

HandiFoam HC Gun Foam, HandiFoam HC Straw Foam, HandiFoam Fireblock, HandiFoam Fireblock West, HandiFoam Extreme, HandiFoam Window & Door, HandiFoam Window & Door West and HandiFoam Extreme Window & Door Polyurethane Foam Sealants

ICP Construction Inc

Version No: 2.3

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: 06/25/2024 Print Date: 06/25/2024 S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	HandiFoam HC Gun Foam, HandiFoam HC Straw Foam, HandiFoam Fireblock, HandiFoam Fireblock West, HandiFoam Extreme, HandiFoam Window & Door, HandiFoam Window & Door West and HandiFoam Extreme Window & Door Polyurethane Foam Sealants	
Synonyms	Available	
Proper shipping name	Aerosols, flammable, (each not exceeding 1 L capacity)	
Other means of identification	Not Available	

Recommended use of the chemical and restrictions on use

Relevant identified uses Use according to manufacturer's directions.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	ICP Construction Inc
Address	150 Dascomb Road Andover MA 01810 United States
Telephone	1-866-667-5119 1-978-623-9987
Fax	Not Available
Website	www.icpgroup.com
Email	sds@icpgroup.com

Emergency phone number

Association / Organisation	ChemTel
Emergency telephone numbers	1-800-255-3924
Other emergency telephone numbers	1-813-248-0585

SECTION 2 Hazard(s) identification

Classification of the substance or mixture



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification
Classification

Aerosols Category 1, Gases Under Pressure (Compressed Gas), Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A, Acute Toxicity (Inhalation) Category 4, Sensitisation (Respiratory) Category 1, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Reproductive Toxicity Effects on or via Lactation, Specific Target Organ Toxicity - Repeated Exposure Category 1

Label elements



Signal word Danger

Hazard statement(s)

(1)	
H222	Extremely flammable aerosol.
H280	Contains gas under pressure; may explode if heated.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P271	Use only outdoors or in a well-ventilated area.
P284	[In case of inadequate ventilation] wear respiratory protection.
P261	Avoid breathing gas.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P262	Do not get in eyes, on skin, or on clothing
P264	Wash all exposed external body areas thoroughly after handling.

Precautionary statement(s) Response

P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P308+P313	IF exposed or concerned: Get medical advice/ attention.	
P333+P313	ritation or rash occurs: Get medical advice/attention.	
P337+P313	eye irritation persists: Get medical advice/attention.	
P302+P352	ON SKIN: Wash with plenty of water and soap.	
P304+P340	IHALED: Remove person to fresh air and keep comfortable for breathing.	

Precautionary statement(s) Storage

P405	Store locked up.	
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.	
P403+P233	Store in a well-ventilated place. Keep container tightly closed.	

Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
198840-65-2	10-30	C14 alkanes. chlorinated (chlorinated paraffin)
9016-87-9	10-30	polymeric diphenylmethane diisocyanate
101-68-8	10-30	4.4'-diphenylmethane diisocyanate (MDI)

CAS No	%[weight]	Name
74-98-6	1-5	propane
75-28-5.	3-7	iso-butane
115-10-6	3-7	dimethyl ether

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measur	es
Eye Contact	 If aerosols come in contact with the eyes: Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If solids or aerosol mists are deposited upon the skin: Flush skin and hair with running water (and soap if available). Remove any adhering solids with industrial skin cleansing cream. DO NOT use solvents. Seek medical attention in the event of irritation.
Inhalation	 Following uptake by inhalation, move person to an area free from risk of further exposure. Oxygen or artificial respiration should be administered as needed. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Treatment is essentially symptomatic. A physician should be consulted. If aerosols, fumes or combustion products are inhaled: Remove to fresh air. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

