

Safety Data Sheet

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

Issue date: 06/15/2020 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : SURFACE BONDER ULTRA

Product code : Durhan

1.2. Recommended use and restrictions on use

Recommended use : Adhesives, sealants

Restrictions on use : No additional information available

1.3. Supplier

Integra Adhesives 600 Ellis Road Durham, NC 27703 - USA

T 1-919-598-2400

www.integra-adhesives.com

1.4. Emergency telephone number

Emergency number : Transportation and Medical: CHEMTEL Tel. 800-255-3924; +1 813-248-0585 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Acute toxicity (inhalation:dust,mist) Category 4

Respiratory sensitisation, Category 1

Skin sensitisation, Category 1

Specific target organ toxicity — Single exposure, Category 3, Respiratory

tract irritation

Full text of H statements : see section 16

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties

if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard pictograms (GHS)





Signal word (GHS) : Danger

Hazard statements (GHS) : H317 - May cause an allergic skin reaction.

H332 - Harmful if inhaled.

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

H335 - May cause respiratory irritation.

Precautionary statements (GHS) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

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.

P312 - Call a poison center/doctor if you feel unwell

P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor.

P363 - Wash contaminated clothing before reuse.

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

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accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS_US)

- 0.14% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
- 0.14% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
- 0.14% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS classification
Aliphatic polyisocyanate	(CAS-No.) 28182-81-2	60 - 70	Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317 STOT SE 3, H335
tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate	(CAS-No.) 136210-30-5	10 - 20	Skin Sens. 1, H317 Aquatic Chronic 3, H412
Diethyl fumarate	(CAS-No.) 623-91-6	0.5 - <1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT RE 2, H373
Aspartic Ester	(CAS-No.) 152637-10-0	0.5 - 1	Skin Sens. 1B, H317 Aquatic Chronic 3, H412
Hexamethylene diisocyanate	(CAS-No.) 822-06-0	0.1 - 0.2	Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335

^{*}Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

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 : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical

advice (show the label where possible).

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position

comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Call

a POISON CENTER/doctor if you feel unwell.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Wash skin thoroughly with mild soap and water.

Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical

advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness

persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON

CENTER/doctor if you feel unwell.

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

Symptoms/effects after inhalation : May cause respiratory irritation. Cough. Harmful if inhaled. May cause allergy or asthma

symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : May cause an allergic skin reaction. Redness. May cause irritation to skin.

Symptoms/effects after eye contact : May cause slight irritation.

Symptoms/effects after ingestion : May cause a light irritation of the linings of the mouth, throat, and gastrointestinal tract.

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 : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

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5.2. Specific hazards arising from the chemical

Fire hazard : Burning produces irritating, toxic and noxious fumes.

Explosion hazard : Product is not explosive.

Reactivity : No dangerous reactions known.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not breathe aerosol. Do not breathe vapour. Do not get in eyes, on skin, or on clothing. Use

personal protective equipment as required. Use only non-sparking tools.

6.1.1. For non-emergency personnel

Protective equipment : Refer to section 8.2.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Refer to section 8.2. Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or

streams.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect

spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Do not breathe aerosol. Use only outdoors or in a well-ventilated area. Do not breathe vapours. Do not get in eyes, on skin, or on clothing. Wear

personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Contaminated work clothing should not be

allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container. Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong acids. Strong oxidizers.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

Storage area : Store in dry, cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Aliphatic polyisocyanate (28182-81-2)		
Not applicable		
Hexamethylene diisocyanate (822-06-0)		
ACGIH	Local name	Hexamethylene diisocyanate
ACGIH	ACGIH TWA (mg/m³)	0.034 mg/m³
ACGIH	ACGIH TWA (ppm)	0.005 ppm (IFV - Inhalable fraction and vapor)

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Remark (ACGIH)	TLV® Basis: URT irr; resp sens. Notations: BEI
Regulatory reference	ACGIH 2020
NIOSH REL (TWA) (mg/m³)	0.035 mg/m³
NIOSH REL (TWA) (ppm)	0.005 ppm
NIOSH REL (ceiling) (mg/m³)	0.14 mg/m³
NIOSH REL (ceiling) (ppm)	0.02 ppm
	Regulatory reference NIOSH REL (TWA) (mg/m³) NIOSH REL (TWA) (ppm) NIOSH REL (ceiling) (mg/m³)

tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate (136210-30-5)

Not applicable

Diethyl fumarate (623-91-6)

Not applicable

Aspartic Ester (152637-10-0)

Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid creating mist or spray. Emergency eye wash fountains and safety showers should be

available in the immediate vicinity of any potential exposure. Avoid splashing. Ensure good

ventilation of the work station. Provide local exhaust or general room ventilation.

