

SECTION 1 Identification
Product Identifier

Product name	ImpermiGrip
Synonyms	Not Available
Proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) with not more than 20% nitrocellulose, by mass, if the nitrogen content of the nitrocellulose is not more than 12.6%, by mass; or PAINT RELATED MATERIAL (including paint thinning or reducing compound) with not more than 20% nitrocellulose, by mass, if the nitrogen content of the nitrocellulose is not more than 12.6%, by mass

Recommended use of the chemical and restrictions on use

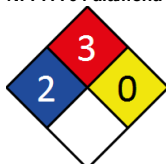
Relevant identified uses	Use according to manufacturer's directions
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Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	Impermitek
Address	5031 53 Ave, Mundare, AB, T0B 3H0, Canada
Telephone	+1 780 289 4542 or +1 780 906 4600
Fax	Not Available
Website	www.impermitek.com
Email	technical@impermitek.com

Emergency phone number

Association / Organisation	Canutec
Emergency telephone numbers	1-888-226-8832 (Canada and US)
Other emergency telephone numbers	1-613-996-6666 (International)

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)

Canadian WHMIS Symbols


Classification	Flammable Liquids Category 3, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3
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Label elements

Hazard pictogram(s)	
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Signal word	Warning
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Hazard statement(s)

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Physical and Health hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P240	Ground and bond container and receiving equipment.

Precautionary statement(s) Response

P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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No further product hazard information.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
80-62-6	2.5-10	methyl methacrylate
141-32-2	2.5-10	butyl acrylate
103-11-7	<1	2-ethylhexyl acrylate
38668-48-3	<1	dipropoxy-p-toluidine
162627-17-0	<1	fatty acid dimers, C18-unsaturated, 1,3-propanediamides

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▶ Wash out immediately 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. ▶ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	▶ If fumes or combustion products are inhaled remove from contaminated area. ▶ 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. ▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ▶ Transport to hospital, or doctor, without delay.
Ingestion	▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

For methyl methacrylate:

Significant effects developing over a work-shift are not detected by symptomatology, blood pressure, respiratory function testing, haemoglobin and white cell count, urinalysis and blood chemistry. Effects may occur in high concentration exposure groups with regard to serum glucose and blood urea, nitrogen, cholesterol, albumin and total bilirubin values. Possible alterations occur in skin and nervous system symptomatology, urinalysis findings and serum triglycerides. Diagnostic signs taken as indicative of methyl methacrylate-induced local neurotoxicity include sensory nerve distal conduction velocities. These deficits appear to result from diffusion of the substance into neurons, lysis of membrane lipids and demyelination.

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SECTION 5 Fire-fighting measures

Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

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

Fire Fighting	▶ 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 course.
Fire/Explosion Hazard	▶ Liquid and vapour are flammable. ▶ Moderate fire hazard when exposed to heat or flame. ▶ Vapour forms an explosive mixture with air. ▶ Moderate explosion hazard when exposed to heat or flame. Combustion products include: carbon dioxide (CO ₂) carbon monoxide (CO) nitrogen oxides (NO _x) 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	▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Control personal contact with the substance, by using protective equipment.
Major Spills	▶ 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.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▶ Containers, even those that have been emptied, may contain explosive vapours. ▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers. ▶ Avoid skin contact, including inhalation. ▶ Wear protective clothing when risk of overexposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps. ▶ DO NOT allow clothing wet with material to stay in contact with skin
Other information	▶ Store in original containers in approved flammable liquid storage area. ▶ Store away from incompatible materials in a cool, dry, well-ventilated 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	For acrylates or methacrylates: Storage tanks and pipes should be made of stainless steel or aluminium. Although they do not corrode carbon steel, there is a risk of contamination if corrosion does occur. ▶ Packing as supplied by manufacturer. ▶ Plastic containers may only be used if approved for flammable liquid. ▶ Check that containers are clearly labelled and free from leaks. ▶ For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure. ▶ For materials with a viscosity of at least 2680 cSt. (23 deg. C) ▶ For manufactured product having a viscosity of at least 250 cSt.
Storage incompatibility	Methyl acrylate: ▶ may polymerise explosively when heated above 21 C, or in light, or when when inhibitor concentrations fall to low levels ▶ storage containers may explode at elevated temperatures ▶ reacts violently with strong oxidisers ▶ is incompatible with strong acids, alkalis, aliphatic amines, alkanolamines, polyvinyl chloride, mercaptans, nitro- compounds, perborates, azides, ethers, ketones, aldehydes, nitrates, nitrites, reducing agents, acid anhydrides, acid chlorides, concentrated mineral acids, metal salts, strong bases, ▶ is usually stored below 10 deg C ▶ vapour may block vents and confined spaces after forming solid polymers