- For sub-chronic and chronic exposures to isocyanates:
 - This material may be a potent pulmonary sensitiser which causes bronchospasm even in patients without prior airway hyperreactivity.
 - Clinical symptoms of exposure involve mucosal irritation of respiratory and gastrointestinal tracts.
- Conjunctival irritation, skin inflammation (erythema, pain vesiculation) and gastrointestinal disturbances occur soon after exposure.
- Pulmonary symptoms include cough, burning, substernal pain and dyspnoea.
- Some cross-sensitivity occurs between different isocyanates.
- Noncardiogenic pulmonary oedema and bronchospasm are the most serious consequences of exposure. Markedly symptomatic patients should receive oxygen, ventilatory support and an intravenous line.
- Treatment for asthma includes inhaled sympathomimetics (epinephrine [adrenalin], terbutaline) and steroids.
- Activated charcoal (1 g/kg) and a cathartic (sorbitol, magnesium citrate) may be useful for ingestion.
- Mydriatics, systemic analgesics and topical antibiotics (Sulamyd) may be used for corneal abrasions.
- There is no effective therapy for sensitised workers.

[Ellenhorn and Barceloux; Medical Toxicology]

NOTE: Isocyanates cause airway restriction in naive individuals with the degree of response dependant on the concentration and duration of exposure. They induce smooth muscle contraction which leads to bronchoconstrictive episodes. Acute changes in lung function, such as decreased FEV1, may not represent sensitivity. [Karol & Jin, Frontiers in Molecular Toxicology, pp 56-61, 1992]

Personnel who work with isocyanates, isocyanate prepolymers or polyisocyanates should have a pre-placement medical examination and periodic examinations thereafter, including a pulmonary function test. Anyone with a medical history of chronic respiratory disease, asthmatic or bronchial attacks, indications of allergic responses, recurrent eczema or sensitisation conditions of the skin should not handle or work with isocyanates. Anyone who develops chronic respiratory distress when working with isocyanates should be removed from exposure and examined by a physician. Further exposure must be avoided if a sensitivity to isocyanates or polyisocyanates has developed.

SECTION 5 Fire-fighting measures

Extinguishing media

- Small quantities of water in contact with hot liquid may react violently with generation of a large volume of rapidly expanding hot sticky semi-solid foam.
- Presents additional hazard when fire fighting in a confined space.
- Cooling with flooding quantities of water reduces this risk.
- Dry chemical powder
- BCF (where regulations permit).
- Carbon dioxide

SMALL FIRE:

Water spray, dry chemical or CO2

LARGE FIRE:
Water spray or fog.

Special hazards arising from the substrate or mixture

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HandiFoam HC Gun Foam, HandiFoam HC Straw Foam, HandiFoam Fireblock, HandiFoam Fireblock West, HandiFoam Extreme, HandiFoam Window & Door, HandiFoam Window & Door West and

Fire Incompatibility

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting	
Fire/Explosion Hazard	 Combustible. Moderate fire hazard when exposed to heat or flame. When heated to high temperatures decomposes rapidly generating vapour which pressures and may then rupture containers with release of flammable and highly toxic isocyanate vapour. carbon dioxide (CO2) isocyanates hydrogen cyanide and minor amounts of hydrogen chloride phosgene nitrogen oxides (NOX) other pyrolysis products typical of burning organic material. BEWARE: Empty solvent, paint, lacquer and flammable liquid drums present a severe explosion hazard if cut by flame torch or welded. Even when thoroughly cleaned or reconditioned the drum seams may retain sufficient solvent to generate an explosive atmosphere in the drum. WARNING: Aerosol containers may present pressure related hazards.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	 Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses.
Major Spills	 For isocyanate spills of less than 40 litres (2 m2): Evacuate area from everybody not dealing with the emergency, keep them upwind and prevent further access, remove ignition sources and, if inside building, ventilate area as well as possible. Notify supervision and others as necessary. Put on personal protective equipment (suitable respiratory protection, face and eye protection, protective suit, gloves and impermeable boots). Avoid contamination with water, alkalies and detergent solutions. Material reacts with water and generates gas, pressurises containers with even drum rupture resulting. DO NOT reseal container if contamination is suspected. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	 Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area.
Other information	Consider storage under inert gas.