Environmental exposure controls : Prevent contaminated water run-off. Prevent leakage or spillage.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear suitable gloves resistant to chemical penetration. nitrile rubber gloves. natural rubber gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Wear a self contained breathing apparatus

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Viscous liquid.
Colour : Off-white

Odour : No data available
Odour threshold : No data available
pH : No data available
Melting point : No data available
Freezing point : No data available

Boiling point : No data available
Flash point : No data available
Relative evaporation rate (butylacetate=1) : No data available
Flammability (solid, gas) : No data available

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Vapour pressure : No data available Relative vapour density at 20 °C : No data available Relative density : No data available Solubility : No data available Log Pow : No data available : No data available Auto-ignition temperature Decomposition temperature : No data available Viscosity, kinematic : No data available Viscosity, dynamic : No data available Explosive limits : No data available Explosive properties : No data available Oxidising properties : No data available

9.2. Other information No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization may occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong oxidizers.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Harmful if inhaled.

ATE (dust,mist)	2.249 mg/l/4h
Unknown acute toxicity (GHS_US)	0.14% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 0.14% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 0.14% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Aliphatic polyisocyanate (28182-81-2)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
ATE (gases)	4500 ppmv/4h
ATE (vapours)	11 mg/l/4h
ATE (dust,mist)	1.5 mg/l/4h

Hexamethylene diisocyanate (822-06-0)	
ATE (gases)	700 ppmv/4h
ATE (vapours)	3 mg/l/4h
ATE (dust,mist)	0.5 mg/l/4h

tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate (136210-30-5)		
LD50 oral rat	> 2000 mg/kg Results obtained on a similar product	
LD50 dermal rabbit	> 2000 mg/kg Results obtained on a similar product	

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tetraethyl N, N'-(methylenedicyclohexane-4,1 LC50 inhalation rat (mg/l)	> 4.224 mg/l/4h Results obtained on a similar product
(0)	> 4.224 mg//4th Results obtained on a similar product
Diethyl fumarate (623-91-6)	1007
LD50 oral rat	1367 mg/kg
ATE (oral)	1367 mg/kg bodyweight
Aspartic Ester (152637-10-0)	T
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg Results obtained on a similar product
LC50 inhalation rat (mg/l)	> 4.224 mg/l/4h Results obtained on a similar product
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	 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
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
Aliphatic polyisocyanate (28182-81-2)	
STOT-single exposure	May cause respiratory irritation.
Hexamethylene diisocyanate (822-06-0)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure Aliphatic polyisocyanate (28182-81-2)	: Not classified
NOAEC (inhalation, rat, dust/mist/fume, 90	3.3 – 3.4 mg/l
days)	3.3 – 3.4 mg/i
Diethyl fumarate (623-91-6)	
NOAEL (oral, rat, 90 days)	< 11 mg/kg bodyweight/day 42 d
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
i i i i i i i i i i i i i i i i i i i	.,
Aspartic Ester (152637-10-0)	
	1000 mg/kg bodyweight Results obtained on a similar product
Aspartic Ester (152637-10-0)	
Aspartic Ester (152637-10-0) NOAEL (subacute, oral, animal/male, 28 days) NOAEL (subacute, oral, animal/female, 28 days)	1000 mg/kg bodyweight Results obtained on a similar product
Aspartic Ester (152637-10-0) NOAEL (subacute, oral, animal/male, 28 days) NOAEL (subacute, oral, animal/female, 28 days) days) spiration hazard	1000 mg/kg bodyweight Results obtained on a similar product 1000 mg/kg bodyweight Results obtained on a similar product
Aspartic Ester (152637-10-0) NOAEL (subacute, oral, animal/male, 28 days) NOAEL (subacute, oral, animal/female, 28 days) Aspiration hazard //iscosity, kinematic	1000 mg/kg bodyweight Results obtained on a similar product 1000 mg/kg bodyweight Results obtained on a similar product : Not classified
Aspartic Ester (152637-10-0) NOAEL (subacute, oral, animal/male, 28 days) NOAEL (subacute, oral, animal/female, 28 days) Aspiration hazard //iscosity, kinematic .ikely routes of exposure	1000 mg/kg bodyweight Results obtained on a similar product 1000 mg/kg bodyweight Results obtained on a similar product : Not classified : No data available
Aspartic Ester (152637-10-0) NOAEL (subacute, oral, animal/male, 28 days) NOAEL (subacute, oral, animal/female, 28 days) Noaet (subacute, oral, animal/female, 28 days) Aspiration hazard //iscosity, kinematic .ikely routes of exposure Symptoms/effects after inhalation	1000 mg/kg bodyweight Results obtained on a similar product 1000 mg/kg bodyweight Results obtained on a similar product Not classified No data available Inhalation. Skin and eye contact. May cause respiratory irritation. Cough. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Aspartic Ester (152637-10-0) NOAEL (subacute, oral, animal/male, 28 days) NOAEL (subacute, oral, animal/female, 28	1000 mg/kg bodyweight Results obtained on a similar product 1000 mg/kg bodyweight Results obtained on a similar product : Not classified : No data available : Inhalation. Skin and eye contact. : May cause respiratory irritation. Cough. Harmful if inhaled. May cause allergy or asthma

