SAFETY DATA SHEET

1. Identification

Product identifier PLEXUS® MA320 Adhesive

Other means of identification

SKU# 32200

Recommended use Not available. **Recommended restrictions** None known.

Manufacturer/Importer/Supplier/Distributor information

Company name ITW Performance Polymers

Address 35 Brownridge Rd

Unit 1

Halton Hills, ON L7G 0C6

Contact personCustomer ServiceTelephone number978-777-1100

Fax E-mail

Emergency telephone

number

800-424-9300

Supplier Not available.

2. Hazard identification

Physical hazardsFlammable liquidsCategory 2Health hazardsAcute toxicity, inhalationCategory 4Skin corrosion/irritationCategory 2

Serious eye damage/eye irritation Category 2A
Sensitization, skin Category 1A

Specific target organ toxicity following single

exposure

Category 3 respiratory tract irritation

Environmental hazards Not classified.

Label elements



Signal word Danger

Hazard statement Highly flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction.

Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation.

Precautionary statement Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

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IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF Response

INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTRE/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to

extinguish.

Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Storage

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Methyl methacrylate		80-62-6	40 - 70
Styrene/butadiene Copolymer		9003-55-8	10 - 30
Methacrylic acid		79-41-4	1 - 5
Ethylene glycol		107-21-1	0.1 - 1
Other components below reportab	le levels		10 - 30

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or Inhalation artificial respiration if needed. Call a poison centre or doctor/physician if you feel unwell.

Remove contaminated clothing immediately and wash skin with soap and water. In case of Skin contact eczema or other skin disorders: Seek medical attention and take along these instructions. Wash

contaminated clothing before reuse.

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if Eye contact

present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred symptoms/effects, acute and

delayed Indication of immediate

medical attention and special treatment needed

General information

vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may

be used for small fires only.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Specific methods

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

IIC ACCIU Threehold Limit Values

Occupational exposure limits

Components	Туре	Value	Form
ETHYLENE GLYCOL (CAS 107-21-1)	STEL	10 mg/m3	Aerosol, inhalable.
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction
METHACRYLIC ACID (CAS 79-41-4)	TWA	20 ppm	

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US. ACGIH Threshold Limit Values			
Components	Туре	Value	Form
METHYL METHACRYLATE (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Canada. Alberta OELs (Occupation Components	aal Health & Safety Code, Sci Type	hedule 1, Table 2) Value	
ETHYLENE GLYCOL (CAS 107-21-1)	Ceiling	100 mg/m3	
METHACRYLIC ACID (CAS 79-41-4)	TWA	70 mg/m3	
		20 ppm	
METHYL METHACRYLATE (CAS 80-62-6)	STEL	410 mg/m3	
		100 ppm	
	TWA	205 mg/m3	
		50 ppm	
Canada. British Columbia OELs. (C Safety Regulation 296/97, as amend		s for Chemical Substances, O	ccupational Health and
Components	Туре	Value	Form
ETHYLENE GLYCOL (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol
		50 ppm	Vapour.
	STEL	20 mg/m3	Particulate.
	TWA	10 mg/m3	Particulate.
METHACRYLIC ACID (CAS 79-41-4)	TWA	20 ppm	
METHYL METHACRYLATE (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Canada. Manitoba OELs (Reg. 217/		•	_
Components	Туре	Value	Form
ETHYLENE GLYCOL (CAS 107-21-1)	STEL	10 mg/m3	Aerosol, inhalable.
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction
METHACRYLIC ACID (CAS 79-41-4)	TWA	20 ppm	
METHYL METHACRYLATE (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Canada. Ontario OELs. (Control of Components	Exposure to Biological or C Type	hemical Agents) Value	Form
ETHYLENE GLYCOL (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol
METHACRYLIC ACID (CAS 79-41-4)	TWA	20 ppm	
METHYL METHACRYLATE (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	

Canada. Quebec OELs. (Ministry o Components	f Labor - Regulation respecti Type	ng occupational health and s Value	afety) Form
ETHYLENE GLYCOL (CAS 107-21-1)	Ceiling	127 mg/m3	Vapor and mist.
		50 ppm	Vapor and mist.
METHACRYLIC ACID (CAS 79-41-4)	TWA	70 mg/m3	
		20 ppm	
METHYL METHACRYLATE (CAS 80-62-6)	TWA	205 mg/m3	
		50 ppm	

Canada, Saskatchewan OFI s	Occupational Health and Safety Regulations	1996. Table 21)
Canada: Caskatonewan CEES	Cooupational riculti and Calcty ricgulations	, 1000, 10010 - 1/

Components	Туре	Value	Form	
ETHYLENE GLYCOL (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol	_
METHACRYLIC ACID (CAS 79-41-4)	15 minute	30 ppm		
	8 hour	20 ppm		
METHYL METHACRYLATE (CAS 80-62-6)	15 minute	100 ppm		
	8 hour	50 ppm		

Biological limit valuesNo biological exposure limits noted for the ingredient(s).

Appropriate engineering

controls

Explosion-proof general and local exhaust ventilation. 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. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapour cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.Other Wear appropriate chemical resistant clothing.

Respiratory protection Chemical respirator with organic vapour cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance Paste.
Physical state Liquid.
Form Paste.
Colour Off-white.

