



HandiFoam Gasket Foam

ICP Construction Inc

Version No: 2.3
Safety Data Sheet according to OSHA HazCom Standard (2024) requirements

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Print Date: 01/21/2026
S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

| | |
|-------------------------------|--|
| Product name | HandiFoam Gasket Foam |
| Synonyms | Not 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 number(s) | 1-800-255-3924 |
| Other emergency telephone number(s) | 1-813-248-0585 |

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond



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 | Aerosols, Hazard Category 1, 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

| | |
|---------------------|--------|
| Hazard pictogram(s) | |
| Signal word | Danger |

Hazard statement(s)

HandiFoam Gasket Foam

| | |
|------------------|---|
| H222+H229 | Extremely flammable aerosol. Pressurized container: may burst 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. (Respiratory system) (Inhalation) |

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

| | |
|-------------|--|
| P201 | Obtain special instructions before use. |
| 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 | Do not pierce or burn, even after use. |
| P260 | Do not breathe gas. |
| P263 | Avoid contact during pregnancy and while nursing. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P284 | [In case of inadequate ventilation] wear respiratory protection. |
| P270 | Do not eat, drink or smoke when using this product. |
| P261 | Avoid breathing gas. |
| P280 | Wear protective gloves, protective clothing, eye protection and face protection. |
| P264 | Wash all exposed external body areas thoroughly after handling. |
| P272 | Contaminated work clothing must not be allowed out of the workplace. |

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. |
| P312 | Call a POISON CENTER/doctor/physician/first aider/if you feel unwell. |
| P314 | Get medical advice/attention if you feel unwell. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P302+P352 | IF ON SKIN: Wash with plenty of water and soap. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |

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. |
|-------------|--|

No further product hazard information.

SECTION 3 Composition / information on ingredients**Substances**

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|-----------|-----------|--|
| 9016-87-9 | 10-30 | <u>polymeric diphenylmethane diisocyanate</u> |
| 101-68-8 | 10-30 | <u>4,4'-diphenylmethane diisocyanate (MDI)</u> |
| 74-98-6 | 1-5 | <u>propane</u> |
| 75-28-5 | 5-10 | <u>iso-butane</u> |
| 115-10-6 | 5-10 | <u>dimethyl ether</u> |
| 104-76-7 | 5-10 | <u>2-ethylhexanol</u> |

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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 measures

| | |
|---------------------|--|
| Eye Contact | <p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ 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 | <p>If solids or aerosol mists are deposited upon the skin:</p> <ul style="list-style-type: none"> ▶ 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 | <p>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.</p> <p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> ▶ 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 | Not considered a normal route of entry. |

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

To treat poisoning by the higher aliphatic alcohols (up to C7):

- ▶ Gastric lavage with copious amounts of water.
- ▶ It may be beneficial to instill 60 ml of mineral oil into the stomach.
- ▶ Oxygen and artificial respiration as needed.
- ▶ Electrolyte balance: it may be useful to start 500 ml. M/6 sodium bicarbonate intravenously but maintain a cautious and conservative attitude toward electrolyte replacement unless shock or severe acidosis threatens.
- ▶ To protect the liver, maintain carbohydrate intake by intravenous infusions of glucose.
- ▶ Haemodialysis if coma is deep and persistent. [GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, Ed 5]

BASIC TREATMENT

- ▶ Establish a patent airway with suction where necessary.
- ▶ Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- ▶ Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- ▶ Monitor and treat, where necessary, for shock.
- ▶ Monitor and treat, where necessary, for pulmonary oedema.
- ▶ Anticipate and treat, where necessary, for seizures.
- ▶ **DO NOT use emetics.** Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- ▶ Give activated charcoal.

ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
- ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ If the patient is hypoglycaemic (decreased or loss of consciousness, tachycardia, pallor, dilated pupils, diaphoresis and/or dextrose strip or glucometer readings below 50 mg), give 50% dextrose.
- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

EMERGENCY DEPARTMENT

- ▶ Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- ▶ Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- ▶ Acidosis may respond to hyperventilation and bicarbonate therapy.
- ▶ Haemodialysis might be considered in patients with severe intoxication.
- ▶ Consult a toxicologist as necessary. BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For C8 alcohols and above.

