

Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • UltraFlash™ One-Part Liquid Flashing

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Construction

1.3 Details of the supplier of the safety data sheet

Manufacturer

- Amrize Building Envelope LLC
- 26 Century Boulevard, Suite 205, Nashville, Tennessee 37214
- GenFlex™ is part of the Amrize family of brands
- GenFlex.com

Telephone (General) • 800-443-4272

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • (703) 527-3887 - CHEMTREC - International

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP

- Flammable Liquids 2 - H225
- Skin Irritation 2 - H315
- Skin Sensitization 1 - H317
- Eye Irritation 2 - H319
- Respiratory Sensitization 1 - H334
- Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336
- Carcinogenicity 2 - H351
- Reproductive Toxicity 2 - H361d
- Specific Target Organ Toxicity Repeated Exposure 2 - H373

DSD/DPD

- Highly Flammable (F)
- Irritant (Xi)
- Harmful (Xn)
- Carcinogenic Substances - Category 3
- Substances Toxic To Reproduction - Category 3
- R11, R38, R40, R42/43, R48/20, R63, R65, R66, R67

2.2 Label Elements

CLP

DANGER



- Hazard statements**
- H225 - Highly flammable liquid and vapour
 - H315 - Causes skin irritation
 - H317 - May cause an allergic skin reaction
 - H319 - Causes serious eye irritation
 - H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 - H336 - May cause drowsiness or dizziness
 - H351 - Suspected of causing cancer.
 - H361d - Suspected of damaging the unborn child.
 - H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention**
- P201 - Obtain special instructions before use.
 - P202 - Do not handle until all safety precautions have been read and understood.
 - P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
 - P233 - Keep container tightly closed.
 - P240 - Ground and/or bond container and receiving equipment.
 - P241 - Use explosion-proof electrical/ventilating/lighting/equipment.
 - P242 - Use only non-sparking tools.
 - P243 - Take precautionary measures against static discharge.
 - P260 - Do not breathe mists, vapours, and/or spray.
 - P264 - Wash thoroughly after handling.
 - P271 - Use only outdoors or in a well-ventilated area.
 - P272 - Contaminated work clothing should not be allowed out of the workplace.
 - P281 - Use personal protective equipment as required.
 - P285 - In case of inadequate ventilation wear respiratory protection.
- Response**
- P370+P378 - In case of fire: Use appropriate media for extinction.
 - P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 - P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P363 - Wash contaminated clothing before reuse.
 - P321 - Specific treatment, see supplemental first aid information.
 - P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P337+P313 - If eye irritation persists: Get medical advice/attention.
 - P308+P313 - IF exposed or concerned: Get medical advice/attention.
- Storage/Disposal**
- P403+P235 - Store in a well-ventilated place. Keep cool.
 - P233 - Keep container tightly closed.
 - P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards

- CLP** ● According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.
- DSD/DPD** ● According to European Directive 1999/45/EC this material is considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012**
- Flammable Liquids 2
 - Skin Irritation 2
 - Skin Sensitization 1A
 - Eye Irritation 2
 - Respiratory Sensitization 1A
 - Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
 - Germ Cell Mutagenicity 1B
 - Reproductive Toxicity 2
 - Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- Highly flammable liquid and vapour
 - Causes skin irritation
 - May cause an allergic skin reaction
 - Causes serious eye irritation
 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 - May cause drowsiness or dizziness
 - May cause genetic defects.
 - Suspected of damaging fertility or the unborn child.
 - Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention**
- Obtain special instructions before use.
 - Do not handle until all safety precautions have been read and understood.
 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
 - Keep container tightly closed.
 - Ground and/or bond container and receiving equipment.
 - Use explosion-proof electrical/ventilating/lighting/equipment.
 - Use only non-sparking tools.
 - Take precautionary measures against static discharge.
 - Do not breathe mists, vapours, and/or spray.
 - Wash thoroughly after handling.
 - Do not eat, drink or smoke when using this product.
 - Use only outdoors or in a well-ventilated area.
 - Contaminated work clothing should not be allowed out of the workplace.
 - Wear protective gloves, clothing, and eye/face protection, .
 - In case of inadequate ventilation wear respiratory protection.
- Response**
- In case of fire: Use appropriate media for extinction.
 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a

position comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

If on skin: Wash with plenty of water .

Wash contaminated clothing before reuse.

Take off contaminated clothing and wash before reuse.

Specific treatment, see supplemental first aid information.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES: 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.

IF exposed or concerned: Get medical advice/attention.

Storage/Disposal •

• Store in a well-ventilated place. Keep cool.

Keep container tightly closed.

