

Safety Data Sheet

GenFlex Roofing Systems

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

1.1 Product identifier

Product Name • EZ TPO FB Bonding Adhesive (LVOC)

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 • Firestone Building Products Company
250 West 96th Street
Indianapolis, IN 46260
United States

genflexmsds@bfdp.com

Telephone (General) • 800-428-4442

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
 - Eye Irritation 2 - H319
 - Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336
 - EUH066
- DSD/DPD**
- Highly Flammable (F)
 - Irritant (Xi)
 - R11, R36, R66, R67

2.2 Label Elements

CLP

DANGER



Hazard statements • H225 - Highly flammable liquid and vapour
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
EUH066 - Repeated exposure may cause skin dryness or cracking.

Precautionary statements

- Prevention**
- 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.
 - P261 - Avoid breathing mist/vapours/spray.
 - P264 - Wash thoroughly after handling.
 - P271 - Use only outdoors or in a well-ventilated area.
 - P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- Response**
- P370+P378 - In case of fire: Use appropriate media for extinction.
 - P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
 - P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P321 - Specific treatment, see supplemental first aid information.
 - P362 - Take off contaminated clothing and wash before reuse.
 - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Storage/Disposal**
- P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 - P235 - Keep cool.
 - P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



- Risk phrases**
- R11 - Highly flammable.
 - R36 - Irritating to eyes.
 - R66 - Repeated exposure may cause skin dryness or cracking.
 - R67 - Vapours may cause drowsiness and dizziness.
- Safety phrases**
- S9 - Keep container in a well ventilated place
 - S16 - Keep away from sources of ignition - No Smoking.
 - S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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 - H225
 - Skin Irritation 2 - H315
 - Eye Irritation 2 - H319
 - Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335
 - Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects - H336

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- Highly flammable liquid and vapour - H225
 - Causes skin irritation - H315
 - Causes serious eye irritation - H319
 - May cause respiratory irritation - H335
 - May cause drowsiness or dizziness - H336

Precautionary statements

- Prevention**
- Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking. - P210
 - Keep container tightly closed. - P233
 - Ground and/or bond container and receiving equipment. - P240
 - Use explosion-proof electrical/ventilating/lighting/equipment. - P241
 - Use only non-sparking tools. - P242
 - Take precautionary measures against static discharge. - P243
 - Avoid breathing mist/vapours/spray. - P261
 - Wash thoroughly after handling. - P264
 - Use only outdoors or in a well-ventilated area. - P271
 - Wear protective gloves/protective clothing/eye protection/face protection. - P280
- Response**
- In case of fire: Use appropriate media for extinction. - P370+P378
 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340
 - Call a POISON CENTER or doctor/physician if you feel unwell. - P312
 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. - P303+P361+P353
 - Specific treatment, see supplemental first aid information. - P321
 - Take off contaminated clothing and wash before reuse. - P362
 - If skin irritation occurs: Get medical advice/attention. - P332+P313
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
 - If eye irritation persists: Get medical advice/attention. - P337+P313
- Storage/Disposal**
- Store in a well-ventilated place. Keep container tightly closed. - P403+P233
 - Keep cool. - P235
 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