Symptomatic and supportive therapy is advised in managing patients.

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.

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- ▶ 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.
- ▶ Alcohol stable foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).

SMALL FIRE:

- ▶ Water spray, dry chemical or CO2

LARGE FIRE:

- ▶ Water spray or fog.

Special hazards arising from the substrate or mixture

| | |
|-----------------------------|--|
| 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

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|------------------------------|---|
| Fire Fighting | <p>FOR FIRES INVOLVING MANY GAS CYLINDERS:</p> <ul style="list-style-type: none"> ▶ To stop the flow of gas, specifically trained personnel may inert the atmosphere to reduce oxygen levels thus allowing the capping of leaking container(s). ▶ Reduce the rate of flow and inject an inert gas, if possible, before completely stopping the flow to prevent flashback. ▶ DO NOT extinguish the fire until the supply is shut off otherwise an explosive re-ignition may occur. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ May be violently or explosively reactive. ▶ Wear breathing apparatus plus protective gloves. <p>-----</p> <p>GENERAL</p> <p>-----</p> <ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ May be violently or explosively reactive. ▶ Wear breathing apparatus plus protective gloves. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> - Combustible. - Moderate fire hazard when exposed to heat or flame. - When heated to high temperatures decomposes rapidly generating vapour which pressurises and may then rupture containers with release of flammable and highly toxic isocyanate vapour. ▶ Liquid and vapour are highly flammable. ▶ Severe fire hazard when exposed to heat or flame. ▶ Vapour forms an explosive mixture with air. <p>Combustion products include:</p> <ul style="list-style-type: none"> ▶ carbon monoxide (CO) ▶ carbon dioxide (CO2) <p>isocyanates hydrogen cyanide and minor amounts of nitrogen oxides (NOx)</p> <ul style="list-style-type: none"> ▶ other pyrolysis products typical of burning organic material. |

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 | <ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Wear protective clothing, impervious gloves and safety glasses. |
| Major Spills | <p>For isocyanate spills of less than 40 litres (2 m2):</p> <ul style="list-style-type: none"> ▶ 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 all unprotected personnel and move upwind. ▶ Alert Emergency Authority and advise them of the location and nature of hazard. ▶ May be violently or explosively reactive. ▶ Remove leaking cylinders to a safe place. ▶ Fit vent pipes. Release pressure under safe, controlled conditions ▶ Burn issuing gas at vent pipes. |

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- ▶ DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve.
- ▶ 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 | <ul style="list-style-type: none"> ▶ Avoid skin contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. |
| Other information | <p>Consider storage under inert gas.</p> <ul style="list-style-type: none"> ▶ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can ▶ Store in original containers in approved flammable liquid storage area. ▶ DO NOT store in pits, depressions, basements or areas where vapours may be trapped. ▶ No smoking, naked lights, heat or ignition sources. |

Conditions for safe storage, including any incompatibilities

| | |
|--------------------------------|--|
| Suitable container | <ul style="list-style-type: none"> ▶ Aerosol dispenser. ▶ Check that containers are clearly labelled. |
| Storage incompatibility | <p>Dimethyl ether:</p> <ul style="list-style-type: none"> ▶ 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 <p>Alcohols</p> <ul style="list-style-type: none"> ▶ are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents. ▶ reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen ▶ react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium ▶ should not be heated above 49 deg. C. when in contact with aluminium equipment <p>Butane / isobutane:</p> <ul style="list-style-type: none"> ▶ 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. <p>Store butane well away from nickel carbonyl in the presence of oxygen between 20-40°C</p> <ul style="list-style-type: none"> · Avoid reaction with water, alcohols and detergent solutions. Isocyanates are electrophiles, and as such they are reactive toward a variety of nucleophiles including alcohols, amines, and even water. Upon treatment with an alcohol, an isocyanate forms a urethane linkage. ▶ A range of exothermic decomposition energies for isocyanates is given as 20-30 kJ/mol. ▶ The relationship between energy of decomposition and processing hazards has been the subject of discussion; it is suggested that values of energy released per unit of mass, rather than on a molar basis (J/g) be used in the assessment. ▶ For example, in 'open vessel processes' (with man-hole size openings, in an industrial setting), substances with exothermic decomposition energies below 500 J/g are unlikely to present a danger, whilst those in 'closed vessel processes' (opening is a safety valve or bursting disk) present some danger where the decomposition energy exceeds 150 J/g. ▶ Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the energy of reaction produced by the gas in chemical reaction with other substances |