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments

Asphalt	CAS: 8052-42-4 EINECS: 232-490-9	15% TO 40%	Ingestion/Oral-Rat LD50 • >5000 mg/kg Inhalation-Rat LC50 • >94.4 mg/m ³	EU DSD/DPD: Skin Irrit. 2, H315 EU CLP: Xi; R38 OSHA HCS 2012: Skin Irrit. 2	NDA
Toluene	CAS: 108-88-3 EC Number: 203-625-9 EU Index: 601-021-00-3	7% TO 13%	Ingestion/Oral-Rat LD50 • 636 mg/kg Inhalation-Rat LC50 • 49 g/m ³ 4 Hour(s) Skin-Rabbit LD50 • 14100 µL/kg	EU DSD/DPD: Annex VI, Table 3.2: F, R11; Xn, R48/20-65; Xi, R38; Repr. Cat. 3, R63; R67 EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Skin Irrit. 2, H315; Repr. 2, H361d; STOT SE 3: Narc., H336; STOT RE 2, H373; Asp. Tox. 1, H304 OSHA HCS 2012: Flam. Liq. 2; Acute Tox. 4 (orl); Skin Irrit. 2; Eye Irrit. 2; Muta. 1B; Repr. 2; STOT SE 3: Narc.; STOT RE 1 (CNS, Inhl); Asp. Tox. 1	NDA
2-Butanone	CAS: 78-93-3 EC Number: 201-159-0 EU Index: 606-002-00-3	5% TO 10%	Ingestion/Oral-Rat LD50 • 2737 mg/kg Inhalation-Rat LC50 • 23500 mg/m ³ 8 Hour(s) Skin-Rabbit LD50 • 6480 mg/kg	EU DSD/DPD: Annex VI, Table 3.2: R11; Xi; R36; R66; R67 EU CLP: Annex VI, Table 3.1: Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3: Narc., H336; EUH066 OSHA HCS 2012: Flam. Liq. 2; Repr. 2; STOT SE 3: Narc.; Skin Irrit. 2; Eye Irrit. 2	NDA
1-Methoxy-2-propanol acetate	CAS: 108-65-6 EC Number: 203-603-9 EU Index: 607-195-00-7	0.5% TO 1.5%	Ingestion/Oral-Rat LD50 • 8532 mg/kg Skin-Rabbit LD50 • >5 g/kg	EU DSD/DPD: Annex VI, Table 3.2: R10 EU CLP: Annex VI, Table 3.1: Flam. Liq. 3, H226 OSHA HCS 2012: Not Classified	NDA
Isocyanic acid, methylenedi-p-phenylene ester	CAS: 101-68-8 EC Number: 202-966-0 EU Index: 615-005-00-9	0.1% TO 1%	Ingestion/Oral-Rat LD50 • 9200 mg/kg Inhalation-Rat LC50 • 178 mg/m ³	EU DSD/DPD: Annex VI, Table 3.2: Carc. Cat. 3; R40; Xn R20-48/20; Xi R36/37/38 R42/43 EU CLP: Annex VI, Table 3.1: Carc. 2, H351; Acute Tox. 4, H332; STOT RE 2, H373; Eye Irrit. 2, H319; Skin Irrit. 2, H315; STOT SE 3: Resp. Irrit., H335; Resp. Sens. 1, H334; Skin Sens. 1, H317 OSHA HCS 2012: Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1A; STOT SE 3: Resp. Irrit; Resp. Sens. 1A; STOT RE 1 (Lungs)	NDA
Benzenesulfonyl isocyanate, 4-methyl-	CAS: 4083-64-1 EC Number: 223-810-8 EU Index: 615-012-00-7	0.1% TO 1%	NDA	EU DSD/DPD: Annex VI, Table 3.2: R14; Xi, R36/37/38; R42 EU CLP: Annex VI, Table 3.1: Eye Irrit. 2, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334 OSHA HCS 2012: Eye Irrit. 2	NDA

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention immediately if symptoms occur.

Skin

- Rinse skin with rubbing alcohol first, followed immediately by washing affected area with soap and water. Remove and isolate contaminated clothing and shoes. If skin irritation occurs: Get medical advice/attention.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

- Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media • Foam, carbon dioxide, dry chemical, and vaporizing liquid type extinguishing agents.

Unsuitable Extinguishing Media • Do not use a direct stream of water.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Runoff to sewer may create fire or explosion hazard.

Hazardous Combustion Products • Irritating and/or toxic fumes may be generated by thermal decomposition or combustion: carbon oxides, nitrogen oxides, sulfur oxides, trace of cyanhydric acid, acetic acid, hydrogen peroxide, aldehydes, alcohols, ketones, vinyl acetate, vinyl ether, methnnc, ethane and ethylene, may be formed depending on fire conditions.

5.3 Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Cool fire exposed containers with water. Move containers from fire area if you can do it without risk.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions • Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breath mist/vapours/spray. Avoid contact with skin and eyes.