Conditions for safe storage, including any incompatibilities

Suitable container	 For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt. Aerosol dispenser. Check that containers are clearly labelled.
Storage incompatibility	Dimethyl ether: is a peroxidisable gas may be heat and shock sensitive is able to form unstable peroxides on prolonged exposure to air reacts violently with oxidisers, aluminium hydride, lithium aluminium hydride is incompatible with strong acids, metal salts Reacts vigorously with alkali metals Butane / isobutane: reacts violently with strong oxidisers, acetylene, halogens, and nitrous oxides does not mix with chlorine dioxide, nitric acid and some plastics may generate electrostatic charges, due to low conductivity, which may ignite vapours. Store butane well away from nickel carbonyl in the presence of oxygen between 20-40°C

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	4,4'-diphenylmethane diisocyanate (MDI)	Methylene bisphenyl isocyanate (MDI)	Not Available	Not Available	0.02 ppm / 0.2 mg/m3	Not Available
US NIOSH Recommended Exposure Limits (RELs)	4,4'-diphenylmethane diisocyanate (MDI)	Methylene bisphenyl isocyanate	0.005 ppm / 0.05 mg/m3	Not Available	0.020 (10-minute) ppm / 0.2 (10-minute) mg/m3	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	propane	Propane	1000 ppm / 1800 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	propane	Propane	1000 ppm / 1800 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	iso-butane	Isobutane	800 ppm / 1900 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
polymeric diphenylmethane diisocyanate	0.15 mg/m3	3.6 mg/m3		22 mg/m3
4,4'-diphenylmethane diisocyanate (MDI)	0.45 mg/m3	Not Available		Not Available
4,4'-diphenylmethane diisocyanate (MDI)	29 mg/m3	40 mg/m3		240 mg/m3
propane	Not Available	Not Available		Not Available
iso-butane	5500* ppm	17000** ppm		53000*** ppm
dimethyl ether	3,000 ppm	3800* ppm		7200* ppm
Ingredient	Original IDLH		Revised IDLH	
C14 alkanes, chlorinated-, (chlorinated paraffin)	Not Available		Not Available	
polymeric diphenylmethane diisocyanate	Not Available		Not Available	
4,4'-diphenylmethane diisocyanate (MDI)	75 mg/m3		Not Available	
propane	Not Available		Not Available	
iso-butane	Not Available		Not Available	
dimethyl ether	Not Available		Not Available	

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
C14 alkanes, chlorinated-, (chlorinated paraffin)	E	≤ 0.1 ppm	
polymeric diphenylmethane diisocyanate	E	≤ 0.1 ppm	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.		

Exposure controls

Appropriate	engineering
	controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk.

Individual protection measures, such as personal protective equipment

Eye and face protection	 Safety glasses with side shields. Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.
Skin protection	See Hand protection below
Hands/feet protection	 NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. Isocyanate resistant materials include Teflon, Viton, nitrile rubber and some PVA gloves. Protective gloves and overalls should be worn as specified in the appropriate national standard. Contaminated garments should be removed promptly and should not be re-used until they have been decontaminated. No special equipment needed when handling small quantities. OTHERWISE: For potentially moderate exposures: Wear general protective gloves, eg. light weight rubber gloves. For potentially heavy exposures: Wear chemical protective gloves, eg. PVC.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. OTHERWISE: • Overalls. • Skin cleansing cream.

Respiratory protection

Type KAX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used
- Generally not applicable.