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 |

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| Ingredient | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---------------|---------------|---------------|
| dimethyl ether | 3,000 ppm | 3800* ppm | 7200* ppm |
| 2-ethylhexanol | Not Available | Not Available | Not Available |
| Ingredient | Original IDLH | Revised IDLH | |
| 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 | |
| 2-ethylhexanol | Not Available | Not Available | |

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 | <ul style="list-style-type: none"> ▶ 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. ▶ Close fitting gas tight goggles |
| Skin protection | See Hand protection below |
| Hands/feet protection | <p>NOTE:</p> <ul style="list-style-type: none"> ▶ 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. <p>OTHERWISE:</p> <ul style="list-style-type: none"> ▶ 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 | <ul style="list-style-type: none"> ▶ The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton. ▶ Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost. <p>No special equipment needed when handling small quantities.</p> <p>OTHERWISE:</p> <ul style="list-style-type: none"> ▶ 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 |

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|--|-------------------|---|---------------|
| 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 | <180 |
| Heat of Combustion (kJ/g) | Not Available | Ignition Distance (cm) | Not Available |
| Flame Height (cm) | Not Available | Flame Duration (s) | Not Available |
| Enclosed Space Ignition Time Equivalent (s/m3) | Not Available | Enclosed Space Ignition Deflagration Density (g/m3) | Not Available |
| Nanoform Solubility | Not Available | Nanoform Particle Characteristics | Not Available |
| Particle Size | Not Available | | |

SECTION 10 Stability and reactivity

| | |
|------------------------------------|--|
| Reactivity | See section 7 |
| Chemical stability | <ul style="list-style-type: none"> ▶ 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

| | |
|--------------------------------------|--|
| a) Acute Toxicity | There is sufficient evidence to classify this material as acutely toxic. |
| b) Skin Irritation/Corrosion | There is sufficient evidence to classify this material as skin corrosive or irritating. |
| c) Serious Eye Damage/Irritation | There is sufficient evidence to classify this material as eye damaging or irritating |
| d) Respiratory or Skin sensitisation | There is sufficient evidence to classify this material as sensitising to skin or the respiratory system |
| e) Mutagenicity | Based on available data, the classification criteria are not met. |
| f) Carcinogenicity | Based on available data, the classification criteria are not met. |
| g) Reproductivity | There is sufficient evidence to classify this material as toxic to reproductivity |
| h) STOT - Single Exposure | There is sufficient evidence to classify this material as toxic to specific organs through single exposure |
| i) STOT - Repeated Exposure | There is sufficient evidence to classify this material as toxic to specific organs through repeated exposure |
| j) Aspiration Hazard | Based on available data, the classification criteria are not met. |

