

SAFETY DATA SHEET

1. Identification

Product identifier DEVCON® Flexane® High Performance Putty Resin

Other means of identification

SKU# 6639N

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 person Customer Service

Telephone number 978-777-1100

Fax

E-mail

Emergency telephone number 800-424-9300

Supplier Not available.

2. Hazard identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1A
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 2
	Specific target organ toxicity following single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity following single exposure	Category 3 narcotic effects
Environmental hazards	Specific target organ toxicity following repeated exposure	Category 2
Label elements	Not classified.	



Signal word Danger

Hazard statement 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 respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Do not breathe mist/vapours. 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. Wear respiratory protection.

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF 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. IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTRE/doctor. 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

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapour. May cause flash fire or explosion.

Supplemental information

20 % of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Polyurethane prepolymer		N/A	60 - 100
METHYL ETHYL KETONE		78-93-3	10 - 20
4,4'-DIPHENYLMETHANE DIISOCYANATE		101-68-8	1 - 5
BUTYLATED HYDROXYTOLUENE (BHT)		128-37-0	1 - 5
METHYLENE BIS(4-CYCLOHEXYLISOCYANATE)		5124-30-1	1 - 5
TOLUENE-2,4-DIISOCYANATE		584-84-9	1 - 5

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

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Skin contact

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

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if 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 symptoms/effects, acute and delayed

May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

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 under observation. Symptoms may be delayed.

General information

Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. 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 (CO ₂). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Water. 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	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapour.

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. Do not breathe 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	<p>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.</p> <p>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.</p> <p>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.</p> <p>Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.</p>
Environmental precautions	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

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Do not breathe mist/vapours. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. 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

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)	TWA	0.005 ppm	
BUTYLATED HYDROXYTOLUENE (BHT) (CAS 128-37-0)	TWA	2 mg/m ³	Inhalable fraction and vapour.
METHYL ETHYL KETONE (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
METHYLENE BIS(4-CYCLOHEXYLISOCYANATE) (CAS 5124-30-1)	TWA	0.005 ppm	
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)	STEL	0.005 ppm	Inhalable fraction and vapour.
	TWA	0.001 ppm	Inhalable fraction and vapour.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)	TWA	0.05 mg/m ³
		0.005 ppm
BUTYLATED HYDROXYTOLUENE (BHT) (CAS 128-37-0)	TWA	10 mg/m ³
METHYL ETHYL KETONE (CAS 78-93-3)	STEL	885 mg/m ³
		300 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
	TWA	590 mg/m3
		200 ppm
METHYLENE BIS(4-CYCLOHEXYLISOCYANATE) (CAS 5124-30-1)	TWA	0.05 mg/m3
		0.005 ppm
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)	Ceiling	0.1 mg/m3
		0.02 ppm
	TWA	0.04 mg/m3
		0.005 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)	Ceiling	0.01 ppm	
	TWA	0.005 ppm	
BUTYLATED HYDROXYTOLUENE (BHT) (CAS 128-37-0)	TWA	2 mg/m3	Vapor and aerosol, inhalable.
METHYL ETHYL KETONE (CAS 78-93-3)	STEL	100 ppm	
	TWA	50 ppm	
METHYLENE BIS(4-CYCLOHEXYLISOCYANATE) (CAS 5124-30-1)	Ceiling	0.01 ppm	
	TWA	0.005 ppm	
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)	Ceiling	0.01 ppm	
	TWA	0.005 ppm	