OSHA HCS 2012

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

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS

- Flammable Liquids - B2
- Other Toxic Effects - D2A
- Other Toxic Effects - D2B

2.2 Label elements

WHMIS



- Flammable Liquids - B2
- Other Toxic Effects - D2A
- Other Toxic Effects - D2B

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Acetone	CAS:67-64-1 EINECS:200-662-2	50% TO 100%	Inhalation-Rat LC50 • 50100 mg/m ³ 8 Hour(s) Ingestion/Oral-Rat LD50 • 5800 mg/kg	EU DSD/DPD: Annex I: F; R11 Xi; R36 R66 R67 EU CLP: Annex VI: Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336 OSHA HCS 2012: Flam. Liq. 2; Eye Irrit 2A; STOT SE 3: Resp. Irrit. & Narc.	NDA
4-Heptanone, 2,6-dimethyl-	CAS:108-83-8 EINECS:203-620-1	2.5% TO 10%	Ingestion/Oral-Rat LD50 • 5750 mg/kg Skin-Rabbit LD50 • 16120 mg/kg	EU DSD/DPD: Annex I: R10 Xi; R37 EU CLP: Annex VI: Flam. Liq. 3, H226; STOT SE 3, H335 OSHA HCS 2012: Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2	NDA
Zinc oxide	CAS:1314-13-2 EINECS:215-222-5	<= 2.5%	NDA	EU DSD/DPD: Annex I: N; R50-53 EU CLP: Annex VI: Aquatic Acute 1, H400; Aquatic Chronic 1, H410 OSHA HCS 2012: Not Classified	NDA

See Section 16 for full text of H-statements and R-phrases.

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. If signs/symptoms continue, get medical attention.

Skin

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Wash skin with soap and water. 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

- Rinse mouth. Drink 1 - 2 glasses of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

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 • LARGE FIRES: Water spray, fog or alcohol-resistant foam.
SMALL FIRES: Dry chemical, CO₂, water spray or alcohol-resistant foam.

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. Containers may explode when heated. Vapor explosion hazard indoors, outdoors or in sewers. Many liquids are lighter than water. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Runoff to sewer may create fire or explosion hazard. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Dried solids can burn and release toxic fumes and vapors.

Hazardous Combustion Products • No data available

5.3 Advice for firefighters

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. 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. Wear appropriate protective clothing. Do not touch or walk through spilled material.

Emergency Procedures • ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). 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) Keep out of low areas. Stay upwind. Keep unauthorized personnel away. 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. A vapor suppressing foam may be used to reduce vapors. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use clean non-sparking tools to collect absorbed material. All equipment used when handling the product must be grounded.

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

- Keep away from fire. Keep away from heat and sparks. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist/vapours/spray. Avoid contact with skin, eyes, and clothing. Use only in well ventilated areas. All equipment used when handling the product must be grounded. Bond and ground all transfer containers and equipment. Take precautionary measures against static charges. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations near container. Do not eat, drink or smoke when using this product. After handling wash hands thoroughly.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Store in a cool/low-temperature, well-ventilated place away from heat and ignition sources. Keep container tightly closed. Keep away from incompatible materials.

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	Canada Alberta	Canada British Columbia	Canada Manitoba	Canada New Brunswick
Zinc oxide (1314-13-2)	STELs	10 mg/m ³ STEL (respirable fraction)	10 mg/m ³ STEL (respirable)	10 mg/m ³ STEL (respirable)	10 mg/m ³ STEL (respirable fraction)	10 mg/m ³ STEL (fume)
	TWAs	2 mg/m ³ TWA (respirable fraction)	2 mg/m ³ TWA (respirable)	2 mg/m ³ TWA (respirable)	2 mg/m ³ TWA (respirable fraction)	10 mg/m ³ TWA (particulate matter containing no Asbestos and <1% Crystalline silica, dust); 5 mg/m ³ TWA (fume)
4-Heptanone, 2,6-dimethyl- (108-83-8)	TWAs	25 ppm TWA	25 ppm TWA; 145 mg/m ³ TWA	25 ppm TWA	25 ppm TWA	25 ppm TWA; 145 mg/m ³ TWA
Acetone (67-64-1)	STELs	750 ppm STEL	750 ppm STEL; 1800 mg/m ³ STEL	500 ppm STEL	750 ppm STEL	750 ppm STEL; 1782 mg/m ³ STEL
	TWAs	500 ppm TWA	500 ppm TWA; 1200 mg/m ³ TWA	250 ppm TWA	500 ppm TWA	500 ppm TWA; 1188 mg/m ³ TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec
Zinc oxide (1314-13-2)	STELs	10 mg/m ³ STEL (fume)	10 mg/m ³ STEL (respirable fraction)	10 mg/m ³ STEL (fume)	10 mg/m ³ STEL (respirable)	10 mg/m ³ STEV (fume)
	TWAs	5 mg/m ³ TWA (fume); 5 mg/m ³ TWA (dust, respirable mass); 10 mg/m ³ TWA (total mass, dust)	2 mg/m ³ TWA (respirable fraction)	5 mg/m ³ TWA (fume); 5 mg/m ³ TWA (dust, respirable mass); 10 mg/m ³ TWA (total mass, dust)	2 mg/m ³ TWA (respirable)	10 mg/m ³ TWAEV (containing no Asbestos and <1% Crystalline silica, total dust); 5 mg/m ³ TWAEV (fume)
4-Heptanone, 2,6-dimethyl- (108-83-8)	STELs	38 ppm STEL; 220 mg/m ³ STEL	Not established	38 ppm STEL; 220 mg/m ³ STEL	Not established	Not established
	TWAs	25 ppm TWA; 145 mg/m ³ TWA	25 ppm TWA	25 ppm TWA; 145 mg/m ³ TWA	25 ppm TWA	25 ppm TWAEV; 145 mg/m ³ TWAEV