| | |
|--------------|--|
| Inhaled | <p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. 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.</p> <p>The paraffin gases are practically not harmful at low doses. Higher doses may produce reversible brain and nerve depression and irritation. Excessive exposure to 2-ethylhexanol may result in headache, muscle weakness, nausea, giddiness, inco-ordination and central nervous system depression.</p> <p>Aliphatic alcohols with more than 3-carbons cause headache, dizziness, drowsiness, muscle weakness and delirium, central depression, coma, seizures and behavioural changes. Secondary respiratory depression and failure, as well as low blood pressure and irregular heart rhythms, may follow.</p> <p>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.</p> <p>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</p> <p>Spray mist may produce discomfort</p> |
| Ingestion | <p>Overexposure to non-ring alcohols causes nervous system symptoms. These include headache, muscle weakness and inco-ordination, giddiness, confusion, delirium and coma.</p> <p>Not normally a hazard due to physical form of product.</p> <p>Considered an unlikely route of entry in commercial/industrial environments</p> <p>Rats receiving large doses of 2-ethylhexanol by mouth showed blood effects, stomach irritation and effects on the liver, thymus and spleen. Isoparaffinic hydrocarbons cause temporary lethargy, weakness, inco-ordination and diarrhoea.</p> |
| Skin Contact | <p>This material can cause inflammation of the skin on contact in some persons.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.</p> <p>Animal testing showed skin exposure to 2-ethylhexanol may affect the liver, lung, kidney and heart.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>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.</p> |

Continued...

