SAFETY DATA SHEET

1. Identification

1. Identification			
Product identifier	DEVCON® R-Flex® II Resin		
Other means of identification			
SKU#	0339B		
Recommended use	Not available.		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/	Distributor information		
Company name	ITW Performance Polymers		
Address	35 Brownridge Rd		
	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	Skin corrosion/irritation	Category 2	
	Serious eye damage/eye irritation	Category 2	
	Sensitization, respiratory	Category 1	
	Sensitization, skin	Category 1	
	Carcinogenicity	Category 2	
	Reproductive toxicity	Category 2	
	Specific target organ toxicity following single exposure	Category 3 respiratory tract irritation	
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2	
Label elements			
Signal word	Danger		
Hazard statement	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. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Toxic to aquatic life.		
Precautionary statement			
Prevention	and understood. Avoid breathing mist/vapours	nated work clothing should not be allowed out of the Wear protective gloves/protective clothing/eye	

Response	IF ON SKIN: Wash with plenty of 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.
Storage	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.
Supplemental information	None.
Other hazards	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
3-Isocyanatomethyl-3,5,5-trimethylc yclohexyl isocyanate		4098-71-9	20 - < 30
Polytetramethylene Ether Glycol		25190-06-1	10 - < 20
Methyl Ethyl Ketone (MEK)		78-93-3	5 - < 10
Polypropylene Glycols		25322-69-4	5 - < 10
4,4'-methylenediphenyl diisocyanate		101-68-8	< 1
Other components below reportable	evels		40 - < 50

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 centre 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	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. Difficulty in breathing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	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	Foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Water. 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

6. Accidental release mea	sures
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. Avoid breathing 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	Prevent product from entering drains.
containment and cleaning up	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.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	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.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
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. Avoid breathing 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. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values (TLV)			
Components	Туре	Value	
3-Isocyanatomethyl-3,5,5-tri methylcyclohexyl isocyanate (CAS 4098-71-9)	TWA	0.005 ppm	
4,4'-methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0.005 ppm	
Methyl Ethyl Ketone (MEK) (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	

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

Components	Туре	Value	
3-Isocyanatomethyl-3,5,5-tri methylcyclohexyl isocyanate (CAS 4098-71-9)	TWA	0.05 mg/m3	
		0.005 ppm	
4,4'-methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0.05 mg/m3	
		0.005 ppm	
Methyl Ethyl Ketone (MEK) (CAS 78-93-3)	STEL	885 mg/m3	
		300 ppm	
	TWA	590 mg/m3	
		200 ppm	

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

Components	Туре	Value	
3-Isocyanatomethyl-3,5,5-tri methylcyclohexyl isocyanate (CAS 4098-71-9)	Ceiling	0.01 ppm	
	TWA	0.005 ppm	
4,4'-methylenediphenyl diisocyanate (CAS 101-68-8)	Ceiling	0.01 ppm	
	TWA	0.005 ppm	
Methyl Ethyl Ketone (MEK) (CAS 78-93-3)	STEL	100 ppm	
	TWA	50 ppm	

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

Components	Туре	Value	
3-Isocyanatomethyl-3,5,5-tri methylcyclohexyl isocyanate (CAS 4098-71-9)	TWA	0.005 ppm	
4,4'-methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0.005 ppm	
Methyl Ethyl Ketone (MEK) (CAS 78-93-3)	STEL	300 ppm	
· · ·	TWA	200 ppm	

Canada. New Brunswick OELs: Threshold Limit Values (TLVs) Based on the 1991 and 1997 ACGIH TLVs and BEIs Publication (New Brunswick Regulation 91-191)

Components	Туре	Value	
3-Isocyanatomethyl-3,5,5-tri methylcyclohexyl isocyanate (CAS 4098-71-9)	TWA	0.045 mg/m3	
		0.005 ppm	
4,4'-methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0.051 mg/m3	
		0.005 ppm	
Methyl Ethyl Ketone (MEK) (CAS 78-93-3)	STEL	885 mg/m3	
		300 ppm	
	TWA	590 mg/m3	
		200 ppm	

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

Components	гуре	value	
3-Isocyanatomethyl-3,5,5-tri methylcyclohexyl isocyanate (CAS 4098-71-9)	Ceiling	0.02 ppm	
	TWA	0.005 ppm	
4,4'-methylenediphenyl diisocyanate (CAS 101-68-8)	Ceiling	0.02 ppm	
	TWA	0.005 ppm	
Methyl Ethyl Ketone (MEK) (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	

Components	Туре	ig occupational health and safety), as amended Value
3-Isocyanatomethyl-3,5,5-tri methylcyclohexyl isocyanate (CAS 4098-71-9)	TWA	0.045 mg/m3
		0.005 ppm
4,4'-methylenediphenyl diisocyanate (CAS 101-68-8)	TWA	0.051 mg/m3
		0.005 ppm
Methyl Ethyl Ketone (MEK) (CAS 78-93-3)	STEL	300 mg/m3
		100 ppm
	TWA	150 mg/m3
		50 ppm
Canada. Saskatchewan OELs (Oc Components	cupational Health and Safety F Type	Regulations, 1996, Table 21), as amended Value

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Components		Туре	Va	lue	
3-Isocyanatomethyl-3,5,5-ti methylcyclohexyl isocyanat (CAS 4098-71-9)		15 minute	0.0	15 ppm	
		8 hour	0.0	05 ppm	
4,4'-methylenediphenyl diisocyanate (CAS 101-68-8)		15 minute	0.0	15 ppm	
		8 hour	0.0	05 ppm	
Methyl Ethyl Ketone (MEK) (CAS 78-93-3)		15 minute	30	0 ppm	
		8 hour	200	0 ppm	
logical limit values					
ACGIH Biological Exposu	re Indices (BEI)				
Components	Value	Determinant	Specimen	Sampling Time	
Methyl Ethyl Ketone (MEK)	2 mg/l	MEK	Urine	*	

(CAS 78-93-3)	. ,	-		
* - For sampling	details, ple	ase see the	source docum	ent.

