

Section 1 Identification of Chemical Product and Company

Code	Description	Size	Colour
20169	Soudal Soudafoam FR HY Aerosol	750 ml	Light Red

Recommended use:	Expanding Foam	
HSNO Group Standard	HSR002517	
UN number, shipping name and packaging group:	UN 1950 AEROSOLS	
Supplier contact details:	Soudal Ltd	Freephone: 0800 70 10 80
	134 Kohia Drive	Phone: (07) 847 5540
	Horotiu	Fax: (07) 847 0324
	Hamilton 3288	Email: sales@soudal.co.nz
	New Zealand	Website: www.soudal.co.nz
POISON CENTRE NUMBER: 0800 764 766 (24 hours)		

Section 2 Hazards Identification

Statement of Hazardous Nature

This product is classified as:

HAZARDOUS SUBSTANCE according to the criteria of GHS v7.

REGULATED under NZS5433:2020 Transport of Dangerous Goods on Land

GHS classification:

Classification	GHS Hazard statements
Flammable Aerosol Category 1	H222+H229 Extremely flammable aerosol. Pressurised container: may burst if heated
Acute Inhalation Toxicity Category 4	H332 Harmful if inhaled
Skin Irritation Category 2	H315 Causes skin irritation
Eye Irritation Category 2	H319 Causes serious eye irritation
Respiratory Sensitisation Category 1	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Sensitisation Category 1	H317 May cause an allergic skin reaction
Carcinogenicity Category 2	H351 Suspected of causing cancer
STOT – RE Category 2	H372 Causes damage to organs through prolonged or repeated exposure

HSNO Signal Word:

DANGER



Precautionary Statements: P102 Keep out of the reach of children
P103 Read label before use

- 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
- P271 Use only outdoors or in a well-ventilated area
- P280 Wear protective gloves, protective clothing, eye protection and face protection
- P284 In case of inadequate ventilation, wear respiratory protection
- P264 Wash all exposed external body areas thoroughly after handling
- P272 Contaminated work clothing should not be allowed out of the workplace
- P270 Do not eat, drink or smoke when handling this product

- P370+378 In case of Fire: Use alcohol resistant foam or normal protein foam to extinguish

- P405 Store locked up
- P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 C

- P501 Dispose of contents/ container to authorised hazardous or special waste collection points in accordance with local regulation

Section 3. Composition/Information on Ingredients

Ingredient	CAS No.	Individual GHS classification	Concentration (% by Wt.)
Polymethylene polyphenyl isocyanate	9016-87-9	Acute Inhalation Toxicity Category 4 Skin Irritation Category 2 Eye Irritation Category 2 Respiratory Sensitisation Category 1 Skin Sensitisation Category 1 Carcinogenicity Category 2 STOT – RE Category 2 STOT – SE RTI Category 3	25 – 50
Reaction products of phosphoryl trichloride and 2-methyloxirane	1244733-77-4	Acute Oral Toxicity Category 4 Chronic Aquatic Hazard Category 3	10 - 25
Dimethyl ether	115-10-6	Flammable Gas Category 1 Eye Irritation Category 2	10 – 25
Isobutane	75-28-5	Flammable Gas Category 1	5 – 10
Propane	74-98-6	Flammable Gas Category 1	1 - 5
Ingredients not contributing to classification			balance

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

Section 4 First Aid Measures

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Eye contact:

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:

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:

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

General advice and advice for physicians:

Treat symptomatically.

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. Water spray or fog may cause frothing and should be used in large quantities.

SMALL FIRE:

Water spray, dry chemical or CO₂

LARGE FIRE:

Water spray or fog.

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. Burns with acrid black smoke and poisonous fumes. Due to reaction with water producing CO₂-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Combustion yields traces of highly toxic hydrogen cyanide HCN, plus toxic nitrogen oxides NO_x and carbon monoxide. Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat or flame. Vapour forms an explosive mixture with air. Severe explosion hazard, in the form of vapour, when exposed to flame or spark. Vapour may travel a considerable distance to source of ignition. Heating may cause expansion or decomposition with violent container rupture. Aerosol cans may explode on exposure to naked flames. Rupturing containers may rocket and scatter burning materials. Hazards may not be restricted to pressure effects. May emit acrid, poisonous or corrosive fumes. On combustion, may emit toxic fumes of carbon monoxide (CO).

Advice for fire-fighters:

Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Consider evacuation. Fight fire from a safe distance, with adequate cover. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach cylinders suspected to be hot. Cool fire-exposed cylinders with water spray from a protected location. If safe to do so, remove containers from path of fire.

Section 6 Accidental Release Measures**Minor Spills**

Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses. Shut off all possible sources of ignition and increase ventilation. Wipe up. If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely.