Emergency Procedures • As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet) ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures • Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Use clean non-sparking tools to collect absorbed material.
 A vapor suppressing foam may be used to reduce vapors.
 All equipment used when handling the product must be grounded.
 LARGE SPILLS: Dike far ahead of liquid spill for later disposal.
 LARGE SPILLS: Water spray may reduce vapor; but may not prevent ignition in closed spaces.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use good safety and industrial hygiene practices. Keep away from heat and ignition sources. Use only with adequate ventilation. Handle and open container with care. Take precautionary measures against static charges. All equipment used when handling the product must be grounded. Bond and ground all transfer containers and equipment. Wear appropriate personal protective equipment, avoid direct contact. Do not breath mist/vapours/spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Keep container/package tightly closed in a cool, well-ventilated place.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Australia	Belgium	Canada Alberta	Canada British Columbia
Isocyanic acid, methylenedi-p-phenylene ester (101-68-8)	TWAs	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	Not established	0.005 ppm TWA; 0.052 mg/m ³ TWA	0.005 ppm TWA; 0.05 mg/m ³ TWA	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))
	Ceilings	Not established	Not established	Not established	Not established	0.01 ppm Ceiling (listed under Methylene bisphenyl isocyanate (MDI))
1-Methoxy-2-propanol acetate (108-65-6)	STELs	Not established	100 ppm STEL; 548 mg/m ³ STEL	100 ppm STEL; 550 mg/m ³ STEL	Not established	75 ppm STEL
	TWAs	Not established	50 ppm TWA; 274 mg/m ³ TWA	50 ppm TWA; 275 mg/m ³ TWA	Not established	50 ppm TWA
2-Butanone (78-93-3)	STELs	300 ppm STEL	300 ppm STEL; 890 mg/m ³ STEL	300 ppm STEL; 900 mg/m ³ STEL	300 ppm STEL; 885 mg/m ³ STEL	100 ppm STEL
	TWAs	200 ppm TWA	150 ppm TWA; 445 mg/m ³ TWA	200 ppm TWA; 600 mg/m ³ TWA	200 ppm TWA; 590 mg/m ³ TWA	50 ppm TWA
Toluene (108-88-3)	STELs	Not established	150 ppm STEL; 574 mg/m ³ STEL	100 ppm STEL; 384 mg/m ³ STEL	Not established	Not established
	TWAs	20 ppm TWA	50 ppm TWA; 191 mg/m ³ TWA	22 ppm TWA; 77 mg/m ³ TWA	50 ppm TWA; 188 mg/m ³ TWA	20 ppm TWA

Asphalt (8052-42-4)	TWAs	0.5 mg/m3 TWA (fume, inhalable fraction, as benzene soluble aerosol)	5 mg/m3 TWA (fume)	5 mg/m3 TWA (fume)	5 mg/m3 TWA (Petroleum; Bitumen, fume)	0.5 mg/m3 TWA (inhalable fume, as Benzene-soluble aerosol)
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut
Isocyanic acid, methylenedi-p- phenylene ester (101-68-8)	TWAs	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate); 0.051 mg/m3 TWA (listed under Methylene bisphenyl isocyanate)	Not established	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	Not established
2-Butanone (78-93-3)	STELs	300 ppm STEL	300 ppm STEL; 885 mg/m3 STEL	300 ppm STEL; 885 mg/m3 STEL	300 ppm STEL	300 ppm STEL; 885 mg/m3 STEL
	TWAs	200 ppm TWA	200 ppm TWA; 590 mg/m3 TWA	200 ppm TWA; 590 mg/m3 TWA	200 ppm TWA	200 ppm TWA; 590 mg/m3 TWA
Toluene (108-88-3)	TWAs	20 ppm TWA	50 ppm TWA; 188 mg/m3 TWA	100 ppm TWA; 375 mg/m3 TWA	20 ppm TWA	100 ppm TWA; 375 mg/m3 TWA
	STELs	Not established	Not established	150 ppm STEL; 560 mg/m3 STEL	Not established	150 ppm STEL; 560 mg/m3 STEL
Asphalt (8052-42-4)	TWAs	0.5 mg/m3 TWA (fume, inhalable fraction, as Benzene soluble aerosol)	5 mg/m3 TWA (petroleum fumes)	5 mg/m3 TWA (Petroleum fumes)	0.5 mg/m3 TWA (fume, inhalable fraction, as Benzene soluble aerosol)	5 mg/m3 TWA (Petroleum fumes)
	STELs	Not established	Not established	10 mg/m3 STEL (Petroleum fumes)	Not established	10 mg/m3 STEL (Petroleum fumes)
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Ontario	Canada Quebec	Canada Saskatchewan	Canada Yukon	China
Isocyanic acid, methylenedi-p- phenylene ester (101-68-8)	STELs	Not established	Not established	Not established	Not established	0.1 mg/m3 STEL
	TWAs	0.005 ppm TWA (designated substances regulation, listed under Isocyanates, organic compounds (Methylene bisphenyl isocyanate (MDI))); 0.005 ppm TWA (applies to workplaces to which the designated substances regulation does not apply, listed under Methylene bisphenyl isocyanate (MDI))	0.005 ppm TWAEV; 0.051 mg/m3 TWAEV	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate (MDI))	Not established	0.05 mg/m3 TWA
	Ceilings	0.02 ppm Ceiling (designated substances regulation, listed under Isocyanates,	Not established	Not established	0.02 ppm Ceiling (Methylene bisphenyl isocyanate (MDI)); 0.2 mg/m3 Ceiling	Not established