Aerosols, in common with most vapours/ mists, should never be used in confined spaces without adequate ventilation. Aerosols, containing agents designed to enhance or mask smell, have triggered allergic reactions in predisposed individuals.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Not Available		
Physical state	Compressed Gas	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	-104	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	165

SECTION 10 Stability and reactivity

Reactivity See section 7

Chemical stability	 Elevated temperatures. Presence of open flame. Product is considered stable. Presence of elevated temperatures.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Window & Door Polyurethane Foam Sealants

Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. A vapour/mist containing chlorinated paraffins of more than 10 carbon atoms and a chlorine content ranging between 40 and 70% may produce sore throat, coughing and shortness of breath. Isobutane produces a dose dependent action and at high concentrations may cause numbness, suffocation, exhilaration, dizziness, headache, nausea, confusion, incoordination and unconsciousness in severe cases. The paraffin gases are practically not harmful at low doses. Higher doses may produce reversible brain and nerve depression and irritation. The vapour/mist may be highly irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis and pulmonary oedema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia. Gastrointestinal disturbances are characterised by nausea and vomiting. WARNING:Intentional misuse by concentrating/inhaling contents may be lethal.			
Ingestion	Chlorinated paraffins can cause liver damage and wasting of heart muscle. Large amounts can cause abdominal pain, nausea, vomiting, as well as inactivity, inco-ordination and diarrhoea. The material has NOT been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence. Isoparaffinic hydrocarbons cause temporary lethargy, weakness, inco-ordination and diarrhoea. Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments			
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Chlorinated paraffins of more than 10 carbon atoms and a chlorine content ranging between 40 and 70% may be absorbed by the skin and produce areas of localised reddening. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Spray mist may produce discomfort Exposure to the material may result in a skin inflammation called chloracne. This is characterised by white- and blackheads, keratin cysts, spots, excessive discolouration.			
Eye	This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.			
Chronic	Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. This product contains a polymer with a functional group considered to be of high concern. Isothiocyanates may cause hypersensitivity of the skin and airways. Prolonged or repeated exposure to chlorinated paraffins may produce liver and kidney disorders. Chronic administration of high doses can cause hair standing on end, muscle inco-ordination and incontinence. Persons with a history of asthma or other respiratory problems or are known to be sensitised, should not be engaged in any work involving the handling of isocyanates. The chemistry of reaction of isocyanates, as evidenced by MDI, in biological milieu is such that in the event of a true exposure of small MDI doses to the mouth, reactions will commence at once with biological macromolecules in the buccal region and will continue along the digestive tract prior to reaching the stomach. Reaction products will be a variety of polyureas and macromolecular conjugates with for example mucus, proteins and cell components. Animal testing shows that polymeric MDI can damage the nasal cavities and lungs, causing inflammation.and increased cell growth. There has been concern that this material can cause cancer or mutations, but there is not enough data to make an asses			
HandiFoam HC Gun Foam,				
HandiFoam HC Straw Foam, HandiFoam Fireblock,				
HandiFoam Fireblock West, HandiFoam Extreme,	TOXICITY IRRITATION			
HandiFoam Window & Door, HandiFoam Window & Door	Not Available	Not Available		
West and HandiFoam Extreme				