Acetone (67-64-1)	STELs	1250 ppm STEL; 2970 mg/m ³ STEL	750 ppm STEL	1250 ppm STEL; 2970 mg/m ³ STEL	750 ppm STEL	1000 ppm STEV; 2380 mg/m ³ STEV
	TWAs	1000 ppm TWA; 2370 mg/m ³ TWA	500 ppm TWA	1000 ppm TWA; 2370 mg/m ³ TWA	500 ppm TWA	500 ppm TWAEV; 1190 mg/m ³ TWAEV

Exposure Limits/Guidelines (Con't.)

	Result	Canada Saskatchewan	Canada Yukon	NIOSH	OSHA
Zinc oxide (1314-13-2)	TWAs	2 mg/m ³ TWA (dust and fume, respirable fraction)	5 mg/m ³ TWA (fume); 30 mppcf TWA (dust); 10 mg/m ³ TWA (dust)	5 mg/m ³ TWA (dust and fume)	5 mg/m ³ TWA (fume); 15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
	STELs	Not established	10 mg/m ³ STEL (fume); 20 mg/m ³ STEL (dust)	10 mg/m ³ STEL (fume)	Not established
	Ceilings	Not established	Not established	15 mg/m ³ Ceiling (dust)	Not established
4-Heptanone, 2,6-dimethyl- (108-83-8)	TWAs	25 ppm TWA	25 ppm TWA; 150 mg/m ³ TWA	25 ppm TWA; 150 mg/m ³ TWA	50 ppm TWA; 290 mg/m ³ TWA
	STELs	Not established	25 ppm STEL; 150 mg/m ³ STEL	Not established	Not established
Acetone (67-64-1)	TWAs	500 ppm TWA	1000 ppm TWA; 2400 mg/m ³ TWA	250 ppm TWA; 590 mg/m ³ TWA	1000 ppm TWA; 2400 mg/m ³ TWA
	STELs	Not established	1250 ppm STEL; 3000 mg/m ³ STEL	Not established	Not established

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. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment**Respiratory**

- In case of insufficient ventilation, wear suitable respiratory equipment. 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/face protection for the job/activity.

Skin/Body

- Wear appropriate gloves for the job/activity.

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

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

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

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

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

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 characteristic odor.
Color	Brown	Odor	Characteristic odor.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	131 F(55 C)	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	0.882 Water=1	Water Solubility	Insoluble
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	175 mmHg (torr) @ 68 F(20 C)	Vapor Density	Data lacking
Evaporation Rate	Data lacking	Volatiles (Vol.)	64 %
Flammability			
Flash Point	-2 F(-18.8889 C)	UEL	13 %
LEL	2.6 %	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, or other sources of ignition.

10.5 Incompatible materials

- Strong oxidizers, acids, and bases.