		organic compounds (Methylene bisphenyl isocyanate (MDI))			(Methylene bisphenyl isocyanate (MDI))	
1-Methoxy-2-propanol acetate (108-65-6)	TWAs	50 ppm TWA; 270 mg/m3 TWA	Not established	Not established	Not established	Not established
2-Butanone (78-93-3)	STELs	300 ppm STEL	100 ppm STEV; 300 mg/m3 STEV	Not established	250 ppm STEL; 740 mg/m3 STEL	600 mg/m3 STEL
	TWAs	200 ppm TWA	50 ppm TWAEV; 150 mg/m3 TWAEV	200 ppm TWA	200 ppm TWA; 590 mg/m3 TWA	300 mg/m3 TWA
Toluene (108-88-3)	STELs	Not established	Not established	Not established	150 ppm STEL; 560 mg/m3 STEL	100 mg/m3 STEL
	TWAs	20 ppm TWA	50 ppm TWAEV; 188 mg/m3 TWAEV	50 ppm TWA	100 ppm TWA; 375 mg/m3 TWA	50 mg/m3 TWA
Asphalt (8052-42-4)	STELs	Not established	Not established	Not established	10 mg/m3 STEL (fume)	12.5 mg/m3 STEL (fume, as Benzene soluble matter)
	TWAs	0.5 mg/m3 TWA (fume, inhalable, as Benzene-soluble aerosol)	5 mg/m3 TWAEV (fume)	0.5 mg/m3 TWA (fume and inhalable fraction, as Benzene soluble aerosol)	5 mg/m3 TWA (fume)	5 mg/m3 TWA (fume, as Benzene soluble matter)

Exposure Limits/Guidelines (Con't.)

	Result	Cyprus	Denmark	Europe	Germany DFG	Germany TRGS
Isocyanic acid, methylenedi-p-phenylene ester (101-68-8)	TWAs	Not established	0.005 ppm TWA; 0.05 mg/m3 TWA	Not established	Not established	0.05 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, ceiling factor 2, exposure factor 1)
	Ceilings	Not established	Not established	Not established	0.05 mg/m3 Peak (inhalable fraction)	Not established
	MAKs	Not established	Not established	Not established	0.05 mg/m3 TWA MAK (see also polymeric MDI, inhalable fraction)	Not established
1-Methoxy-2-propanol acetate (108-65-6)	TWAs	50 ppm TWA; 275 mg/m3 TWA	50 ppm TWA; 275 mg/m3 TWA	Not established	Not established	50 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1); 270 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1)
	STELs	100 ppm STEL; 550 mg/m3 STEL	Not established	Not established	Not established	Not established

	Ceilings	Not established	Not established	Not established	50 ppm Peak; 270 mg/m ³ Peak	Not established
	MAKs	Not established	Not established	Not established	50 ppm TWA MAK; 270 mg/m ³ TWA MAK	Not established
2-Butanone (78-93-3)	TWAs	200 ppm TWA; 600 mg/m ³ TWA	50 ppm TWA; 145 mg/m ³ TWA	Not established	Not established	200 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1); 600 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1)
	STELs	300 ppm STEL; 900 mg/m ³ STEL	Not established	Not established	Not established	Not established
	Ceilings	Not established	Not established	Not established	200 ppm Peak; 600 mg/m ³ Peak	Not established
	MAKs	Not established	Not established	Not established	200 ppm TWA MAK; 600 mg/m ³ TWA MAK	Not established
Toluene (108-88-3)	STELs	100 ppm STEL; 384 mg/m ³ STEL	Not established	100 ppm STEL; 384 mg/m ³ STEL	Not established	Not established
	TWAs	50 ppm TWA; 192 mg/m ³ TWA	25 ppm TWA; 94 mg/m ³ TWA	50 ppm TWA; 192 mg/m ³ TWA	Not established	50 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4); 190 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4)
	Ceilings	Not established	Not established	Not established	200 ppm Peak; 760 mg/m ³ Peak	Not established
	MAKs	Not established	Not established	Not established	50 ppm TWA MAK; 190 mg/m ³ TWA MAK	Not established
Asphalt (8052-42-4)	TWAs	Not established	1 mg/m ³ TWA (Cyclohexane fraction of total dust, fume)	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
		Result	NIOSH		OSHA	

Isocyanic acid, methylenedi-p-phenylene ester (101-68-8)	Ceilings	0.020 ppm Ceiling (10 min); 0.2 mg/m ³ Ceiling (10 min)	0.02 ppm Ceiling; 0.2 mg/m ³ Ceiling
	TWAs	0.005 ppm TWA (listed under Methylene bisphenyl isocyanate); 0.05 mg/m ³ TWA	Not established
2-Butanone (78-93-3)	TWAs	200 ppm TWA; 590 mg/m ³ TWA	200 ppm TWA; 590 mg/m ³ TWA
	STELs	300 ppm STEL; 885 mg/m ³ STEL	Not established
Toluene (108-88-3)	Ceilings	Not established	300 ppm Ceiling
	TWAs	100 ppm TWA; 375 mg/m ³ TWA	200 ppm TWA
	STELs	150 ppm STEL; 560 mg/m ³ STEL	Not established
Asphalt (8052-42-4)	Ceilings	5 mg/m ³ Ceiling (fume, 15 min)	Not established