Odd allowers addering to d	ΤΟΧΙΟΙΤΥ		IRRITATIO	אר			
C14 alkanes, chlorinated-, (chlorinated paraffin)	(chlorinated paraffin) Not Available			Not Available			
	ΤΟΧΙCITY			IRRITATION			
	Dermal (rabbit) LD50: >9400 mg/kg ^{[2}	2]		Eye (rabbit): 100 mg -	mild		
polymeric diphenylmethane diisocyanate	Inhalation (Rat) LC50: 0.49 mg/L4h ^{[2}						
	Oral (Rat) LD50: 43000 mg/kg ^[2]						
				1			
	TOXICITY IRRITATION						
	Dermal (rabbit) LD50: >6200			741			
4,4'-diphenylmethane	mg/kg ^[2] Eye: no adverse effect observed (not irritating) ^[1]						
diisocyanate (MDI)	Inhalation (Rat) LC50: 0.368 Skin (rabbit): 500 mg /24 hours mg/L4h ^[1] 2133615]			s Dermal Sensitiser *Respiratory Sensitiser (g.pig) *[* = Bayer CCINFO			
	Oral (Mouse) LD50; 2200 mg/kg ^[2]	Skin: adverse effect obser	ved (irritating) ^[1]				
	ΤΟΧΙCΙΤΥ				IRRITATION		
propane	Inhalation (Rat) LC50: 364726.819 p	om4h ^[2]			Not Available		
	ΤΟΧΙCITY		IRRITATION				
iso-butane	Inhalation (Rat) LC50: >13023 ppm4l	h[1]	Eye: no adverse	effect observed (not irrit	ating) ^[1]		
			-	effect observed (not irri			
	TOXICITY		IRRITATION				
dimethyl ether	Inhalation (Rat) LC50: >20000 ppm4	h[1]	Skin: no adverse	kin: no adverse effect observed (not irritating) ^[1]			
	specified data extracted from RTECS	- Register of Toxic Effect of C	nemicai Substan	ces			
C14 ALKANES, CHLORINATED-, (CHLORINATED PARAFFIN)	WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans. Tenth Annual Report on Carcinogens: Substance anticipated to be Carcinogen [National Toxicology Program: U.S. Dep. of Health & Human Services 2002]						
POLYMERIC DIPHENYLMETHANE DIISOCYANATE	product Isocyanate vapours are irritating to the airways and can cause their inflammation, with wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, inco-ordination, anxiety, depression and paranoia.						
4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	Inhalation (human) TCLo: 0.13 ppm/30 mins Eye (rabbit): 0.10 mg moderate						
HandiFoam HC Gun Foam, HandiFoam HC Straw Foam, HandiFoam Fireblock, HandiFoam Fireblock West, HandiFoam Extreme, HandiFoam Window & Door, HandiFoam Window & Door West and HandiFoam Extreme Window & Door Polyurethane Foam Sealants & POLYMERIC DIPHENYLMETHANE DIISOCYANATE & 4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.						
HandiFoam HC Gun Foam, HandiFoam HC Straw Foam, HandiFoam HC Straw Foam, HandiFoam Fireblock West, HandiFoam Window & Door, HandiFoam Window & Door West and HandiFoam Extreme Window & Door Polyurethane Foam Sealants & C14 ALKANES, CHLORINATED-, (CHLORINATED PARAFFIN)	C12, 60% Chlorinated paraffin is classified by IARC as possibly causing cancer in humans. In experimental animals, oral exposure to its C12, 59% variant plus corn oil produced tumour and early infant death. High molecular weight liquid chloroparaffins are considered to be practically non-harmful. Special consideration should be given to solid grades of the material (eg Cerector 70) because of relatively high levels of carbon tetrachloride remaining as a residual reactant. Vapours are readily absorbed through intact skin, requiring additional precautions in handling. Lifetime studies have been carried out with two grades of chlorinated paraffins.						
C14 ALKANES, CHLORINATED-, (CHLORINATED PARAFFIN) &	No significant acute toxicological data identified in literature search.						
					Continued		

PROPANE			
POLYMERIC DIPHENYLMETHANE DIISOCYANATE & 4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	The material may produce moderate eye irritation lead conjunctivitis. Aromatic and aliphatic diisocyanates may cause airwa effect. Of the several members of diisocyanates teste others produced a harmless outcome. The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or lim	ay toxicity and skin sensitization. Mono d on experimental animals by inhalatio	omers and prepolymers exhibit similar respiratory
Acute Toxicity	✓	Carcinogenicity	×
Skin Irritation/Corrosion	✓	Reproductivity	×
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	×
Respiratory or Skin sensitisation	*	STOT - Repeated Exposure	*
Mutagenicity	×	Aspiration Hazard	×
		Legend: 🗙 – Data either n	ot available or does not fill the criteria for classification