HandiFoam Gasket Foam

| | Spray mist may produce discomfort Most liquid alcohols appear to act as primary skin irritants in humans. Significant percutaneous absorption occurs in rabbits but not apparently in man. | | | | | | | | | | | | | | | | | | |
|--|---|----------|------------|--|--|--|--|--|--|--|---|--|--|--|--------------------------------------|--|--|--|---|
| Eye | This material causes serious eye irritation. Not considered to be a risk because of the extreme volatility of the gas. | | | | | | | | | | | | | | | | | | |
| Chronic | <p>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.</p> <p>This product contains a polymer with a functional group considered to be of high concern. Isothiocyanates may cause hypersensitivity of the skin and airways.</p> <p>Main route of exposure to the gas in the workplace is by inhalation.</p> <p>Prolonged or repeated skin contact with 2-ethylhexanol may result in irritation, reddening and sensitization. Repeated exposure by mouth or skin contact has resulted in adverse effects on the liver and kidneys. Animal testing showed that 2-ethylhexanol can produce birth defects if exposure occurs by mouth, however, they did not occur with inhalation of vapour at maximum saturation concentration.</p> <p>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.</p> <p>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.</p> <p>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 assessment. Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping.</p> <p>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.</p> | | | | | | | | | | | | | | | | | | |
| HandiFoam Gasket Foam | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Not Available</td> <td>Not Available</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Not Available | Not Available | | | | | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | |
| Not Available | Not Available | | | | | | | | | | | | | | | | | | |
| polymeric diphenylmethane diisocyanate | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: >9400 mg/kg^[2]</td> <td>Eye (Rodent - rabbit): 100mg - Mild</td> </tr> <tr> <td>Inhalation (Rat) LC50: 0.49 mg/L4h^[2]</td> <td></td> </tr> <tr> <td>Oral (Rat) LD50: 43000 mg/kg^[2]</td> <td></td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: >9400 mg/kg ^[2] | Eye (Rodent - rabbit): 100mg - Mild | Inhalation (Rat) LC50: 0.49 mg/L4h ^[2] | | Oral (Rat) LD50: 43000 mg/kg ^[2] | | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: >9400 mg/kg ^[2] | Eye (Rodent - rabbit): 100mg - Mild | | | | | | | | | | | | | | | | | | |
| Inhalation (Rat) LC50: 0.49 mg/L4h ^[2] | | | | | | | | | | | | | | | | | | | |
| Oral (Rat) LD50: 43000 mg/kg ^[2] | | | | | | | | | | | | | | | | | | | |
| 4,4'-diphenylmethane diisocyanate (MDI) | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: >6200 mg/kg^[2]</td> <td>Eye (Rodent - rabbit): 100mg - Moderate</td> </tr> <tr> <td>Inhalation (Rat) LC50: 0.368 mg/L4h^[1]</td> <td>Eye: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td>Oral (Mouse) LD50: 2200 mg/kg^[2]</td> <td>Skin (Rodent - rabbit): 500mg/24H</td> </tr> <tr> <td></td> <td>Skin: adverse effect observed (irritating)^[1]</td> </tr> <tr> <td></td> <td>Skin: no adverse effect observed (not irritating)^[1]</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: >6200 mg/kg ^[2] | Eye (Rodent - rabbit): 100mg - Moderate | Inhalation (Rat) LC50: 0.368 mg/L4h ^[1] | Eye: no adverse effect observed (not irritating) ^[1] | Oral (Mouse) LD50: 2200 mg/kg ^[2] | Skin (Rodent - rabbit): 500mg/24H | | Skin: adverse effect observed (irritating) ^[1] | | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: >6200 mg/kg ^[2] | Eye (Rodent - rabbit): 100mg - Moderate | | | | | | | | | | | | | | | | | | |
| Inhalation (Rat) LC50: 0.368 mg/L4h ^[1] | Eye: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | |
| Oral (Mouse) LD50: 2200 mg/kg ^[2] | Skin (Rodent - rabbit): 500mg/24H | | | | | | | | | | | | | | | | | | |
| | Skin: adverse effect observed (irritating) ^[1] | | | | | | | | | | | | | | | | | | |
| | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | |
| propane | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Inhalation (Rat) LC50: 364726.819 ppm4h^[2]</td> <td>Not Available</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Inhalation (Rat) LC50: 364726.819 ppm4h ^[2] | Not Available | | | | | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | |
| Inhalation (Rat) LC50: 364726.819 ppm4h ^[2] | Not Available | | | | | | | | | | | | | | | | | | |
| iso-butane | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Inhalation (Rat) LC50: >13023 ppm4h^[1]</td> <td>Eye: no adverse effect observed (not irritating)^[1]</td> </tr> <tr> <td></td> <td>Skin: no adverse effect observed (not irritating)^[1]</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Inhalation (Rat) LC50: >13023 ppm4h ^[1] | Eye: no adverse effect observed (not irritating) ^[1] | | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | |
| Inhalation (Rat) LC50: >13023 ppm4h ^[1] | Eye: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | |
| | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | |
| dimethyl ether | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Inhalation (Rat) LC50: >20000 ppm4h^[1]</td> <td>Skin: no adverse effect observed (not irritating)^[1]</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Inhalation (Rat) LC50: >20000 ppm4h ^[1] | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | |
| Inhalation (Rat) LC50: >20000 ppm4h ^[1] | Skin: no adverse effect observed (not irritating) ^[1] | | | | | | | | | | | | | | | | | | |
| 2-ethylhexanol | <table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Dermal (rabbit) LD50: 1970 mg/kg^[2]</td> <td>Eye (Rodent - rabbit): 20mg - Severe</td> </tr> <tr> <td>Oral (Rat) LD50: 2049 mg/kg^[2]</td> <td>Eye (Rodent - rabbit): 20mg/24H - Moderate</td> </tr> <tr> <td></td> <td>Eye (Rodent - rabbit): 20ug - Moderate</td> </tr> <tr> <td></td> <td>Eye: adverse effect observed (irritating)^[1]</td> </tr> <tr> <td></td> <td>Skin (Rodent - rabbit): 0.5mL - Severe</td> </tr> <tr> <td></td> <td>Skin (Rodent - rabbit): 415mg - Mild</td> </tr> <tr> <td></td> <td>Skin (Rodent - rabbit): 500mg/24H - Moderate</td> </tr> <tr> <td></td> <td>Skin: adverse effect observed (irritating)^[1]</td> </tr> </tbody> </table> | TOXICITY | IRRITATION | Dermal (rabbit) LD50: 1970 mg/kg ^[2] | Eye (Rodent - rabbit): 20mg - Severe | Oral (Rat) LD50: 2049 mg/kg ^[2] | Eye (Rodent - rabbit): 20mg/24H - Moderate | | Eye (Rodent - rabbit): 20ug - Moderate | | Eye: adverse effect observed (irritating) ^[1] | | Skin (Rodent - rabbit): 0.5mL - Severe | | Skin (Rodent - rabbit): 415mg - Mild | | Skin (Rodent - rabbit): 500mg/24H - Moderate | | Skin: adverse effect observed (irritating) ^[1] |
| TOXICITY | IRRITATION | | | | | | | | | | | | | | | | | | |
| Dermal (rabbit) LD50: 1970 mg/kg ^[2] | Eye (Rodent - rabbit): 20mg - Severe | | | | | | | | | | | | | | | | | | |
| Oral (Rat) LD50: 2049 mg/kg ^[2] | Eye (Rodent - rabbit): 20mg/24H - Moderate | | | | | | | | | | | | | | | | | | |
| | Eye (Rodent - rabbit): 20ug - Moderate | | | | | | | | | | | | | | | | | | |
| | Eye: adverse effect observed (irritating) ^[1] | | | | | | | | | | | | | | | | | | |
| | Skin (Rodent - rabbit): 0.5mL - Severe | | | | | | | | | | | | | | | | | | |
| | Skin (Rodent - rabbit): 415mg - Mild | | | | | | | | | | | | | | | | | | |
| | Skin (Rodent - rabbit): 500mg/24H - Moderate | | | | | | | | | | | | | | | | | | |
| | Skin: adverse effect observed (irritating) ^[1] | | | | | | | | | | | | | | | | | | |