Exposure Control Notations

China

- Toluene (108-88-3): **Skin:** (Skin notation)

Canada Ontario

- Isocyanic acid, methylenedi-p-phenylene ester (101-68-8): **Designated Substances:** (0.005 ppm TWA (listed under Isocyanates, organic compounds (Methylene bisphenyl isocyanate (MDI))); 0.02 ppm Ceiling (listed under Isocyanates, organic compounds (Methylene bisphenyl isocyanate (MDI))))

Canada Quebec

- Toluene (108-88-3): **Skin:** (Skin designation)

Cyprus

- Toluene (108-88-3): **Skin:** (Skin-potential for cutaneous absorption)
- 1-Methoxy-2-propanol acetate (108-65-6): **Skin:** (Skin-potential for cutaneous absorption)

ACGIH

- Asphalt (8052-42-4): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen (fume, coal tar-free))
- Toluene (108-88-3): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Germany TRGS

- Toluene (108-88-3): **Skin:** (skin notation)
- 2-Butanone (78-93-3): **Skin:** (skin notation)
- Isocyanic acid, methylenedi-p-phenylene ester (101-68-8): **Carcinogens:** (Category 3 (as inhalable aerosol, alveola fraction)) | **Developmental Toxins:** (Based on current data, this substance cannot be classified in categories 1-3 (as inhalable aerosol, alveoli fraction)) | **Reproductive Toxins:** (Based on current data, this substance cannot be classified in categories 1-3 (as inhalable aerosol, alveola fraction)) | **Germ Cell Mutagens:** (Based on current data, this substance cannot be classified in categories 1-3 (as inhalable aerosol, alveola fraction))

Germany DFG

- Asphalt (8052-42-4): **Carcinogens:** (Category 2 (considered to be carcinogenic for man, aerosol and vapour)) | **Skin:** (skin notation (aerosol and vapour))
- Toluene (108-88-3): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation)
- 2-Butanone (78-93-3): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation)
- 1-Methoxy-2-propanol acetate (108-65-6): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)
- Isocyanic acid, methylenedi-p-phenylene ester (101-68-8): **Carcinogens:** (Category 4 (no significant contribution to human cancer)) | **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to (inhalable fraction, see also polymeric MDI)) | **Sensitizers:** (respiratory and skin sensitizer (inhalable fraction)) | **Skin:** (skin notation)

Exposure Limits Supplemental

ACGIH

- Asphalt (8052-42-4): **BEIs:** (Medium: urine Time: end of shift at end of workweek Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative)) | **TLV Basis - Critical Effects:** (eye and upper respiratory tract irritation (fume))

- Toluene (108-88-3): **BEIs:** (0.02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene; 0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene; 0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)) | **TLV Basis - Critical Effects:** (female reproductive; pregnancy loss; visual impairment)
- 2-Butanone (78-93-3): **BEIs:** (2 mg/L Medium: urine Time: end of shift Parameter: MEK (nonspecific)) | **TLV Basis - Critical Effects:** (CNS and PNS impairment; upper respiratory tract irritation)
- Isocyanic acid, methylenedi-p-phenylene ester (101-68-8): **TLV Basis - Critical Effects:** (respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI)))

8.2 Exposure controls

Engineering Measures/Controls

- This material is designed to be used outdoors, in roofing applications. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear appropriate eye and/or face protection.

Hands

- Wear appropriate chemical resistant gloves (neoprene, nitrile, polyvinyl alcohol (PVA)).

Skin/Body

- Wear appropriate chemical resistant clothing.

Environmental Exposure Controls

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

BEI = Biological Exposure Indices

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

STEL = Short Term Exposure Limits are based on 15-minute exposures

STEV = Short Term Exposure Value

TLV = Threshold Limit Value determined by the American Conference of Governmental Industrial Hygienists (ACGIH)

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

TWAEV = Time-Weighted Average Exposure Value

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Brown liquid with a solvent odor.
Color	Brown	Odor	Solvent
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Insoluble
Viscosity	30000 Centipoise (cPs, cP) or mPas	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	> 1 Air=1
Evaporation Rate	Data lacking		
Flammability			
Flash Point	10.5 C(50.9 F)	UEL	Data lacking

LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Avoid flames, sparks, and other sources of ignition. Avoid contact with combustible materials. Avoid contact with incompatible materials.

10.5 Incompatible materials

- Keep away from oxidizing and reducing agents and from highly acidic and basic materials to avoid exothermic reactions.