Data available to make classification

SECTION 12 Ecological information

HandiFoam HC Gun Foam,							
HandiFoam HC Straw Foam, HandiFoam Fireblock,							
HandiFoam Fireblock West,	Endpoint	Test Duration (hr)	Species	Value		Source	
HandiFoam Extreme, HandiFoam Window & Door,	Not Available	Not Available	Not Available	Not Availa		Not Available	
HandiFoam Window & Door est and HandiFoam Extreme lindow & Door Polyurethane Foam Sealants		Technolog					
C14 alkanes, chlorinated-,	Endpoint	Test Duration (hr)	Species	Value		Source	
(chlorinated paraffin)	Not Available	Not Available	Not Available	Not Availa	ble	Not Available	
polymeric diphenylmethane	Endpoint	Test Duration (hr)	Species	Value		Source	
diisocyanate	Not Available	Not Available	Not Available	Not Availa	ble	Not Available	
	Endpoint	Test Duration (hr)	Species	Species Value		Source	
	LC50	96h	Fish	95.24-134.37mg/		Not Available	
4,4'-diphenylmethane	EC50	48h	Crustacea	>100mg/l		2	
diisocyanate (MDI)	NOEC(ECx)	504h	Crustacea	>=10mg/l		2	
	BCF	672h	Fish	Fish 61-150		7	
	Endpoint	Test Duration (hr)	Species	Value		Source	
propane	Not Available	Not Available	Not Available	Not Availa	ble	Not Available	
	Endpoint	Test Duration (hr)	Species		Value	Source	
	EC50(ECx)	96h	Algae or other aquatic plants		7.71mg/l	2	
iso-butane	EC50	96h	Algae or other aquatic plants		7.71mg/l	2	
	LC50	96h	Fish		24.11mg/	1 2	
	Endpoint	Test Duration (hr)	Species		Value		
	LC50	96h	Fish	Fish		2	
dimethyl ether	EC50	48h	Crustacea		>4400mg/L	2	
	NOEC(ECx)	48h	Crustacea	Crustacea		1	
	EC50	96h	Algae or other aquati	plants	154.917mg/	2	

for polyisocyanates:

Polyisocyanates are not readily biodegradable. However, due to other elimination mechanisms (hydrolysis, adsorption), long retention times in water are not to be expected. The resulting polyurea is more or less inert and, due to its molecular size, not bioavailable.

For Isocyanate Monomers:

Environmental Fate: Isocyanates, (di- and polyfunctional isocyanates), are commonly used to make various polymers, such as polyurethanes. Polyurethanes find significant application in the manufacture of rigid and flexible foams. They are also used in the production of adhesives, elastomers, and coatings. The term chlorinated paraffins is usually taken to encompass a wide range of liquids and solids from C10 to >C24 containing 30-72% chlorine content. Properties differ significantly across this range and for this reason they are considered in three separate groups: 1. The C10-13 liquid products from 40-72% Cl2 content

2

For Isobutene (Refrigerant Gas): Koc: 35, (estimated); Henry s Law Constant: 4.08 atm-cu m/mole; Vapor Pressure: 2611 mm Hg @ 25 deg C; BCF: 74, (estimated). Atmospheric Fate: Isobutane is a gas at ordinary temperatures. The substance is highly flammable and explosive. **DO NOT** discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
4,4'-diphenylmethane diisocyanate (MDI)	LOW (Half-life = 1 days)	LOW (Half-life = 0.24 days)
propane	LOW	LOW
iso-butane	HIGH	HIGH
dimethyl ether	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
4,4'-diphenylmethane diisocyanate (MDI)	LOW (BCF = 15)
propane	LOW (LogKOW = 2.36)
iso-butane	LOW (BCF = 1.97)
dimethyl ether	LOW (LogKOW = 0.1)

Mobility in soil

Ingredient	Mobility
4,4'-diphenylmethane diisocyanate (MDI)	LOW (Log KOC = 376200)
propane	LOW (Log KOC = 23.74)
iso-butane	LOW (Log KOC = 35.04)
dimethyl ether	HIGH (Log KOC = 1.292)

SECTION 13 Disposal considerations

Waste treatment methods	
Product / Packaging disposal	 DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Consult State Land Waste Management Authority for disposal. Discharge contents of damaged aerosol cans at an approved site. Allow small quantities to evaporate.