10.6 Hazardous decomposition products

- Oxides of carbon and nitrogen.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
Acetone (50% TO 100%)	67-64-1	Acute Toxicity: orl-rat LD50:5800 mg/kg; ihl-rat LC50:50100 mg/m3/8H; Irritation: eye-rbt 20 mg SEV; skn-rbt 395 mg open MLD; Reproductive: ihl-rat TCLo:11000 ppm (6-19D preg)

4-Heptanone, 2,6-dimethyl- (2.5% TO 10%)	108-83-8	Acute Toxicity: orl-rat LD50:5750 mg/kg; skn-rbt LD50:16120 mg/kg; Irritation: eye-rbt 500 mg MLD; skn-rbt 500 mg open MLD
Zinc oxide (<= 2.5%)	1314-13-2	Irritation: eye-rbt 500 mg/24H MLD; skn-rbt 500 mg/24H MLD; Reproductive: orl-rat TDLo:6846 mg/kg (1-22D preg)

GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin corrosion/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Skin Irritation 2
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-RE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
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; Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation	EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2

Route(s) of entry/exposure • Inhalation, Skin, Eye, Ingestion

Potential Health Effects

Inhalation

Acute (Immediate)

- May cause respiratory irritation. May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

Chronic (Delayed)

- No data available

Skin

Acute (Immediate)

- Causes skin irritation.

Chronic (Delayed)

- Repeated exposure may cause skin dryness or cracking.

Eye

Acute (Immediate)

- Causes serious eye irritation.

Chronic (Delayed)

- No data available.

Ingestion

Acute (Immediate)

- No data available

Chronic (Delayed)

- No data available.

Key to abbreviations

LC = Lethal Concentration

TC = Toxic Concentration

LD = Lethal Dose

SEV = Severe

MLD = Mild

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	UN1133	Adhesives	3	II	NDA
TDG	UN1133	ADHESIVES	3	II	Potential Marine Pollutant
IMO/IMDG	UN1133	ADHESIVES	3	II	NDA
ADN	UN1133	ADHESIVES	3	II	NDA
ADR/RID	UN1133	ADHESIVES	3	II	NDA
IATA/ICAO	UN1133	Adhesives	3	II	NDA

14.6 Special precautions for user

- None known.

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

- Not relevant.

Section 15 - Regulatory Information

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

SARA Hazard Classifications • Acute, Fire

State Right To Know				
Component	CAS	MA	NJ	PA
4-Heptanone, 2,6-dimethyl-	108-83-8	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes
Zinc oxide	1314-13-2	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
4-Heptanone, 2,6-dimethyl-	108-83-8	Yes	No	Yes	No	Yes
Acetone	67-64-1	Yes	No	Yes	No	Yes
Zinc oxide	1314-13-2	Yes	No	Yes	No	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• 4-Heptanone, 2,6-dimethyl-	108-83-8	B3
• Acetone	67-64-1	B2, D2B
• Zinc oxide	1314-13-2	Uncontrolled product according to WHMIS classification criteria
• Zinc oxide as Zinc compounds		Not Listed

Canada - WHMIS - Ingredient Disclosure List

• 4-Heptanone, 2,6-dimethyl-	108-83-8	1 %
• Acetone	67-64-1	1 %
• Zinc oxide	1314-13-2	1 %
• Zinc oxide as Zinc compounds		Not Listed

Environment

Canada - CEPA - Priority Substances List

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

Other

Canada - Accelerated Reduction/Elimination of Toxics (ARET)

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

Canada New Brunswick

Environment

Canada - New Brunswick - Ozone Depleting Substances - Schedule A

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

Canada - New Brunswick - Ozone Depleting Substances - Schedule B

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

Europe

Other

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	R10 Xi; R37
• Acetone	67-64-1	F; R11 Xi; R36 R66 R67
• Zinc oxide	1314-13-2	N; R50-53
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	10%≤C: Xi; R:37
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Xi R:10-37 S:(2)-24
• Acetone	67-64-1	F Xi R:11-36-66-67 S:(2)-9-16-26
• Zinc oxide	1314-13-2	N R:50/53 S:60-61
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	S:(2)-24
• Acetone	67-64-1	S:(2)-9-16-26
• Zinc oxide	1314-13-2	S:60-61
• Zinc oxide as Zinc compounds		Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed

- | | | |
|--------------------------------|--|------------|
| • Zinc oxide as Zinc compounds | | Not Listed |
|--------------------------------|--|------------|

U.S. - OSHA - Specifically Regulated Chemicals

- | | | |
|--------------------------------|-----------|------------|
| • 4-Heptanone, 2,6-dimethyl- | 108-83-8 | Not Listed |
| • Acetone | 67-64-1 | Not Listed |
| • Zinc oxide | 1314-13-2 | Not Listed |
| • Zinc oxide as Zinc compounds | | Not Listed |

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

- | | | |
|--------------------------------|-----------|------------|
| • 4-Heptanone, 2,6-dimethyl- | 108-83-8 | Not Listed |
| • Acetone | 67-64-1 | Not Listed |
| • Zinc oxide | 1314-13-2 | Not Listed |
| • Zinc oxide as Zinc compounds | | Not Listed |

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

- | | | |
|--------------------------------|-----------|------------------------------------|
| • 4-Heptanone, 2,6-dimethyl- | 108-83-8 | Not Listed |
| • Acetone | 67-64-1 | 5000 lb final RQ; 2270 kg final RQ |
| • Zinc oxide | 1314-13-2 | Not Listed |
| • Zinc oxide as Zinc compounds | | Not Listed |

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

- | | | |
|--------------------------------|-----------|------------|
| • 4-Heptanone, 2,6-dimethyl- | 108-83-8 | Not Listed |
| • Acetone | 67-64-1 | Not Listed |
| • Zinc oxide | 1314-13-2 | Not Listed |
| • Zinc oxide as Zinc compounds | | Not Listed |

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

- | | | |
|--------------------------------|-----------|------------|
| • 4-Heptanone, 2,6-dimethyl- | 108-83-8 | Not Listed |
| • Acetone | 67-64-1 | Not Listed |
| • Zinc oxide | 1314-13-2 | Not Listed |
| • Zinc oxide as Zinc compounds | | Not Listed |

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

- | | | |
|--------------------------------|-----------|------------|
| • 4-Heptanone, 2,6-dimethyl- | 108-83-8 | Not Listed |
| • Acetone | 67-64-1 | Not Listed |
| • Zinc oxide | 1314-13-2 | Not Listed |
| • Zinc oxide as Zinc compounds | | Not Listed |

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

- | | | |
|--------------------------------|-----------|---|
| • 4-Heptanone, 2,6-dimethyl- | 108-83-8 | Not Listed |
| • Acetone | 67-64-1 | Not Listed |
| • Zinc oxide | 1314-13-2 | Not Listed |
| • Zinc oxide as Zinc compounds | | 1.0 % de minimis concentration (Chemical Category N982) |

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

- | | | |
|--------------------------------|-----------|------------|
| • 4-Heptanone, 2,6-dimethyl- | 108-83-8 | Not Listed |
| • Acetone | 67-64-1 | Not Listed |
| • Zinc oxide | 1314-13-2 | Not Listed |
| • Zinc oxide as Zinc compounds | | Not Listed |

U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Included in waste stream: F039
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring		
• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents		
• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards		
• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	0.28 mg/L (wastewater); 160 mg/kg (nonwastewater)
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring		
• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics		
• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	waste number U002 (Ignitable waste)
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	
• Zinc oxide	1314-13-2	(fume)
• Zinc oxide as Zinc compounds		

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

• 4-Heptanone, 2,6-dimethyl-	108-83-8	Not Listed
• Acetone	67-64-1	Not Listed
• Zinc oxide	1314-13-2	Not Listed
• Zinc oxide as Zinc compounds		Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Relevant Phrases (code & full text)**

- H226 - Flammable liquid and vapour
- H335 - May cause respiratory irritation
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- R10 - Flammable.
- R37 - Irritating to respiratory system.
- R50 - Very toxic to aquatic organisms.
- R53 - May cause long-term adverse effects in the aquatic environment.

Last Revision Date

- 18/February/2014

Preparation Date

- 30/January/2012

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Key to abbreviations

NDA = No data available