10.6 Hazardous decomposition products

- Exposed to high temperatures this product can emit dangerous decomposition products, such as fumes, carbon oxide, nitrogen oxide, trace of hydrocyanic acid, trace of formaldehyde, trace of hydrochloric acid. This product slowly reacts with water and causes an emanation of carbonic gas which would lead to pressure increasing in closed container.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Asphalt (15% TO 40%)	8052-42-4	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • >5000 mg/kg; <i>Gastrointestinal:Hypermotility, diarrhea</i>; Inhalation-Rat LC50 • >94.4 mg/m³;</p> <p>Mutagen: Micronucleus test • Unreported Route-Rat • Other Cell Type • 57.8 µg/L;</p> <p>Tumorigen / Carcinogen: Skin-Mouse TDLo • 905 g/kg 2 Year(s)-Intermittent; <i>Tumorigenic:Neoplastic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors; Skin and Appendages:Other:Tumors</i></p>
Toluene (7% TO 13%)	108-88-3	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 636 mg/kg; Inhalation-Rat LC50 • 49 g/m³ 4 Hour(s); Inhalation-Human TCLo • 1500 mg/m³ 8 Hour(s); <i>Sense Organs and Special Senses:Eye:Lacrimation; Sense Organs and Special Senses:Eye:Conjunctive irritation; Behavioral:Ataxia</i>; Inhalation-Human TCLo • 200 ppm; <i>Brain and Coverings:Recordings from specific areas of CNS; Behavioral:Antipsychotic; Blood:Changes in bone marrow not included above</i>; Inhalation-Man TCLo • 50 ppm; <i>Kidney, Ureter, and Bladder:Other changes in urine composition</i>; Skin-Rabbit LD50 • 14100 µL/kg;</p> <p>Irritation: Eye-Rabbit • 2 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 20 mg 24 Hour(s) • Moderate irritation;</p> <p>Multi-dose Toxicity: Inhalation-Mouse TCLo • 250 ppm 4 Day(s)-Continuous; <i>Behavioral:Convulsions or effect on seizure threshold; Behavioral:Abuse</i>; Inhalation-Mouse TCLo • 50 ppm 12 Week(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes</i>; Inhalation-Rat TCLo • 10 ppm 6 Hour(s) 13 Week(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes; Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Multiple enzyme effects</i>;</p> <p>Mutagen: Micronucleus test • Ingestion/Oral-Mouse • 200 mg/kg; Sister chromatid exchange • Inhalation-Human •</p>

		252 µg/L 19 Year(s); Cytogenetic analysis • Inhalation-Rat • 5400 µg/m³ 16 Week(s)-Intermittent; Reproductive: Inhalation-Mouse TLo • 500 mg/m³ 24 Hour(s)(6-13D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i> ; Inhalation-Mouse TLo • 200 ppm 7 Hour (s)(7-16D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Urogenital system</i>
2-Butanone (5% TO 10%)	78-93-3	Acute Toxicity: Ingestion/Oral-Rat LD50 • 2737 mg/kg; Inhalation-Rat LC50 • 23500 mg/m³ 8 Hour(s); Inhalation-Human TLo • 100 ppm 5 Minute(s); <i>Sense Organs and Special Senses:Olfaction:Other changes; Sense Organs and Special Senses:Eye:Conjunctive irritation; Lungs, Thorax, or Respiration:Other changes</i> ; Inhalation-Mouse TLo • 25000 mg/m³ 2 Hour(s); <i>Behavioral:General anesthetic; Lungs, Thorax, or Respiration:Emphysema; Liver:Other changes</i> ; Skin-Rabbit LD50 • 6480 mg/kg; Irritation: Eye-Rabbit • 80 mg; Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation; Mutagen: Sex chromosome loss & nondisjunction • Unreported Route-Saccharomyces cerevisiae • 33800 ppm; Reproductive: Inhalation-Rat TLo • 1000 ppm 7 Hour(s)(6-15D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i> ; <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i>
1-Methoxy-2-propanol acetate (0.5% TO 1.5%)	108-65-6	Acute Toxicity: Ingestion/Oral-Rat LD50 • 8532 mg/kg; Skin-Rabbit LD50 • >5 g/kg
Isocyanic acid, methylenedi-p-phenylene ester (0.1% TO 1%)	101-68-8	Acute Toxicity: Ingestion/Oral-Rat LD50 • 9200 mg/kg; <i>Behavioral:Somnolence (general depressed activity); Behavioral:Ataxia; Nutritional and Gross Metabolic:Changes in Chemistry or Temperature:Body temperature decrease</i> ; Inhalation-Rat TLo • 2.4 mg/m³ 6 Hour(s); <i>Lungs, Thorax, or Respiration:Structural or functional change in trachea or bronchi; Lungs, Thorax, or Respiration:Other changes; Biochemical:Metabolism (intermediary):Other proteins</i> ; Irritation: Eye-Rabbit • 100 mg • Moderate irritation; Skin-Rabbit • 500 mg 24 Hour(s)
Benzenesulfonyl isocyanate, 4-methyl- (0.1% TO 1%)	4083-64-1	Acute Toxicity: Ingestion/Oral-Rat LD50 • 2234 mg/kg; <i>Gastrointestinal:Other changes</i> ; Inhalation-Rat LC50 • >640 ppm 1 Hour(s); <i>Sense Organs and Special Senses:Eye:Other; Lungs, Thorax, or Respiration:Dyspnea</i> ; Irritation: Eye-Rabbit • 100 µL • Moderate irritation; Skin-Rabbit • 500 µL 24 Hour(s) • Mild irritation