HandiFoam Gasket Foam

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

| | |
|--|---|
| 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 |
| PROPANE | No significant acute toxicological data identified in literature search. |
| 2-ETHYLHEXANOL | The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Alkyl alcohols of chain length C6-13 are absorbed from skin, when inhaled or swallowed but show evidence of little harm. They are broken down and rapidly excreted by the body. The Branched Chain Saturated Alcohol (BCSA) group of fragrance ingredients was evaluated for safety. The fifteen materials tested have low acute toxicity. Following repeated application, seven materials had low whole-body toxicity. In humans, no evidence of skin irritation was found at concentrations of 2-10%. |
| HandiFoam Gasket Foam & POLYMERIC DIPHENYLMETHANE DIISOCYANATE & 4,4'- DIPHENYLMETHANE DIISOCYANATE (MDI) & 2- ETHYLHEXANOL | 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. |
| HandiFoam Gasket Foam & POLYMERIC DIPHENYLMETHANE DIISOCYANATE & 4,4'- DIPHENYLMETHANE DIISOCYANATE (MDI) | 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. |
| POLYMERIC DIPHENYLMETHANE DIISOCYANATE & 4,4'- DIPHENYLMETHANE DIISOCYANATE (MDI) | The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Aromatic and aliphatic diisocyanates may cause airway toxicity and skin sensitization. Monomers and prepolymers exhibit similar respiratory effect. Of the several members of diisocyanates tested on experimental animals by inhalation and oral exposure, some caused cancer while 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 limited in animal testing. |

| | | | |
|--|---|---------------------------------|---|
| 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 not available or does not fill the criteria for classification
✓ – Data available to make classification

SECTION 12 Ecological information

| Toxicity | | | | | |
|--|-----------------|---------------------------|----------------|---------------|---------------|
| HandiFoam Gasket Foam | Endpoint | Test Duration (hr) | Species | Value | Source |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| polymeric diphenylmethane diisocyanate | Endpoint | Test Duration (hr) | Species | Value | Source |
| | Not Available | Not Available | Not Available | Not Available | Not Available |
| 4,4'-diphenylmethane diisocyanate (MDI) | Endpoint | Test Duration (hr) | Species | Value | Source |
| | BCF | 672h | Fish | 61-150 | 7 |
| | EC50 | 48h | Crustacea | >100mg/l | 2 |
| | NOEC(ECx) | 504h | Crustacea | >=10mg/l | 2 |
| | LC50 | 96h | Fish | >100mg/l | 2 |
| propane | Endpoint | Test Duration (hr) | Species | Value | Source |
| | Not Available | Not Available | Not Available | Not Available | Not Available |

Continued...