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)	TWA	0.005 ppm	
BUTYLATED HYDROXYTOLUENE (BHT) (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapour.
METHYL ETHYL KETONE (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
METHYLENE BIS(4-CYCLOHEXYLISOCYANATE) (CAS 5124-30-1)	TWA	0.005 ppm	
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)	STEL	0.005 ppm	Inhalable fraction and vapour.
	TWA	0.001 ppm	Inhalable fraction and vapour.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)	Ceiling	0.02 ppm	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
	TWA	0.005 ppm	
BUTYLATED HYDROXYTOLUENE (BHT) (CAS 128-37-0)	TWA	2 mg/m3	Inhalable fraction and vapour.
METHYL ETHYL KETONE (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
METHYLENE BIS(4-CYCLOHEXYLISOC YANATE) (CAS 5124-30-1)	Ceiling	0.02 ppm	
	TWA	0.005 ppm	
TOLUENE-2,4-DIISOCYAN ATE (CAS 584-84-9)	Ceiling	0.02 ppm	
	TWA	0.005 ppm	

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value	Form
4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)	TWA	0.051 mg/m3	
		0.005 ppm	
BUTYLATED HYDROXYTOLUENE (BHT) (CAS 128-37-0)	TWA	10 mg/m3	
METHYL ETHYL KETONE (CAS 78-93-3)	STEL	300 mg/m3	
		100 ppm	
	TWA	150 mg/m3	
		50 ppm	
METHYLENE BIS(4-CYCLOHEXYLISOC YANATE) (CAS 5124-30-1)	TWA	0.054 mg/m3	
		0.005 ppm	
TOLUENE-2,4-DIISOCYAN ATE (CAS 584-84-9)	STEL	0.14 mg/m3	
		0.02 ppm	
	TWA	0.036 mg/m3	
		0.005 ppm	

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value	Form
4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)	15 minute	0.015 ppm	
	8 hour	0.005 ppm	
BUTYLATED HYDROXYTOLUENE (BHT) (CAS 128-37-0)	15 minute	4 mg/m3	Inhalable fraction and vapour.
	8 hour	2 mg/m3	Inhalable fraction and vapour.
METHYL ETHYL KETONE (CAS 78-93-3)	15 minute	300 ppm	
	8 hour	200 ppm	
METHYLENE BIS(4-CYCLOHEXYLISOC YANATE) (CAS 5124-30-1)	15 minute	0.015 ppm	

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value	Form
	8 hour	0.005 ppm	
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)	15 minute	0.02 ppm	
	8 hour	0.005 ppm	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
METHYL ETHYL KETONE (CAS 78-93-3)	2 mg/l	MEK	Urine	*
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)	5 µg/g	Toluene diamine (sum of 2,4- and 2,6-isomers), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

Canada - British Columbia OELs: Skin designation

4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)	Can be absorbed through the skin.
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)	Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)	Can be absorbed through the skin.
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US ACGIH Threshold Limit Values: Skin designation

TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)	Can be absorbed through the skin.
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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. Use of an impervious apron is recommended.

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

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. 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	Liquid.
Physical state	Liquid.
Form	Liquid.
Colour	Colourless to light yellow.
Odour	Sweet.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	-86.64 °C (-123.95 °F) estimated
Initial boiling point and boiling range	79.59 °C (175.26 °F) estimated
Flash point	-4.4 °C (24.0 °F)

Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.8 % estimated
Flammability limit - upper (%)	10 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Vapour pressure	120.8 hPa estimated
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	404 °C (759.2 °F) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.99 g/cm ³
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Oxidising properties	Not oxidising.
Percent volatile	20 %
pH in aqueous solution	5 @ 5% solution
Specific gravity	0.99

