

SAFETY DATA SHEET

1. Identification

Product identifier: NVH-HT 1

Other means of identification

Synonyms: SILICONE RESIN IN TOLUENE SOLUTION

Recommended use and restriction on use

Recommended use: Industrial use

Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information : Momentive Performance Materials LLC
260 Hudson River Road
Waterford NY 12188

Contact person : commercial.services@momentive.com

Telephone : General information
+1-800-295-2392

Emergency telephone number

Supplier : CHEMTREC
1-800-424-9300

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

Skin Corrosion/Irritation Category 2

Toxic to reproduction Category 2

Specific Target Organ Toxicity -
Single Exposure Category 3¹.

Specific Target Organ Toxicity -
Repeated Exposure Category 2².

Aspiration Hazard Category 1

Target Organs

1. Narcotic effect.
2. Central nervous system.

Label Elements

Hazard Symbol:

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Signal Word: Danger

Hazard Statement: H225; Highly flammable liquid and vapor.
H315; Causes skin irritation.
H361; Suspected of damaging fertility or the unborn child.
H336; May cause drowsiness or dizziness.
H373; May cause damage to organs through prolonged or repeated exposure.
H304; May be fatal if swallowed and enters airways.

Precautionary Statements

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. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. If skin irritation occurs: Get medical advice/attention. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell. Specific treatment (see on this label). Take off contaminated clothing. In case of fire: Use alcohol resistant foam for extinction.

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

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNO): Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

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Mixtures

Chemical Identity	CAS number	Content in percent (%)*	Notes
Toluene	108-88-3	20 - <50%	# This substance has workplace exposure limit(s).
2-Propanol	67-63-0	1 - <5%	# This substance has workplace exposure limit(s).

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

4. First-aid measures

General information:	Get medical attention if symptoms occur.
Ingestion:	Rinse mouth. Do NOT induce vomiting. Get medical attention immediately.
Inhalation:	Move into fresh air and keep at rest. Get medical attention.
Skin Contact:	Take off immediately all contaminated clothing. Wash the skin immediately with soap and water. Get medical attention.
Eye contact:	Rinse immediately with plenty of water and seek medical advice.

Most important symptoms/effects, acute and delayed

Symptoms:	Contains toluene. The metabolism of other solvents may be inhibited resulting in a potentiation of toxic effects of those chemicals. Uptake is directly proportional to the amount of body fat. Blood levels may be cumulative when exposure is extended.
	More severe effects if alcohol is consumed. Stimulants such as epinephrine may induce ventricular fibrillation.

Hazards:	No data available.
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Indication of immediate medical attention and special treatment needed

Treatment:	Get medical attention immediately.
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5. Fire-fighting measures

General Fire Hazards:	Use water spray to keep fire-exposed containers cool.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical: No data available.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.

Methods and material for containment and cleaning up: Collect spillage with granulates, sawdust, rags or other absorbent.

Notification Procedures: Remove sources of ignition.

7. Handling and storage

Precautions for safe handling: Keep away from sources of ignition - No smoking. Ground container and transfer equipment to eliminate static electric sparks. Use only in well-ventilated areas.

Conditions for safe storage, including any incompatibilities: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Toluene	TWA	20 ppm	US. ACGIH Threshold Limit Values, as amended (03 2015)
	STEL	150 ppm 560 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)

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	REL	100 ppm	375 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	TWA	100 ppm	375 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	150 ppm	560 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	200 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	Ceiling	300 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	MAX. CONC	500 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000), as amended (02 2006)
	TWA	100 ppm	375 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)
	Ceiling	500 ppm		US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
	STEL	150 ppm	560 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
	TWA PEL	10 ppm	37 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
	IDLH	500 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)
	STEL	150 ppm	580 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (01 2019)
	TWA	20 ppm		US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values, as amended (01 2020)
2-Propanol	TWA	200 ppm		US. ACGIH Threshold Limit Values, as amended (03 2015)
	STEL	400 ppm		US. ACGIH Threshold Limit Values, as amended (03 2015)
	REL	400 ppm	980 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	STEL	500 ppm	1,225 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	PEL	400 ppm	980 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	400 ppm	980 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	STEL	500 ppm	1,225 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	400 ppm	980 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)
	STEL	500 ppm	1,225 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
	TWA PEL	400 ppm	980 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
	IDLH	2,000 ppm		US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)
	LEL		2.0 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)
	STEL	500 ppm	1,225 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (01 2019)
	AN ESL		200 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (06 2018)
	ST ESL		4,920 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (06 2018)
	ST ESL		2,000 ppb	US. Texas. Effects Screening Levels (Texas

