SAFETY DATA SHEET

1. Identification

Product identifier Plexus AO420 Adhesive

Other means of identification

SKU# IT100

Recommended useNot 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, dermalCategory 4Acute toxicity, inhalationCategory 4Skin corrosion/irritationCategory 2

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

Specific target organ toxicity following single Category 3 respiratory tract irritation

exposure

Environmental hazards Not classified.

Label elements



Signal word Danger

Hazard statement Highly flammable liquid and vapour. Harmful in contact with skin. Causes skin irritation. May

cause an allergic skin reaction. Causes serious eye damage. 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. Immediately call a POISON CENTRE/doctor. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire:

Use appropriate media to extinguish.

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

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	60 - 100
Methacrylic acid		79-41-4	3 - 7
Ethylene glycol		107-21-1	0.1 - 1
Other components below reportable 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. Get medical Skin contact

advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred

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 immediately.

Ingestion Rinse mouth. Get medical advice/attention if you feel unwell.

Most important symptoms/effects, acute and delayed

Indication of immediate

medical attention and special treatment needed

General information

vision. Permanent eye damage including blindness could result. 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. Show this safety data sheet to the doctor in attendance. 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 In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods General fire hazards Use standard firefighting procedures and consider the hazards of other involved materials.

Highly flammable liquid and vapour.

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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. 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. Do not get this material in contact with eyes. Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. 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

Occupational exposure limits

US. ACGIH Threshold Limit Values Components	Type	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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Components	Туре	Value	Form
METHYL METHACRYLATE (CAS 80-62-6)	STEL	100 ppm	
	TWA	50 ppm	
Canada. Alberta OELs (Occupation Components	al Health & Safety Code, Sch Type	nedule 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 amen		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/			Eaur-
Components	Туре	Value	Form
ETHYLENE GLYCOL (CAS 107-21-1)	STEL	10 mg/m3	Aerosol, inhalable.
	T14/4	50 ppm	Vapor fraction
METHACDVIIC ACID (CAC	TWA	25 ppm	Vapor fraction
METHACRYLIC ACID (CAS 79-41-4) METHYL METHACRYLATE	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 Ch Type	nemical Agents) Value	Form
ETHYLENE GLYCOL (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol
METHACRYLIC ACID (CAS	TWA	20 ppm	
79-41-4)			
79-41-4) METHYL METHACRYLATE (CAS 80-62-6)	STEL TWA	100 ppm	

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Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety) Components Type Value 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 OELs (Occupational Health and Safety Regulations, 1996, Table 21)

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 values No 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 Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure

limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapour

cartridge.

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

Not available. **Evaporation rate** Not applicable. Flammability (solid, gas) Upper/lower flammability or explosive limits

Flammability limit - lower

2.1 % estimated

(%)

Flammability limit - upper

(%)

12.5 % estimated

Not available. Explosive limit - lower (%) Explosive limit - upper

Not available.

(%)

51.33 hPa estimated Vapour pressure

Vapour density Not available. Not available. Relative density

Solubility(ies)

Not available. Solubility (water) **Partition coefficient** Not available. (n-octanol/water)

Not available. **Auto-ignition temperature** Not available. **Decomposition temperature** Not available. **Viscosity**

Other information

Density 0.99 g/cm3 estimated

Explosive properties Not explosive.

Flammable IB estimated Flammability class

Oxidising properties Not oxidising. Specific gravity 0.99 estimated VOC < 50 g/l Mixed

10. Stability and reactivity

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

Chemical stability Material is stable under normal conditions. Possibility of hazardous Hazardous polymerisation does not occur.

Conditions to avoid

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

flash point. Contact with incompatible materials.

Strong oxidising agents. Nitrates. Peroxides. Incompatible materials

Hazardous decomposition

products

reactions

No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Harmful if inhaled. Inhalation

Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Skin contact

Eve contact Causes serious eye damage.

Knowledge about health hazard is incomplete. Ingestion

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis.

Information on toxicological effects

In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and **Acute toxicity**

central nervous system effects. Harmful if inhaled. Harmful in contact with skin.

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Rash.

Components Species Test Results

Ethylene glycol (CAS 107-21-1)

Acute Dermal

LD50 Rabbit 9530 mg/kg

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 damage.

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 Risk of cancer cannot be excluded with prolonged exposure.

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.

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

Specific target organ toxicity -

single exposure

May cause respiratory irritation.

Specific target organ toxicity -

repeated exposure

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

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

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

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

Material name: Plexus AO420 Adhesive IT100 Version #: 02 Revision date: 28-April-2020 Issue date: 28-May-2019 Partition coefficient n-octanol / water (log Kow)

-1.36 Ethylene glycol Methacrylic acid 0.93 Methyl methacrylate 1.38

Mobility in soil No data available.

Other adverse effects The product contains volatile organic compounds which have a photochemical ozone creation

potential.

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

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

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**

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

Transport hazard class(es)

Class 3 Subsidiary risk Ш Packing group

Not available. **Environmental hazards**

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

Adhesives containing flammable liquid

IATA

UN number UN1133

UN proper shipping name

Transport hazard class(es)

Class 3 Subsidiary risk Ш Packing group **Environmental hazards** No. **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 ADHESIVES containing flammable liquid

Transport hazard class(es)

Class 3 Subsidiary risk Ш Packing group **Environmental hazards**

Marine pollutant No. F-E. S-D **EmS**

Transport in bulk according to

Special precautions for user Read safety instructions, SDS and emergency procedures before handling. Not established.

Annex II of MARPOL 73/78 and

the IBC Code

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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.

International Inventories

Country(s) or region	Inventory name On inventory	(yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes
*A "Yes" indicates that all compo	nents of this product comply with the inventory requirements administered by the governing country(s)	

16. Other information

country(s).

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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

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.

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