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 reactions	Hazardous polymerisation does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the decomposition temperature. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents. Amines. Ammonia. Caustics. Isocyanates.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity	Not known.	
Components	Species	Test Results
BUTYLATED HYDROXYTOLUENE (BHT) (CAS 128-37-0)		
Acute		
Oral		
LD50	Rat	890 mg/kg
METHYL ETHYL KETONE (CAS 78-93-3)		
Acute		
Dermal		
LD50	Rabbit	> 8000 mg/kg
Oral		
LD50	Rat	2300 - 3500 mg/kg
METHYLENE BIS(4-CYCLOHEXYLISOCYANATE) (CAS 5124-30-1)		
Acute		
Dermal		
LD50	Rabbit	> 10000 mg/kg
Oral		
LD50	Rat	1065 mg/kg
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)		
Acute		
Oral		
LD50	Rat	5800 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitisation		
ACGIH sensitisation		
TOLUENE-2,4-DIISOCYANATE, INHALABLE FRACTION AND VAPOR (CAS 584-84-9)		Dermal sensitisation
		Respiratory sensitisation
Canada - Alberta OELs: Irritant		
BUTYLATED HYDROXYTOLUENE (BHT) (CAS 128-37-0)		Irritant
Canada - British Columbia OELs: Respiratory or skin sensitiser		
4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)		Capable of causing sensitization
METHYLENE BIS(4-CYCLOHEXYLISOCYANATE) (CAS 5124-30-1)		Capable of causing sensitization
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)		Capable of causing sensitization
Canada - Manitoba OELs Hazard: Dermal sensitization		
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)		Dermal sensitisation
Canada - Manitoba OELs Hazard: Respiratory sensitization		
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)		Respiratory sensitisation
Canada - Quebec OELs: Sensitizer		
4,4'-DIPHENYLMETHANE DIISOCYANATE (CAS 101-68-8)		Sensitizer.
METHYLENE BIS(4-CYCLOHEXYLISOCYANATE) (CAS 5124-30-1)		Sensitizer.
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)		Sensitizer.
Canada - Saskatchewan OELs Hazard Data: Sensitizer		
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9)		Sensitizer.
Respiratory sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Skin sensitisation	May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	

Carcinogenicity Suspected of causing cancer.

ACGIH Carcinogens

BUTYLATED HYDROXYTOLUENE (BHT) A4 Not classifiable as a human carcinogen.
(CAS 128-37-0)
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9) A3 Confirmed animal carcinogen with unknown relevance to humans.

Canada - Manitoba OELs: carcinogenicity

BUTYLATED HYDROXYTOLUENE (BHT) Not classifiable as a human carcinogen.
(CAS 128-37-0)
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9) Confirmed animal carcinogen with unknown relevance to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

4,4'-DIPHENYLMETHANE DIISOCYANATE 3 Not classifiable as to carcinogenicity to humans.
(CAS 101-68-8)
BUTYLATED HYDROXYTOLUENE (BHT) 3 Not classifiable as to carcinogenicity to humans.
(CAS 128-37-0)
TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9) 2B Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

TOLUENE-2,4-DIISOCYANATE (CAS 584-84-9) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Not likely, due to the form of the product.

Chronic effects Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity The 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)

METHYL ETHYL KETONE 0.29
METHYLENE BIS(4-CYCLOHEXYLISOCYANATE) 6.11

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.

Local disposal regulations Dispose in accordance with all applicable 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).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number UN1866
UN proper shipping name RESIN SOLUTION, flammable, Limited Quantity
Transport hazard class(es)
Class 3
Subsidiary risk -

Packing group III
Environmental hazards Not available.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN1866
UN proper shipping name Resin solution flammable, Limited Quantity
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group III
Environmental hazards No.
ERG Code 3L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

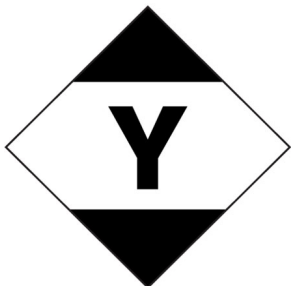
Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG

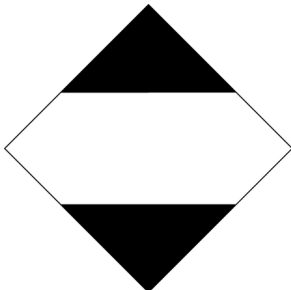
UN number UN1866
UN proper shipping name RESIN SOLUTION flammable, Limited Quantity
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant No.
EmS F-E, S-E
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

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

METHYL ETHYL KETONE (CAS 78-93-3) Class B

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)	Yes
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)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
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 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).