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO

Shipping container, transport vehicle placarding, and labeling may vary from the below information. This depends on the quantity shipped, the applicability of excepted quantity requirements, limited quantity requirements, and/or special provisions according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate labels and markings in accordance with applicable transport regulations.

Land transport (DOT)

14.1. UN number or ID number	1950						
14.2. UN proper shipping name	Aerosols, flammable, (each not exceeding 1 L capacity)						
14.3. Transport hazard class(es)	Class 2.1 Subsidiary Hazard Not Applicable						
14.4. Packing group	Not Applicable						
14.5. Environmental hazard	Not Applicable						

14.6. Special precautions for	Hazard Label	2.1
user	Special provisions	N82

Air transport (ICAO-IATA / DGR)

14.1. UN number	1950					
14.2. UN proper shipping name	Aerosols, flammable					
14.3. Transport hazard class(es)	ICAO/IATA Class 2.1 ICAO / IATA Subsidiary Hazard Not Applicable					
	ERG Code	10L				
14.4. Packing group	Not Applicable					
14.5. Environmental hazard	Not Applicable					
	Special provisions		A145 A167 A802			
	Cargo Only Packing Instructions		203			
	Cargo Only Maximum Qty / Pack		150 kg			
14.6. Special precautions for user	Passenger and Cargo Packing In	structions	203			
	Passenger and Cargo Maximum	Qty / Pack	75 kg			
	Passenger and Cargo Limited Qu	antity Packing Instructions	Y203			
	Passenger and Cargo Limited Ma	aximum Qty / Pack	30 kg G			

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	1950				
14.2. UN proper shipping name	AEROSOLS				
14.3. Transport hazard class(es)	IMDG Class2.1IMDG Subsidiary HazardNot Applicable				
14.4. Packing group	Not Applicable				
14.5 Environmental hazard	Not Applicable				
14.6. Special precautions for user	Special provisions	F-D , S-U 63 190 277 327 344 381 959 1000 ml			

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
C14 alkanes, chlorinated-, (chlorinated paraffin)	Not Available
polymeric diphenylmethane diisocyanate	Not Available
4,4'-diphenylmethane diisocyanate (MDI)	Not Available
propane	Not Available
iso-butane	Not Available
dimethyl ether	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
C14 alkanes, chlorinated-, (chlorinated paraffin)	Not Available
polymeric diphenylmethane diisocyanate	Not Available
4,4'-diphenylmethane diisocyanate (MDI)	Not Available
propane	Not Available
iso-butane	Not Available
dimethyl ether	Not Available