HandiFoam Gasket Foam

| | Endpoint | Test Duration (hr) | Species | Value | Source |
|----------------|--|--------------------|-------------------------------|-------------|--------|
| iso-butane | EC50 | 96h | Algae or other aquatic plants | 7.71mg/l | 2 |
| | EC50(ECx) | 96h | Algae or other aquatic plants | 7.71mg/l | 2 |
| | LC50 | 96h | Fish | 24.11mg/l | 2 |
| dimethyl ether | EC50 | 48h | Crustacea | >4400mg/L | 2 |
| | NOEC(ECx) | 48h | Crustacea | >4000mg/l | 1 |
| | EC50 | 96h | Algae or other aquatic plants | 154.917mg/l | 2 |
| | LC50 | 96h | Fish | 1783.04mg/l | 2 |
| 2-ethylhexanol | EC50 | 72h | Algae or other aquatic plants | 11.5mg/l | 1 |
| | EC50 | 48h | Crustacea | 39mg/l | 1 |
| | EC10(ECx) | 72h | Algae or other aquatic plants | 3.2mg/l | 1 |
| | LC50 | 96h | Fish | >7.5mg/l | 2 |
| Legend: | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. US EPA, Ecotox database - Aquatic Toxicity Data 4. ECETOC Aquatic Hazard Assessment Data 5. NITE (Japan) - Bioconcentration Data 6. METI (Japan) - Bioconcentration Data 7. Vendor Data | | | | |

Harmful to aquatic organisms.

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.

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: Isobutene 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 |
| 2-ethylhexanol | LOW | LOW |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|----------------------|
| polymeric diphenylmethane diisocyanate | LOW (LogKOW = 10.46) |
| 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) |
| 2-ethylhexanol | LOW (BCF = 27) |

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) |
| 2-ethylhexanol | LOW (Log KOC = 26.01) |

Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

SECTION 13 Disposal considerations

Waste treatment methods

| Product / Packaging disposal | |
|------------------------------|--|
| | ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. |

Continued...

HandiFoam Gasket Foam

- ▶ 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 user | Hazard Label | 2.1 |
| | 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 | |
| 14.6. Special precautions for user | Special provisions | A145 A167 A802 |
| | Cargo Only Packing Instructions | 203 |
| | Cargo Only Maximum Qty / Pack | 150 kg |
| | Passenger and Cargo Packing Instructions | 203 |
| | Passenger and Cargo Maximum Qty / Pack | 75 kg |
| | Passenger and Cargo Limited Quantity Packing Instructions | Y203 |
| | Passenger and Cargo Limited Maximum 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 Class | 2.1 |
| | IMDG Subsidiary Hazard | Not Applicable |
| 14.4. Packing group | Not Applicable | |
| 14.5. Environmental hazard | Not Applicable | |
| 14.6. Special precautions for user | EMS Number | F-D, S-U |
| | Special provisions | 63 190 277 327 344 381 959 |
| | Limited Quantities | 1000 ml |

14.7. Maritime transport in bulk according to IMO instruments

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

HandiFoam Gasket Foam

Not Applicable

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

| Product name | Group |
|---|----------------|
| polymeric diphenylmethane diisocyanate | Not Applicable |
| 4,4'-diphenylmethane diisocyanate (MDI) | Not Applicable |
| propane | Not Applicable |
| iso-butane | Not Applicable |
| dimethyl ether | Not Applicable |
| 2-ethylhexanol | Not Applicable |

14.7.3. Transport in bulk in accordance with the IGC Code

| Product name | Ship Type |
|---|----------------|
| polymeric diphenylmethane diisocyanate | Not Applicable |
| 4,4'-diphenylmethane diisocyanate (MDI) | Not Applicable |
| propane | Not Applicable |
| iso-butane | Not Applicable |
| dimethyl ether | Not Applicable |
| 2-ethylhexanol | Not Applicable |

