with ignition sources. Sealed containers should be protected against heat as this results in pressure build-up.

Conditions for safe storage, including any incompatibilities

Segregate from strong bases. Segregate from oxidizing agents. Segregate from incompatible substances. Segregate from metals. Segregate from strong acids. Keep away from water.

Suitable materials for containers: Carbon steel (Iron), tinned carbon steel (Tinplate)

Further information on storage conditions: Keep container tightly closed. Protect against moisture. Carbon dioxide gas can cause containers to expand and possibly rupture explosively. Store protected against freezing. Protect from direct sunlight. If moisture enters isocyanate containers, CO2 forms and pressure builds up.

Storage stability:
Storage temperature: 25 - 35 °C
Consult local fire marshal for storage requirements.
Slow non-hazardous polymerization possible when at or exceeding maximum temperatures.
Protect from temperatures above: 49 °C

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

2-butoxyethyl acetate		
	ACGIH TLV	TWA value 20 ppm ;
n-Butyl acetate	OSHA PEL	PEL 150 ppm 710 mg/m3 ; STEL value 200 ppm 950 mg/m3 ; TWA value 150 ppm 710 mg/m3 ;
	ACGIH TLV	STEL value 150 ppm ; TWA value 50 ppm ;
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	OSHA PEL	SKIN_FINAL ; The substance can be absorbed through the skin. STEL value 0.02 ppm ; TWA value 0.005 ppm ;
	ACGIH TLV	TWA value 0.005 ppm ;

Advice on system design:
General mechanical ventilation should comply with OSHA 1910.94.

Personal protective equipment

Respiratory protection:
Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination.

Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:
Use appropriate chemically resistant gloves as determined by an evaluation of glove performance characteristics and the hazards and potential hazards identified, including but not limited to butyl, natural and synthetic rubber, nitrile, or neoprene.

Eye protection:
Wear face shield if splashing hazard exists. Tightly fitting safety goggles (chemical goggles).

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Work place should be equipped with a shower and an eye wash. Consider the type of application and environmental concentrations to maintain the actual exposures below the established exposure limits. Employee education and training in the safe use and handling of isocyanates is required under the OSHA Communication Standard. Remove contaminated clothing. Remove contaminated clothing immediately and clean before re-use or dispose it if necessary. Contact lenses should not be worn. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties

Form:	liquid	
Odour:	ester-like	
Odour threshold:	No applicable information available.	
Colour:	clear	
pH value:	No applicable information available.	
Melting point:	No applicable information available.	
Boiling range:	257.00 - 390.20 °F	
	125.00 - 199.00 °C	
Sublimation point:	No applicable information available.	
Flash point:	110.00 °F	(ASTM D3278)
	43.33 °C	(ASTM D3278)
Flammability:	No applicable information available.	
Lower explosion limit:	0.50 %(V)	
Upper explosion limit:	8.54 %(V)	
Autoignition:	No applicable information available.	
Vapour pressure:	No applicable information available.	
Density:	8.5455 lb/USg	(calculated)
	1.0240 g/cm3	(calculated)
	(20 °C)	
Relative density:	1.0240	
	(20 °C)	
Vapour density:	No applicable information available.	
Partitioning coefficient n-octanol/water (log Pow):	No applicable information available.	
Thermal decomposition:	Risk of polymerization above the indicated temperature in the presence of moisture and isocyanate reactive substances. No applicable information available.	
Viscosity, dynamic:	No applicable information available.	
Viscosity, kinematic:	> 20.600 mm2/s	
Solubility in water:	No applicable information available.	
Solubility (quantitative):	No applicable information available.	
Solubility (qualitative):	No applicable information available.	
Evaporation rate:	No applicable information available.	

10. Stability and Reactivity

Reactivity
No applicable information available.

Chemical stability
The product is chemically stable.

Possibility of hazardous reactions
On contact with water, gaseous decomposition products are formed, which cause build-up of pressure in tightly closed containers. Reacts with water.

Conditions to avoid
Avoid all sources of ignition: heat, sparks, open flame. Avoid direct contact with water. Avoid electrostatic discharge.