16. Other information**Issue date** 22-May-2019**Revision date** 18-July-2021**Version No.** 04**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.

Revision information

Physical & Chemical Properties: Multiple Properties

SAFETY DATA SHEET

1. Identification

Product identifier	DEVCON® Flexane® High Performance Putty Curing Agent
Other means of identification	
SKU#	6923N
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 person	Customer Service
Telephone number	978-777-1100
Fax	
E-mail	
Emergency telephone number	800-424-9300
Supplier	Not available.

2. Hazard identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity following repeated exposure	Category 2
Environmental hazards	Not classified.	

Label elements



Signal word	Warning
Hazard statement	Harmful if swallowed. Harmful in contact with skin. Causes serious eye irritation. May cause damage to organs through prolonged or repeated exposure.
Precautionary statement	
Prevention	Do not breathe mist/vapours. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye protection/face protection. Wear protective gloves/protective clothing.
Response	IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of water. 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 eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	Store away from incompatible materials.
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	%
Diethyltoluenediamine		68479-98-1	40 - 70
Carbon Black		1333-86-4	3 - 7
Other components below reportable levels			15 - 40

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

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	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.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	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	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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	<p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.</p>
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist/vapours. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
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Conditions for safe storage, including any incompatibilities

Store in tightly closed container. 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
CARBON BLACK (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
CARBON BLACK (CAS 1333-86-4)	TWA	3.5 mg/m ³

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
CARBON BLACK (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
CARBON BLACK (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
CARBON BLACK (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
CARBON BLACK (CAS 1333-86-4)	TWA	3.5 mg/m ³

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
CARBON BLACK (CAS 1333-86-4)	15 minute	7 mg/m ³
	8 hour	3.5 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

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.

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. Use of an impervious apron is recommended.

Respiratory protection

Chemical respirator with organic vapour cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Keep away from food and drink. 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.

9. Physical and chemical properties

Appearance

Liquid.

Physical state	Liquid.
Form	Liquid.
Colour	Black.
Odour	Ammoniacal.
Odour threshold	Not available.
pH	7 - 8 @ 5% solution
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	93.3 °C (200.0 °F) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapour pressure	0.00009 hPa estimated
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.05 g/cm ³ estimated
Explosive properties	Not explosive.
Flammability class	Combustible III B estimated
Oxidising properties	Not oxidising.
Specific gravity	1.05 estimated

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 reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the decomposition temperature. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Harmful in contact with skin.
Eye contact	Causes serious eye irritation.

Ingestion Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity Harmful in contact with skin. Harmful if swallowed.

Components	Species	Test Results
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Carbon Black (CAS 1333-86-4)

Acute

Oral

LD50

Rat

> 8000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitisation

Respiratory sensitisation Not a respiratory sensitizer.

Skin sensitisation This product is not expected to cause skin sensitisation.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

ACGIH Carcinogens

Carbon Black (CAS 1333-86-4)

A3 Confirmed animal carcinogen with unknown relevance to humans.

Canada - Manitoba OELs: carcinogenicity

Carbon Black (CAS 1333-86-4)

Confirmed animal carcinogen with unknown relevance to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon Black (CAS 1333-86-4)

2B Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Carbon Black (CAS 1333-86-4)

Known To Be Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity The 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 No data available.

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.

Local disposal regulations Dispose in accordance with all applicable 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).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

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Controlled Drugs and Substances Act

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Export Control List (CEPA 1999, Schedule 3)

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Greenhouse Gases

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Precursor Control Regulations

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International regulations**Stockholm Convention**

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Montreal Protocol

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Basel Convention

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Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
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 components of this product comply with the inventory requirements administered by the governing country(s)

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16. Other information

Issue date 22-May-2019

Revision date 18-July-2021

Version No. 04

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