SECTION 12: Ecological information

12.1. Toxicity

,		
Aliphatic polyisocyanate (28182-81-2)		
LC50 fish 1	> 100 mg/l 96 h Danio rerio	
EC50 crustacea	> 100 mg/l 48 h	
tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate (136210-30-5)		
LC50 fish 1	66 mg/l 96 h Danio rerio (Results obtained on a similar product)	
EC50 crustacea	88.6 mg/l (Results obtained on a similar product)	

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Diethyl fumarate (623-91-6)		
LC50 fish 1	38 mg/l 96 h Pimephales promelas	
Aspartic Ester (152637-10-0)		
LC50 fish 1	66 mg/l 96 h Danio rerio (Results obtained on a similar product)	
EC50 crustacea	> 100 mg/l 48 h	
ErC50 (algae)	> 100 mg/l 72 h	

12.2. Persistence and degradability

SURFACE BONDER ULTRA		
Persistence and degradability	May cause long-term adverse effects in the environment.	
Aliphatic polyisocyanate (28182-81-2)		
Persistence and degradability	Not readily biodegradable.	
Biodegradation	0 % 28 d	
tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate (136210-30-5)		

tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate (136210-30-5)	
Biodegradation	13 % 28 d (Results obtained on a similar product)
Diethyl fumarate (623-91-6)	
Persistence and degradability	Readily biodegradable.
Biodegradation	92 – 95 %
Aspartic Ester (152637-10-0)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	23 % 28 d

12.3. Bioaccumulative potential

SURFACE BONDER ULTRA	
Bioaccumulative potential	Not established.

Aspartic Ester (152637-10-0)	
Bioconcentration factor (BCF REACH)	1872

12.4. Mobility in soil

SURFACE BONDER ULTRA	
Ecology - soil	Not established.

Aspartic Ester (152637-10-0)	
Partition coefficient n-octanol/water (Log Koc)	4.2 – 5.1

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated.

Transport by sea

Not regulated.

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Air transport

Not regulated.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Aliphatic polyisocyanate (28182-81-2	2)
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
Hexamethylene diisocyanate (822-0	6-0)
Subject to reporting requirements of Ur Listed on EPA Hazardous Air Pollutant	
Listed on EPA Hazardous Air Pollutant	(HAPS)
CERCLA RQ 100 lb	
tetraethyl N, N'-(methylenedicyclohe	xane-4,1-diyl)bis-DL-aspartate (136210-30-5)
PA TSCA Regulatory Flag PMN - PMN - indicates a commenced PMN substance.	

15.2. International regulations

CANADA

Aliphatic	polvisod	vanate	(28182-81-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Hexamethylene diisocyanate (822-06-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate (136210-30-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Diethyl fumarate (623-91-6)

Listed on the Canadian NDSL (Non-Domestic Substances List)

Aspartic Ester (152637-10-0)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Aliphatic polyisocyanate (28182-81-2)

Listed on IARC (International Agency for Research on Cancer)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on Taiwan National Chemical Inventory

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Hexamethylene diisocyanate (822-06-0)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Chinese Catalog of Hazardous Chemicals.

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on Taiwan National Chemical Inventory

Listed on the Korea Designated Existing Substances List (First Batch).

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

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tetraethyl N, N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate (136210-30-5)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on Taiwan National Chemical Inventory

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Not listed on Phillipines Inventory of Chemicals and Chemical Substances (PICCS)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Diethyl fumarate (623-91-6)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on Taiwan National Chemical Inventory

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Aspartic Ester (152637-10-0)

Listed on Taiwan National Chemical Inventory

Not listed on New Zealand - Inventory of Chemicals (NZIoC).

Not listed on Phillipines Inventory of Chemicals and Chemical Substances (PICCS)

Not listed on the AICS (Australian Inventory of Chemical Substances)

Not listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Not listed on the Inventory of Existing Chemical Substances of China (IECSC).

Not listed on the KECI (Chemical Inventory of Korea).

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
Hexamethylene diisocyanate (822-06-0)	U.S Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

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Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE

COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. Manufacturer Information. United Nations Economic Commission for

Europe: About the GHS. Accessed at

http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html.

Other information : None.

Full text of H-statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

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H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms:

	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	European List of Waste (LoW) code
	LD50: Lethal Dose for 50% of the test population
	TWA: Time Weighted Average
	STEL: Short Term Exposure Limits
	PBT: Persistent, Bioaccumulative, Toxic
	WEL: Workplace Exposure Limit
vPvB	Very Persistent and Very Bioaccumulative

NFPA health hazard

: 2 - Materials that, under emergency conditions, can cause

temporary incapacitation or residual injury.

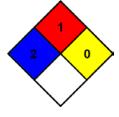
NFPA fire hazard

: 1 - Materials that must be preheated before ignition can

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions,

and not reactive with water.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

* - Chronic (long-term) health effects may result from repeated overexposure

: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, Flammability

solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT

react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection

B - Safety glasses, Gloves

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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.

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