Good general ventilation should be used. Ventilation rates should be matched to conditions. If Appropriate engineering applicable, use process enclosures, local exhaust ventilation, or other engineering controls to controls maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment Chemical respirator with organic vapour cartridge and full facepiece. Eye/face protection Skin protection Wear appropriate chemical resistant gloves. Hand protection Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Chemical respirator with organic vapour cartridge and full facepiece. **Respiratory protection** Thermal hazards Wear appropriate thermal protective clothing, when necessary. Observe any medical surveillance requirements. Always observe good personal hygiene **General hygiene** measures, such as washing after handling the material and before eating, drinking, and/or considerations 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 Liquid. Appearance Liquid. **Physical state** Form Liquid.

Colour	Clear colorless or nearly colorless
Odour	Slight.
Odour threshold	Not available.
рН	7 @ 5% solution
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	204.4 °C (399.9 °F) Closed cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	plosive limits
Explosive limit - lower (%)	1.8 % estimated
Explosive limit – upper (%)	11.4 % estimated
Vapour pressure	16.94 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	505 °C (941 °F) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.00 g/cm3 estimated
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Oxidising properties	Not oxidising.
Specific gravity	1 estimated
10. Stability and reactivity	y .
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	Contact with incompatible materials.
Incompatible materials	Strong oxidising agents. Alcohols. Amides. Amines. Ammonia. Caustics. Isocyanates. Phenols.
Hazardous decomposition products	No hazardous decomposition products are known.
11. Toxicological informa	tion
Information on likely routes of e	exposure
Inhalation	May cause irritation to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be barmful

	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	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Coughing. 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	
3-Isocyanatomethyl-3,5,5-trimethy	vlcyclohexyl isocyanate (CAS 4098	-71-9)	
<u>Acute</u>			
Dermal	Det	1000	
LD50	Rat	1060 mg/kg	
Oral LD50	Rat	> 1000 mg/kg	
Methyl Ethyl Ketone (MEK) (CAS			
Acute	10 00 07		
Dermal			
LD50	Rabbit	> 8000 mg/kg	
Oral			
LD50	Rat	2300 - 3500 mg/kg	
Skin corrosion/irritation	Causes skin irritation.		
Serious eye damage/eye irritation	Causes serious eye irritation.		
Respiratory or skin sensitisatio			
Canada - Quebec OELs: Se			
3-Isocyanatomethyl-3,5, (CAS 4098-71-9)	5-trimethylcyclohexyl isocyanate	Sensitiser.	
	diisocyanate (CAS 101-68-8)	Sensitiser.	
Respiratory sensitisation	May cause allergy or asthma syr	mptoms or breathing difficulties if inhaled.	
Skin sensitisation	May cause an allergic skin react		
Germ cell mutagenicity	mutagenic or genotoxic.	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Suspected of causing cancer.		
- ·	Evaluation of Carcinogenicity		
• • •	· · · · · · ·	3 Not classifiable as to carcinogenicity to humans.	
Reproductive toxicity	Suspected of damaging fertility of	or the undorn child.	
Specific target organ toxicity - single exposure		May cause respiratory irritation.	
Specific target organ toxicity - repeated exposure	Not classified.		
Aspiration hazard	Not an aspiration hazard.		
Chronic effects	Prolonged inhalation may be har	rmful.	
12. Ecological informatio	n		
Ecotoxicity	Toxic to aquatic life.		
Persistence and degradability		adability of any ingredients in the mixture.	
Bioaccumulative potential			
Partition coefficient n-octa 3-lsocyanatomethyl-3,5,5-trir 4,4'-methylenediphenyl diiso Methyl Ethyl Ketone (MEK)	nethylcyclohexyl isocyanate	4.75 5.22 0.29	
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 consideration	ons		
Disposal instructions	Collect and reclaim or dispose ir this material to drain into sewers	n sealed containers at licensed waste disposal site. Do not allow s/water supplies. Do not contaminate ponds, waterways or ditches . Dispose of contents/container in accordance with nal regulations.	

Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 F 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.

ΙΑΤΑ

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not established.

Annex II of MARPOL 73/78 and the IBC Code

Canadian regulations

15. Regulatory information

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.

		equired by the fill it.	
Controlled Drugs and Su	bstances Act		
Not regulated.			
Export Control List (CEP	A 1999, Schedule 3)		
Not listed.			
Greenhouse Gases			
Not listed.			
Precursor Control Regul			
Methyl Ethyl Ketone (I	MEK) (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 Indus	trial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (D	SL)	Yes
Canada	Non-Domestic Substances L	ist (NDSL)	No
China	Inventory of Existing Chemic	al Substances in China (IECSC)	Yes
Europe	European Inventory of Existir Substances (EINECS)	ng Commercial Chemical	No
Europe	European List of Notified Che	emical Substances (ELINCS)	No
Japan	Inventory of Existing and Nev	w Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory		Yes

Country(s) or region	Inventory name On inventory (y	es/no)*
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)	

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 informati	on
Issue date	22-May-2019
Revision date	01-August-2023
Version No.	09
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.