Incompatible materials
strong oxidizing agents, strong bases, strong acids, thiols, transition metal salts, water, amines, alcohols

Hazardous decomposition products

Decomposition products:
nitrogen oxides, carbon dioxide, carbon monoxide, hydrogen cyanide

Thermal decomposition:
Risk of polymerization above the indicated temperature in the presence of moisture and isocyanate reactive substances. No applicable information available.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Primary routes of entry
Solvents are absorbed through the skin.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 2-butoxyethyl acetate
Assessment of acute toxicity:Of moderate toxicity after single ingestion. Of moderate toxicity after short-term skin contact. The inhalation of a highly enriched/saturated vapor-air-mixture represents an unlikely acute hazard. The European Union (EU) has classified this substance as 'harmful' after inhalation.

Information on: 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
Assessment of acute toxicity:Of very high toxicity after short-term inhalation. The substance was tested in form of respirable aerosols. Of low toxicity after single ingestion. Virtually nontoxic after a single skin contact.

Assessment other acute effects
No applicable information available.

Irritation / corrosion
Assessment of irritating effects: Skin contact causes irritation.

Information on: 2-ethylhexyl acetate
Assessment of irritating effects: Skin contact causes irritation. Not irritating to the eyes.

Information on: 2-butoxyethyl acetate
Assessment of irritating effects: Not irritating to the skin. Not irritating to the eyes.

Skin
Result: Irritant.
The product has not been tested. The statement has been derived from the properties of the individual components.

Eye
Result: Irritant.
The product has not been tested. The statement has been derived from the properties of the individual components.

Sensitization
Assessment of sensitization: The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible.

Information on: Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-, homopolymer

Information on: 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
Assessment of sensitization:
The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible.

Aspiration Hazard
No applicable information available.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 2-butoxyethyl acetate
Assessment of repeated dose toxicity: Damages blood cells. Due to the species specific mode of action, the effects are not expected to occur in humans.

Genetic toxicity
Assessment of mutagenicity: No applicable information available.

Carcinogenicity
Assessment of carcinogenicity: No applicable information available.

Reproductive toxicity
Assessment of reproduction toxicity: No applicable information available.

Teratogenicity
Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: 2-butoxyethyl acetate
Assessment of teratogenicity: In animal studies the substance did not cause malformations. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Medical conditions aggravated by overexposure
Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended. The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing.

12. Ecological Information

No applicable information available.

13. Disposal considerations

Waste disposal of substance:
Do not incinerate closed containers. The use and processing of this product, or addition of other constituents, may cause it to be considered a hazardous waste. Do not discharge into drains/surface waters/groundwater.
Incinerate or dispose of in a RCRA-licensed facility. Dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

Container disposal:
WARNING: Empty containers may still contain hazardous residue.
Dispose of in accordance with national, state and local regulations.

14. Transport Information

Land transport
USDOT

Hazard class:	3
Packing group:	III
ID number:	UN 1866
Hazard label:	3
Proper shipping name:	RESIN SOLUTION

Sea transport
IMDG

Hazard class:	3
Packing group:	III
ID number:	UN 1866
Hazard label:	3
Marine pollutant:	NO
Proper shipping name:	RESIN SOLUTION

Air transport
IATA/ICAO

Hazard class:	3
Packing group:	III
ID number:	UN 1866
Hazard label:	3
Proper shipping name:	RESIN SOLUTION

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

EPCRA 313:

CAS Number	Chemical name
112-07-2	2-butoxyethyl acetate

State regulations

State RTK	CAS Number	Chemical name
NJ	112-07-2	2-butoxyethyl acetate
	123-86-4	n-Butyl acetate
PA	103-09-3	2-ethylhexyl acetate
	112-07-2	2-butoxyethyl acetate
	123-86-4	n-Butyl acetate

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including BENZENE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:
Health: 2 Fire: 2 Reactivity: 0 Special:

HMIS III rating
Health: 2¤ Flammability: 2 Physical hazard: 0

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2018/10/08

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