SECTION 15 Regulatory information**Safety, health and environmental regulations / legislation specific for the substance or mixture****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 - New Jersey Right to Know Hazardous Substances
 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 - New Jersey Right to Know Hazardous Substances
 US - Pennsylvania - Hazardous Substance List
 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 New York City Community Right-to-Know: List of Hazardous Substances
 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 - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Flammables
 US - New Jersey Right to Know Hazardous Substances
 US - Pennsylvania - Hazardous Substance List
 US Department of Homeland Security (DHS) - Chemical Facility Anti-Terrorism Standards (CFATS) - Chemicals of Interest
 US DOE Temporary Emergency Exposure Limits (TEELs)
 US New York City Community Right-to-Know: List of Hazardous Substances
 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 - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Flammables
 US - New Jersey Right to Know Hazardous Substances
 US - Pennsylvania - Hazardous Substance List
 US Department of Homeland Security (DHS) - Chemical Facility Anti-Terrorism Standards (CFATS) - Chemicals of Interest
 US DOE Temporary Emergency Exposure Limits (TEELs)
 US New York City Community Right-to-Know: List of Hazardous Substances
 US NIOSH Recommended Exposure Limits (RELs)
 US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

dimethyl ether is found on the following regulatory lists

Continued...

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US - Massachusetts - Right To Know Listed Chemicals
 US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Flammables
 US - New Jersey Right to Know Hazardous Substances
 US - Pennsylvania - Hazardous Substance List
 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 New York City Community Right-to-Know: List of Hazardous Substances
 US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
 US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

2-ethylhexanol is found on the following regulatory lists

US - Massachusetts - Right To Know Listed Chemicals
 US - Pennsylvania - Hazardous Substance List
 US DOE Temporary Emergency Exposure Limits (TEELs)
 US EPA Pesticide Chemical Search - Antimicrobial
 US EPA Substance Registry Services (SRS) - 2020 CDR TSCA 4 TR
 US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
 US TSCA Section 4/12 (b) - Sunset Dates/Status

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 | No |
| Combustible Dust | No |
| Carcinogenicity | No |
| Acute toxicity (any route of exposure) | Yes |
| Reproductive toxicity | Yes |
| 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) | Yes |
| Aspiration Hazard | No |
| Germ cell mutagenicity | No |
| Simple Asphyxiant | No |
| Hazards Not Otherwise Classified | No |

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

| Name | Reportable Quantity in Pounds (lb) | 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 copied and distributed for this material.

Additional Federal Regulatory Information

Not Applicable

Continued...

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State Regulations

US. California Proposition 65

None Reported

Additional State Regulatory Information

Not Applicable

National Inventory Status

| National Inventory | Status |
|---|---|
| Australia - AIC / Australia Non-Industrial Use | Yes |
| Canada - DSL | Yes |
| Canada - NDSL | No (polymeric diphenylmethane diisocyanate; 4,4'-diphenylmethane diisocyanate (MDI); propane; iso-butane; dimethyl ether; 2-ethylhexanol) |
| China - IECSC | Yes |
| Europe - EINEC / ELINCS / NLP | No (polymeric diphenylmethane diisocyanate) |
| Japan - ENCS | Yes |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | Yes |
| USA - TSCA | All chemical substances in this product have been designated as TSCA Inventory 'Active' |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - FBEPH | Yes |
| UAE - Control List (Banned/Restricted Substances) | No (polymeric diphenylmethane diisocyanate; 4,4'-diphenylmethane diisocyanate (MDI); propane; iso-butane; dimethyl ether; 2-ethylhexanol) |
| 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 | 01/21/2026 |
| Initial Date | 04/22/2021 |

CONTACT POINT

SDS Version Summary

| Version | Date of Update | Sections Updated |
|---------|----------------|--|
| 1.3 | 01/21/2026 | Toxicological information - Acute Health (eye), Hazards identification - Classification, Exposure controls / personal protection - Personal Protection (eye) |

Other information

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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