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Carcinogenicity 2 OSHA HCS 2012 • Data lacking
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Germ Cell Mutagenicity 1B
Skin corrosion/Irritation	EU/CLP • Skin Irritation 2 OSHA HCS 2012 • Skin Irritation 2
Skin sensitization	EU/CLP • Skin Sensitizer 1 OSHA HCS 2012 • Skin Sensitizer 1A
STOT-RE	EU/CLP • Specific Target Organ Toxicity Repeated Exposure 2 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1
STOT-SE	EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
Toxicity for Reproduction	EU/CLP • Toxic to Reproduction 2 OSHA HCS 2012 • Toxic to Reproduction 2
Respiratory sensitization	EU/CLP • Respiratory Sensitizer 1 OSHA HCS 2012 • Respiratory Sensitizer 1A
Serious eye damage/Irritation	EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2

Potential Health Effects

Inhalation

- Acute (Immediate)**
 - May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.
- Chronic (Delayed)**
 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. CNS depression has been reported to occur in chronic abusers exposed to high levels of toluene. Symptoms include drowsiness, ataxia, tremors, cerebral atrophy, nystagmus (involuntary eye movements), and impaired speech, hearing, and vision. Neurobehavioral effects have been observed in occupationally exposed workers. Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.

Skin

- Acute (Immediate)**
 - Causes skin irritation. May cause skin sensitization. Symptoms include redness, and skin rash.
- Chronic (Delayed)**
 - No data available

Eye

- Acute (Immediate)**
 - Causes serious eye irritation.
- Chronic (Delayed)**
 - No data available.

Ingestion

- Acute (Immediate)**
 - No data available
- Chronic (Delayed)**
 - No data available.

Mutagenic Effects

- Animal tests for components show repeated and prolonged exposure may cause mutagenic effects.

Carcinogenic Effects

- Repeated and prolonged exposure may cause cancer. Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m³) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Reproductive Effects

- Multiple physical deformities, with signs similar to fetal alcohol syndrome, microencephaly, CNS dysfunction, and variable growth deficiencies, have occurred in infants born to mothers who abused toluene during pregnancy.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1263	Paint	3	III	NDA
TDG	UN1263	PAINT	3	III	NDA
IMO/IMDG	UN1263	PAINT	3	III	NDA
ADN	UN1263	PAINT	3	III	NDA
ADR/RID	UN1263	PAINT	3	III	NDA
IATA/ICAO	UN1263	Paint	3	III	NDA

14.6 Special precautions for user

- None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications

- Acute, Chronic, Fire

State Right To Know				
Component	CAS	MA	NJ	PA
1-Methoxy-2-propanol acetate	108-65-6	No	No	No
2-Butanone	78-93-3	Yes	Yes	Yes
Asphalt	8052-42-4	Yes	Yes	Yes
Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	No	No	No
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	No	No	Yes

Toluene	108-88-3	Yes	Yes	Yes
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Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
1-Methoxy-2-propanol acetate	108-65-6	Yes	No	Yes	Yes	No
2-Butanone	78-93-3	Yes	No	Yes	Yes	No
Asphalt	8052-42-4	Yes	No	Yes	Yes	No
Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Yes	No	Yes	Yes	No
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Yes	No	Yes	Yes	No
Toluene	108-88-3	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
1-Methoxy-2-propanol acetate	108-65-6	Yes	Yes	Yes
2-Butanone	78-93-3	Yes	Yes	Yes
Asphalt	8052-42-4	Yes	Yes	Yes
Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Yes	Yes	Yes
Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes

Australia

Labor

Australia - Work Health and Safety Regulations - Hazardous Substances Requiring Health Monitoring

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Australia - High Volume Industrial Chemicals List

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	
• Toluene	108-88-3	
• Asphalt	8052-42-4	
• 2-Butanone	78-93-3	
• 1-Methoxy-2-propanol acetate	108-65-6	

Australia - List of Designated Hazardous Substances - Classification

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Xi, Xn R14, R36/37/38, R42
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Xn, Xi Carc. Cat.3 R40, R20, R48/20, R36/37/38, R42/43

• Toluene	108-88-3	F, Xn, Xi Repr.Cat.3 R11, R63, R48/20, R65, R38, R67
• Asphalt	8052-42-4	Self classification required (petroleum fumes)
• 2-Butanone	78-93-3	F, Xi R11, R36, R66, R67
• 1-Methoxy-2-propanol acetate	108-65-6	R10

Environment

Australia - National Pollutant Inventory (NPI) Substance List

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	10 tonne/yr Threshold category 1
• Toluene	108-88-3	10 tonne/yr Threshold category 1
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	10 tonne/yr Threshold category 1
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Australia - Ozone Protection Act - Scheduled Substances

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Australia - Priority Existing Chemical Program

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Candidate chemical
• Toluene	108-88-3	Candidate chemical
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Candidate chemical
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Belgium

Labor

Belgium - Substances and Preparations - Carcinogens and Mutagens

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Bulgaria

Environment

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 24 Hour

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	0.25 mg/m3 MAHCL
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed

• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed
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Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 30 Minute

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - Annual

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Canada**Labor****Canada - WHMIS - Classifications of Substances**

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	D1A, D2A, D2B
• Toluene	108-88-3	B2, D2A, D2B
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	B2, D2B
• 1-Methoxy-2-propanol acetate	108-65-6	B3

Canada - WHMIS - Ingredient Disclosure List

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	0.1 %
• Toluene	108-88-3	1 %
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	1 %
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Environment**Canada - CEPA - Priority Substances List**

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Priority Substance List 1 (substance not considered toxic)
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

China**Other****China - Annex I & II - Controlled Chemicals Lists**

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed

• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Denmark

Environment

Denmark - List of Undesirable Substances - Product Groups/Function

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Binders; Curing agents; Glues; Paints; Coatings; Molding compounds
• Toluene	108-88-3	Solvents in a wide range of products including paints, coatings and cooling lubricants (listed under Organic solvents)
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	R14 Xi; R36/37/38 R42
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Xn; R20-48/20 Xi; R36/37/38 Carc.Cat.3; R40 R42/43
• Toluene	108-88-3	F; R11 Xi; R38 Xn; R48/20-65 Repr.Cat.3; R63 R67
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	F; R11 Xi; R36 R66 R67
• 1-Methoxy-2-propanol acetate	108-65-6	R10

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	5%≤C: Xi; R:36/37/38
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	5%≤C: Xi; R:36/37/38 0.1% ≤C: R:42
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Xn R:14-36/37/38-42 S:(2)-26-28-30
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Xn R:20-36/37/38-40-42/43-48/20 S:(1/2)-23-36/37-45
• Toluene	108-88-3	F Xn R:11-38-48/20-63-65-67 S:(2)-36/37-46-62
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	F Xi R:11-36-66-67 S:(2)-9-16
• 1-Methoxy-2-propanol acetate	108-65-6	R:10 S:(2)

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
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• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	C, 2
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	S:(2)-26-28-30
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	S:(1/2)-23-36/37-45
• Toluene	108-88-3	S:(2)-36/37-46-62
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	S:(2)-9-16
• 1-Methoxy-2-propanol acetate	108-65-6	S:(2)

Germany**Labor****Germany - Immission Control - Qualifying Quantities for Major Accident Prevention**

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Germany - Immission Control - Qualifying Quantities for Safety Reporting

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Germany - TRGS 505 - Specific Lead Regulations

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Germany - TRGS 511 - Specific Ammonium Nitrate Regulations

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Environment**Germany - TA Luft - Types and Classes**

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	organic Substance: 5.2.5, Class I
• Toluene	108-88-3	Not Listed

• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed
Germany - TA Luft - Emission Limits for Carcinogenic Substances		
• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed
Germany - TA Luft - Emission Limits for Fibers		
• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed
Germany - TA Luft - Emission Limits for Inorganic Dusts		
• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed
Germany - TA Luft - Emission Limits for Inorganic Gases		
• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed
Germany - TA Luft - Emission Limits for Organic Substances		
• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	0.10 kg/h Mass flow (Class I); 20 mg/m ³ Mass concentration (Class I)
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed
Germany - Water Classification (VwVwS) - Annex 1		
• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	ID Number 326, not considered hazardous to water
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	ID Number 635, hazard class 1 - low hazard to waters
• Toluene	108-88-3	ID Number 194, hazard class 2 - hazard to waters
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	ID Number 150, hazard class 1 - low hazard to waters
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Germany - Water Classification (VwVwS) - Annex 3

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	ID Number 6726, hazard class 1 - low hazard to waters
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	ID Number 5033, hazard class 1 - low hazard to waters

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	(listed under Methylene diphenyl diisocyanate)
• Toluene	108-88-3	
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	5000 lb final RQ; 2270 kg final RQ

• Toluene	108-88-3	1000 lb final RQ; 454 kg final RQ
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	5000 lb final RQ; 2270 kg final RQ
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	1.0 % de minimis concentration (listed under Chemical Category N120, Diisocyanates)
• Toluene	108-88-3	1.0 % de minimis concentration
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	developmental toxicity, initial date 1/1/91
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	7000 µg/day MADL (level represents absorbed dose)
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	female reproductive toxicity, initial date 8/7/09
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

United States - Pennsylvania**Labor****U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
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• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	
• Toluene	108-88-3	
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Benzenesulfonyl isocyanate, 4-methyl-	4083-64-1	Not Listed
• Isocyanic acid, methylenedi-p-phenylene ester	101-68-8	Not Listed
• Toluene	108-88-3	Not Listed
• Asphalt	8052-42-4	Not Listed
• 2-Butanone	78-93-3	Not Listed
• 1-Methoxy-2-propanol acetate	108-65-6	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

15.3 Other Information

- **WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Section 16 - Other Information**Last Revision Date**

- 29/April/2015

Preparation Date

- July 10, 2025

Disclaimer/Statement of Liability

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Key to abbreviations

NDA = No data available