Major Spills

Avoid contamination with water, alkalis 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. Open all containers with care. DO NOT touch the spill material. 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. Wear full body clothing with breathing apparatus. Prevent by any means available, spillage from entering drains and watercourses. Consider evacuation. Shut off all possible sources of ignition and increase ventilation. No smoking or naked lights within area. Use extreme caution to prevent violent reaction. Stop leak only if safe to do so. Water spray or fog may be used to disperse vapour. DO NOT enter confined space where gas may have collected. Keep area clear until gas has dispersed. Remove leaking cylinders to a safe place. Fit vent pipes. Release pressure under safe, controlled conditions. Burn issuing gas at vent pipes. 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. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses. No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Water spray or fog may be used to disperse / absorb vapour. Absorb or cover spill with sand, earth, inert materials or vermiculite. If safe, damaged cans should be placed in a container outdoors,

away from ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely. Collect residue and seal in labelled drums for disposal.

Section 7 Handling and Storage

Handling:

Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. DO NOT incinerate or puncture aerosol cans. DO NOT spray directly on humans, exposed food or food utensils. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Storage:

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. Keep containers securely sealed. Contents under pressure. Store away from incompatible materials. Store in a cool, dry, well-ventilated area. Avoid storage at temperatures higher than 50 deg C. Store in an upright position. Protect containers against physical damage. Check regularly for spills and leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

Suitable Container:

Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.

Section 8 Exposure Controls/Personal Protection

Exposure Limits




CAS no.	Substance or ingredient	WES-TWA		WES-STEL	
9016-87-9	Polymeric diphenylmethane diisocyanate	0.02 mg/m ³		0.07 mg/m ³	
115-10-6	Dimethyl ether	766 mg/m ³	400 ppm	958 mg/m ³	500 ppm

The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5-day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

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. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Exposure controls:

Control	Protective measure
Eye	Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] 
Respiratory	Not generally required. If workplace exposure standards are likely to be exceeded, a Type KAX-P filter is recommended 
Skin	Wear chemical protective gloves, e.g., PE/EVAL/PE. Wear safety footwear or safety gumboots, e.g., Rubber 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 watchbands should be removed and destroyed. 

Section 9 Physical and Chemical Properties

General substance properties:

Property	Details
Appearance	Aerosol
Odour	Characteristic
pH	Not available
Vapour pressure	4.3 kPa
Vapour Density	> 1 heavier than air
Viscosity	No data
Boiling Point	°C
Volatile materials	Not available
Freezing/melting point	Not available
Water Solubility	Immiscible
Specific gravity/density	1.041 g/ml
Flash point	°C
Auto-ignition temperature	No data
Upper and lower flammability limits	LEL % UEL %
Corrosiveness	Not available)

Section 10 Stability and Reactivity

Stability:

Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.

Conditions to avoid:

Ignition sources, elevated temperatures

Incompatible materials to avoid:

Oxidising or reducing agents

Hazardous decomposition products:

Carbon monoxide (CO) carbon dioxide (CO₂), isocyanates (-NCO), Hydrocyanide (HCN), Hydrogen Chloride (HCl), Phosgene (COCl₂), Nitrogen Oxides (NO_x), Phosphorus Oxides (PO_x) and other pyrolysis products typical of burning organic material.

Section 11 Toxicological Information

Summary of Toxicity

Test	Data and symptoms of exposure
Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. 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. Pulmonary sensitisation may produce asthmatic reactions ranging from minor breathing difficulties to severe allergic attacks; this may occur following a single acute exposure or may develop without warning for several hours after exposure. Sensitized people can react to very low doses and should not be allowed to work in situations allowing exposure to this material. Continued exposure of sensitised persons may lead to possible long term respiratory impairment. Inhalation hazard is increased at higher temperatures. WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.
Oral	Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments Accidental ingestion of the material may be seriously damaging to the health of the individual; animal experiments indicate that ingestion of less than 40 gram may be fatal.
Dermal	The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Temporary discomfort, however, may result from prolonged dermal exposures. Skin contact with the material may damage the health of the individual; systemic effects may result following absorption. Spray mist may produce discomfort Open cuts, abraded or irritated skin should not be exposed to this material Entry into the bloodstream 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.
Eye	Not considered to be a risk because of the extreme volatility of the gas. 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	There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Based on experiments and other information, there is ample evidence to presume that exposure to this material can cause genetic defects that can be inherited. 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.

SAFETY DATASHEET

Ingredient	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
ATE			
Polymeric diphenylmethane diisocyanate	430000 mg/kg	>9400 mg/kg	0.49 mg/L/4h
Tris(2-chloroisopropyl)phosphate	632 mg/kg	>2000 mg/kg	4.6 mg/L/4h
Dimethyl ether			>20,000 ppm/4h
Isobutane			>13,023 ppm/4h
Propane			364726 ppm/4h

Section 12 Ecological Information

Summary of Ecotoxicity

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high-water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Ingredient	Fish	Crustacean	Algae
ATE			
Tris(2-chloroisopropyl)phosphate	LC _{50 96hr} 56.2 mg/L	EC _{50 96hr} 65335 mg/L	EC _{50 96hr} 82 mg/L
Dimethyl ether	LC _{50 96hr} 1783 mg/L	EC _{50 48hr} >4400 mg/L	EC _{50 96hr} 154 mg/L
Isobutane	LC _{50 96hr} 24.1 mg/L		EC _{50 96hr} 7.71 mg/L