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			Commission on Environmental Quality), as amended (06 2018)
	AN ESL	492 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (06 2018)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Toluene (o-Cresol, with hydrolysis: Sampling time: End of shift.)	0.3 mg/g (Creatinine in urine)	ACGIH BEI (03 2015)
Toluene (toluene: Sampling time: Prior to last shift of work week.)	0.02 mg/l (Blood)	ACGIH BEI (03 2015)
Toluene (toluene: Sampling time: End of shift.)	0.03 mg/l (Urine)	ACGIH BEI (03 2015)
2-Propanol (acetone: Sampling time: End of shift at end of work week.)	40 mg/l (Urine)	ACGIH BEI (03 2015)

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

General information: Avoid contact with skin.

Eye/face protection: Safety glasses with side-shields conforming to EN166

Skin Protection

Hand Protection: Use chemical-resistant, impervious gloves.

Other: Chemical resistant clothing Wear rubber boots.

Respiratory Protection: If inhalation exposure is expected, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wear suitable gloves and eye/face protection. Avoid inhalation of vapors and spray mists.

9. Physical and chemical properties

Appearance

Physical state: liquid

Form: liquid

Color: Colorless

Odor: Aromatic

Odor threshold: No data available.

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pH:	Not applicable
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	110 °C
Flash Point:	14.40 °C (Closed Cup)
Evaporation rate:	> 1
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	7.00 %(V)
Flammability limit - lower (%):	1.20 %(V)
Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Heat of combustion:	No data available.
Vapor pressure:	Not applicable
Vapor density:	No data available.
Density:	ca. 1.044 g/cm ³
Relative density:	0.99
Solubility(ies)	
Solubility in water:	Negligible
Solubility (other):	No data available.
Partition coefficient (n-octanol/water) Log Pow:	No data available.
Auto-ignition temperature:	536.00 °C
Decomposition temperature:	No data available.
SADT:	No data available.
Viscosity, dynamic:	No data available.
Viscosity, kinematic:	< 14 mm ² /s (40 °C)
VOC:	415 g/l ;

10. Stability and reactivity

Reactivity:	No dangerous reaction if used as recommended.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Keep away from sources of ignition - No smoking.
Incompatible Materials:	Heat, sparks, flames.

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Hazardous Decomposition Products:

Carbon dioxide Formaldehyde. Silicon dioxide. This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150°C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive.

11. Toxicological information

Information on likely routes of exposure

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: 5,000 mg/kg
ATEmix : 250,000 mg/kg

Specified substance(s):

Toluene LD 50 (Rat): > 5,000 mg/kg

Dermal

Product: 14,000 mg/kg
ATEmix : 250,000 mg/kg

Specified substance(s):

Toluene LD 50 (Rabbit): 12,124 mg/kg

Inhalation

Product: Not classified for acute toxicity based on available data.

Specified substance(s):

Toluene LC50 (Rat): 30.6 mg/l

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Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Target Organs

Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

Specific Target Organ Toxicity - Repeated Exposure: Central nervous system.

Aspiration Hazard

Product: No data available.

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Other effects:

Laboratory animal gavage studies, as well as repeated (addictive) inhalation of toluene or toluene-containing materials by pregnant mothers, have shown toluene to be an embryofetal toxic substance.

Studies in laboratory animals suggest that prolonged and repeated overexposure to toluene vapors may cause hearing loss. Repeated exposure to moderately high concentrations of toluene vapor may cause brain damage. Signs and symptoms include euphoria, hallucinations, behavioral disturbances, double vision, ataxia, convulsions and coma.

Exposure to toluene during pregnancy has demonstrated limited evidence of developmental toxicity in laboratory animals. The effects seen included decreased fetal body weight and increased skeletal variations in both inhalation and oral studies.

Isopropyl alcohol has produced fetotoxic effects and developmental effects in animals following oral administration.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Toluene LC0 (Leuciscus idus, 48 h): 52 mg/l
LC50 (Leuciscus idus, 48 h): 70 mg/l
LC50 (Pimephales promelas, 96 h): 34 mg/l

2-Propanol LC50 (Leuciscus idus, 48 h): 8,970 mg/l
LC50 (Pimephales promelas, 96 h): > 65,500 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Toluene LC0 (Daphnia magna): 93 mg/l
(Daphnia magna): 270 mg/l

2-Propanol EC50 (Daphnia magna, 24 h): > 10,000 mg/l
EC0 (Daphnia magna): 500 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

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Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

2-Propanol 82.5 % (5 d, No data available.)