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture
C14 alkanes, chlorinated-, (chlorinated paraffin) is found on the following regulatory lists
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Section 12(b) - List of Chemical Substances Subject to Export Notification Requirements
US TSCA Section 5(a)(2) - Significant New Use Rules (SNURs)
polymeric diphenylmethane diisocyanate is found on the following regulatory lists
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)
US DOE Temporary Emergency Exposure Limits (TEELs)
US EPCRA Section 313 Chemical List
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
4,4'-diphenylmethane diisocyanate (MDI) is found on the following regulatory lists
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
US - California Hazardous Air Pollutants Identified as Toxic Air Contaminants
US - Massachusetts - Right To Know Listed Chemicals
US Clean Air Act - Hazardous Air Pollutants
US DOE Temporary Emergency Exposure Limits (TEELs)
US EPA Integrated Risk Information System (IRIS)
US EPCRA Section 313 Chemical List
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Limits (PELs) Table Z-1
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA New Chemical Exposure Limits (NCEL)
propane is found on the following regulatory lists
US - Massachusetts - Right To Know Listed Chemicals
US Department of Homeland Security (DHS) - Chemical Facility Anti-Terrorism Standards (CFATS) - Chemicals of Interest
US DOE Temporary Emergency Exposure Limits (TEELs)
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Limits (PELs) Table Z-1
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
iso-butane is found on the following regulatory lists
Chemical Footprint Project - Chemicals of High Concern List
US - Massachusetts - Right To Know Listed Chemicals
US Department of Homeland Security (DHS) - Chemical Facility Anti-Terrorism Standards (CFATS) - Chemicals of Interest
US DOE Temporary Emergency Exposure Limits (TEELs)
US NIOSH Recommended Exposure Limits (RELs)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
dimethyl ether is found on the following regulatory lists
US - Massachusetts - Right To Know Listed Chemicals
US AIHA Workplace Environmental Exposure Levels (WEELs)
US Department of Homeland Security (DHS) - Chemical Facility Anti-Terrorism Standards (CFATS) - Chemicals of Interest
US DOE Temporary Emergency Exposure Limits (TEELs)
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

Additional Regulatory Information

Not Applicable

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	Yes
Gas under pressure	Yes
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	
Combustible Dust	No
Carcinogenicity	No

Acute toxicity (any route of exposure)		
Reproductive toxicity		
Skin Corrosion or Irritation	Yes	
Respiratory or Skin Sensitization	Yes	
Serious eye damage or eye irritation	Yes	
Specific target organ toxicity (single or repeated exposure)		
Aspiration Hazard	No	
Germ cell mutagenicity	No	
Simple Asphyxiant	No	
Hazards Not Otherwise Classified		
US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)		

Name	Reportable Quantity in Pounds (Ib)	Reportable Quantity in kg
4,4'-diphenylmethane diisocyanate (MDI)	5000	2270

US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know-Act of 1986 (40 CFR 372):

CAS No	%[weight]	Name
9016-87-9	10-30	polymeric diphenylmethane diisocyanate
101-68-8	10-30	4,4'-diphenylmethane diisocyanate (MDI)
This information must be included in all SDSs that are conied and distributed for this material		

This information must be included in all SDSs that are copied and distributed for this material.

Additional Federal Regulatory Information

Not Applicable

State Regulations

US. California Proposition 65

None Reported

Additional State Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	No (C14 alkanes, chlorinated-, (chlorinated paraffin))	
Canada - DSL	Yes	
Canada - NDSL	No	
China - IECSC	No (C14 alkanes, chlorinated-, (chlorinated paraffin))	
Europe - EINEC / ELINCS / NLP	No (C14 alkanes, chlorinated-, (chlorinated paraffin); polymeric diphenylmethane diisocyanate)	
Japan - ENCS	No (C14 alkanes, chlorinated-, (chlorinated paraffin))	
Korea - KECI	No (C14 alkanes, chlorinated-, (chlorinated paraffin))	
New Zealand - NZIoC	No (C14 alkanes, chlorinated-, (chlorinated paraffin))	
Philippines - PICCS	No (C14 alkanes, chlorinated-, (chlorinated paraffin))	
USA - TSCA	Yes	
Taiwan - TCSI	No (C14 alkanes, chlorinated-, (chlorinated paraffin))	
Mexico - INSQ	Yes	
Vietnam - NCI	No (C14 alkanes, chlorinated-, (chlorinated paraffin))	
Russia - FBEPH	No (C14 alkanes, chlorinated-, (chlorinated paraffin))	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.	

SECTION 16 Other information

Revision Date	06/25/2024
Initial Date	04/25/2021

CONTACT POINT

PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES

SDS Version Summary

Version	Date of Update	Sections Updated
1.3	06/25/2024	Hazards identification - Classification, Name

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chernwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.

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