Ingredient	Persistence Water/ Soil	Persistence Air	Bioaccumulation	Mobility
Tris(2-chloroisopropyl)phosphate	HIGH	HIGH	LOW	LOW
Dimethyl ether	LOW	LOW	LOW	HIGH
Isobutane	HIGH	HIGH	LOW	LOW
Propane	LOW	LOW	LOW	LOW

Section 13 Disposal Considerations

Disposal methods:

Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: If container cannot be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and SDS and observe all notices pertaining to the product. DO NOT recycle spilled material. Consult State Land Waste Management Authority for disposal. Neutralise spill material carefully and decontaminate empty containers and spill residues with 10% ammonia solution plus detergent or a proprietary decontaminant prior to disposal. DO NOT seal or stopper drums being decontaminated as CO₂ gas is generated and may pressurise containers. Puncture containers to prevent re-use. Bury or incinerate residues at an approved site.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled. The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous. Only dispose to the environment if a tolerable exposure limit has been set for the substance. Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

Section 14 Transport Information



HAZCHEM

Land Transport UNDG

UN Number	1950
Shipping Name	AEROSOL
Class or division	2.1
Subsidiary Risk	
UN Packing Group	
Environmental Hazard	
Special Provisions	63 190 277 327 344 381
Limited Quantities	1000 ml

Air Transport IATA

UN/ID Number	1950
Shipping Name	AEROSOLS, FLAMMABLE
ICAO/IATA Class	2.1
ICAO/IATA Subrisk	
ERG Code	10L
Packing Group	
Environmental Hazard	
Special provision	A145 A167 A802
Cargo only	
Packing instructions	203
Maximum Qty/pack	150 Kg
Passenger and Cargo	
Packing instructions	203
Maximum Qty/pack	75 Kg

Passenger & Cargo Limited Quantity

Packing instructions	Y203
Maximum Qty/pack	30 Kg G

Marine Transport IMDG

UN Number	1950
Shipping Name	AEROSOLS
IMDG Class	2.1
IMDG Subrisk	
UN Packing Group	
Environmental Hazard	
EmS Number	F-D S-U
Special provisions	63 190 277 327 344 381 959
Limited quantities	1000 ml

Section 15 Regulatory Information

HSNO approval number and Group Standard:

HSR002517 Aerosols, flammable, Carcinogenic

Group Standard conditions and other regulations:

Condition	Requirement
SDS	Required
Emergency plan	Required when quantities exceed 3000Lt water equivalent
Certified handler	Not required
Tracking	Not applicable
Bunding and secondary containment	Not required
Signage	Required when quantities exceed 3000Lt water equivalent
Location Compliance certificate	Flammable Aerosol Category 1 required when quantities exceed 3000Lt water equivalent
Hazardous Atmosphere Zone	Required to meet AS/NZS 60079.10
Fire extinguisher	2 required when quantities exceed 3000 Lt water equivalent

National Inventories

Y = All ingredients are on the inventory

Australia	AICS	N
Canada	DSL	N
Canada	NDSL	N
China	IECSC	N
Europe	EINEC/ELINCS/NLP	N
Japan	ENCS	N
Korea	KECI	N
New Zealand	NZIOC	Y
Philippines	PICCS	N
USA	TSCA	N
Taiwan	TCSI	Y
Mexico	INSQ	N
Vietnam	NCI	Y
Russia	ARIPS	N

Section 16 Other Information

Revision History:

April 2024	Reviewed and format updated
July 2020	Reformulated and reformatted
June 2016	origination

Abbreviations:

Abbreviation	Description
CAS number	Number assigned to chemical in the Chemical Abstracts Service registry
HAZCHEM code	Code used by fire-fighters to determine correct method of action in the case of fire
HSNO	Hazardous Substances and New Organisms (Act)
ICAO Technical Instructions	International Civil Aviation Organization Technical Instructions
IMDG code	International Maritime Dangerous Goods code controlled by the International Maritime Organization (IMO)

LC ₅₀	Lethal concentration 50% - concentration fatal to 50% of the tested population
LD ₅₀	Lethal dose 50% - dose fatal to 50% of the tested population
NZS 5433:2020	New Zealand Standard 5433 (Standard for the Transport of Dangerous Goods on Land)
SDS	Safety data sheet
STEL	Short term exposure limit
TWA	Time weighted average (typically measured as 8 hours)
UN number	United nations number
WES	Workplace exposure standard

References

Chemical properties and GHS classifications derived from the New Zealand chemical classification information database (CCID).

www.epa.govt.nz.

Workplace exposure limits derived from Workplace Exposure Standards and Biological Exposure Indices 13th Edition (April 2022).

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material in combination with any other material or in any process, unless specified in the text.

This SDS was prepared by Collievale Enterprises in accord with the Hazardous Substances (Safety Data Sheets) Notice 2020

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End of SDS