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Toluene No data available.

2-Propanol No data available.

Other adverse effects: No data available.

13. Disposal considerations

General information:

See Section 8 for information on appropriate personal protective equipment. Do not discharge into drains, water courses or onto the ground. The generation of waste should be avoided or minimized wherever possible.

Disposal instructions:

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. The generation of waste should be avoided or minimized wherever possible. The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

Contaminated Packaging:

Dispose of as unused product.

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14. Transport information

DOT

UN Number:	UN 1866
UN Proper Shipping Name:	Resin solution
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	II
Marine Pollutant:	No

IMDG

UN Number:	UN 1866
UN Proper Shipping Name:	RESIN SOLUTION
Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-E
Packing Group:	II
Marine Pollutant:	No
Limited quantity	5.00L
Excepted quantity	E2

IATA

UN Number:	UN 1866
Proper Shipping Name:	Resin solution
Transport Hazard Class(es):	
Class:	3
Label(s):	3
Packing Group:	II
Cargo aircraft only Packing	364
Instructions:	
Passenger and cargo aircraft	364
Packing Instructions:	
Limited quantity:	Y341
Packing Instructions:	
Excepted quantity	E2
Environmental Hazards:	Not regulated.
Marine Pollutant:	No

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

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US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

<u>Chemical Identity</u>	<u>OSHA hazard(s)</u>
Toluene	Causes mild skin irritation.; Systemic effects
2-Propanol	Moderately irritating to the eyes.; Systemic effects

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Toluene	1,000 lbs.
<u>Chemical Identity</u>	<u>Reportable quantity</u>
Toluene	1,000 lbs.
2-Propanol	100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard
Flammable (gases, aerosols, liquids, or solids)
Skin Corrosion or Irritation
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Aspiration Hazard
Hazards Not Otherwise Classified (HNOC)

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
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US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

<u>Chemical Identity</u>	<u>Reporting threshold for other users</u>	<u>Reporting threshold for manufacturing and processing</u>
Toluene		
2-Propanol		

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Toluene	Reportable quantity: 1,000 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

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WARNING: This product can expose you to chemicals including Benzene, which is [are] known to the State of California to cause cancer and birth defects or other reproductive harm.

This product can expose you to chemicals including Toluene, which is [are] known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Silicic acid, trimethylsilyl ester

Toluene

2-Propanol

Benzene

US. Massachusetts RTK - Substance List

Chemical Identity

Toluene

Benzene

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Toluene

US. Rhode Island RTK

Chemical Identity

Toluene

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Inventory Status:

Australia AICS:	y (positive listing)	Remarks: None.
EU EINECS List:	y (positive listing)	Remarks: None.
Japan (ENCS) List:	y (positive listing)	Remarks: None.
China Inventory of Existing Chemical Substances:	y (positive listing)	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	y (positive listing)	Remarks: None.
Canada DSL Inventory List:	e (special case)	Remarks: None.
Canada NDSL Inventory:	n (Negative listing)	Remarks: None.
Philippines PICCS:	y (positive listing)	Remarks: None.
US TSCA Inventory:	y (positive listing)	Remarks: On TSCA Inventory
New Zealand Inventory of Chemicals:	y (positive listing)	Remarks: None.
Taiwan Chemical Substance Inventory:	y (positive listing)	Remarks: None.
REACH:	If purchased from Momentive Performance Materials GmbH in Leverkusen, Germany, all substances in this product have been registered by Momentive Performance Materials GmbH or upstream in our supply chain or are exempt from registration under Regulation (EC) No 1907/2006 (REACH). For polymers, this includes the constituent monomers and other reactants.	Remarks: None.

16. Other information, including date of preparation or last revision

HMIS Hazard ID

Health	*	3
Flammability		3
Physical Hazards		0
PERSONAL PROTECTION		K

K - Hood, Gloves, Protective Suit & Boots

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 08/28/2020

Revision Date: No data available.

Version #: 3.1

Further Information: No data available.

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Disclaimer:

Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives. Keep out of the reach of children.

Further Information

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. 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.

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