Odour Fragrant
Odour threshold Not available.
pH Not available.

Melting point/freezing point -48 °C (-54.4 °F) estimated Initial boiling point and boiling 100.5 °C (212.9 °F) estimated

range

Flash point 10.0 °C (50.0 °F) estimated

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

SDS CANADA

Upper/lower flammability or explosive limits

Flammability limit - lower 1.7 %

(%)

Flammability limit - upper

(%)

12.5 %

Explosive limit - lower (%) Not available.

Explosive limit - upper Not available.

(%)

Vapour pressure 51.33 hPa estimated

Vapour densityNot available.Relative densityNot available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.

Other information

Density 0.95 g/cm3 estimated

Explosive properties Not explosive.

Flammability class Flammable IB estimated

Oxidising properties Not oxidising.

Specific gravity 0.95 estimated

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stabilityMaterial is stable under normal conditions.Possibility of hazardousHazardous polymerisation does not occur.

reactions

Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the

flash point. Contact with incompatible materials.

Incompatible materials Strong oxidising agents. Nitrates. Peroxides.

Hazardous decomposition

products

No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation Harmful if inhaled.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

Ingestion Knowledge about health hazard is incomplete.

Symptoms related to the physical, chemical and toxicological characteristics

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an

allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity Harmful if inhaled.

Components Species Test Results

Ethylene glycol (CAS 107-21-1)

Acute Dermal

LD50 Rabbit 9530 mg/kg

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Components Species Test Results

Methyl methacrylate (CAS 80-62-6)

Acute Inhalation

LC50 Mouse 18.5 mg/l, 2 Hours

Oral

LD50 Rat 7800 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye

Causes serious eye irritation.

irritation

Respiratory or skin sensitisation

ACGIH sensitisation

Methyl methacrylate (CAS 80-62-6)

Dermal sensitization

Canada - Alberta OELs: Irritant

Ethylene glycol (CAS 107-21-1) Irritant
Methacrylic acid (CAS 79-41-4) Irritant
Canada - British Columbia OELs: Respiratory or skin sensitiser

Methyl methacrylate (CAS 80-62-6)

Capable of causing respiratory, dermal or conjunctival

sensitization.

Canada - Manitoba OELs Hazard: Dermal sensitization

Methyl methacrylate (CAS 80-62-6)

Dermal sensitization

Canada - Quebec OELs: Sensitizer

Methyl methacrylate (CAS 80-62-6) Sensitiser.

Canada - Saskatchewan OELs Hazard Data: Sensitiser

Methyl methacrylate (CAS 80-62-6) Sensitiser.

Respiratory sensitisation Due to partial or complete lack of data the classification is not possible.

Skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity

Due to partial or complete lack of data the classification is not possible.

Carcinogenicity

Due to partial or complete lack of data the classification is not possible.

ACGIH Carcinogens

Ethylene glycol (CAS 107-21-1)

Methyl methacrylate (CAS 80-62-6)

A4 Not classifiable as a human carcinogen.

A4 Not classifiable as a human carcinogen.

Canada - Manitoba OELs: carcinogenicity

Ethylene glycol (CAS 107-21-1)

Mot classifiable as a human carcinogen.

Methyl methacrylate (CAS 80-62-6)

Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Methyl methacrylate (CAS 80-62-6)

3 Not classifiable as to carcinogenicity to humans.

Styrene/butadiene Copolymer (CAS 9003-55-8)

3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicityDue to partial or complete lack of data the classification is not possible.

Specific target organ toxicity -

May cause respiratory irritation.

single exposure

Specific target organ toxicity -

repeated exposure

Due to partial or complete lack of data the classification is not possible.

Aspiration hazard Due to partial or complete lack of data the classification is not possible.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

EcotoxicityThe product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Ethylene glycol -1.36
Methacrylic acid 0.93
Methyl methacrylate 1.38

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation

potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of

contents/container in accordance with local/regional/national/international regulations.

Dispose in accordance with all applicable regulations. Local disposal regulations

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

14. Transport information

TDG

UN1133 **UN number**

UN proper shipping name ADHESIVES containing flammable liquid

Transport hazard class(es)

Class 3 Subsidiary risk Ш Packing group

Environmental hazards Not available.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN1133

Adhesives containing flammable liquid **UN proper shipping name**

Transport hazard class(es) 3 Class Subsidiary risk Ш Packing group **Environmental hazards** Nο

ERG Code 3L

Other information

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Passenger and cargo

aircraft

Allowed with restrictions.

Cargo aircraft only

Allowed with restrictions.

IMDG

UN number UN1133

UN proper shipping name Transport hazard class(es) ADHESIVES containing flammable liquid

3 Class Subsidiary risk Packing group Ш

Environmental hazards

No.

Marine pollutant **EmS** F-E, S-D

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and

the IBC Code

Not established.

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IATA; IMDG; TDG



15. Regulatory information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

Country(s) or region

International Inventories

		/
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Toxic Substances Control Act (TSCA) Inventory

16. Other information

United States & Puerto Rico

Issue date 26-May-2019 **Revision date** 02-May-2020

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Inventory name

On inventory (yes/no)*

Yes

Version No.

02

Disclaimer

ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.