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ImpermiGrip

NOTE: Contact with alkali solutions will remove inhibitor and render material unstable on storage.
 Avoid oxygen content of less than 5%
 ► Avoid reaction with oxidising agents

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	methyl methacrylate	Methyl methacrylate	100 ppm / 410 mg/m3	510 mg/m3 / 125 ppm	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	methyl methacrylate	Methyl methacrylate	50 ppm	100 ppm	Not Available	SEN
Canada - Manitoba Occupational Exposure Limits	methyl methacrylate	Not Available	50 ppm	100 ppm	Not Available	TLV® Basis: URT & eye irr; body weight eff; pulm edema
Canada - Prince Edward Island Occupational Exposure Limits	methyl methacrylate	Methyl methacrylate	50 ppm	100 ppm	Not Available	TLV® Basis: URT & eye irr; body weight eff; pulm edema
Canada - British Columbia Occupational Exposure Limits	methyl methacrylate	Methyl methacrylate	50 ppm	100 ppm	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	methyl methacrylate	Methyl methacrylate	50 ppm / 205 mg/m3	410 mg/m3 / 100 ppm	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	methyl methacrylate	Methacrylic acid, methyl ester (Methyl methacrylate)	50 ppm / 205 mg/m3	410 mg/m3 / 100 ppm	Not Available	Not Available
Canada - Northwest Territories Occupational Exposure Limits	methyl methacrylate	Methyl methacrylate	50 ppm	100 ppm	Not Available	SEN
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	methyl methacrylate	Methyl methacrylate (monomer)	50 ppm	100 ppm	Not Available	S(D): a substance that, through skin contact, shows specific signs of sensitization on the skin
Canada - Nova Scotia Occupational Exposure LimitsCanada	methyl methacrylate	Methyl methacrylate	50 ppm	100 ppm	Not Available	TLV Basis: upper respiratory tract irritation; body weight effects; pulmonary edema; eye irritation
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	butyl acrylate	Butyl acrylate	10 ppm / 55 mg/m3	82 mg/m3 / 15 ppm	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	butyl acrylate	n-Butyl acrylate	2 ppm	4 ppm	Not Available	SEN
Canada - Manitoba Occupational Exposure Limits	butyl acrylate	Not Available	2 ppm	Not Available	Not Available	TLV® Basis: Irr
Canada - Prince Edward Island Occupational Exposure Limits	butyl acrylate	n-Butyl acrylate	2 ppm	Not Available	Not Available	TLV® Basis: Irr
Canada - British Columbia Occupational Exposure Limits	butyl acrylate	n-Butyl acrylate	2 ppm	Not Available	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	butyl acrylate	Acrylic acid, n-butyl ester (n-Butyl acrylate)	2 ppm / 10 mg/m3	Not Available	Not Available	3 - Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.
Canada - Alberta Occupational Exposure Limits	butyl acrylate	n-Butyl acrylate	2 ppm / 10 mg/m3	Not Available	Not Available	Not Available
Canada - Northwest Territories Occupational Exposure Limits	butyl acrylate	n-Butyl acrylate	2 ppm	4 ppm	Not Available	SEN
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	butyl acrylate	n-Butyl acrylate	2 ppm	Not Available	Not Available	S(D): a substance that, through skin contact, shows specific signs of sensitization on the skin
Canada - Nova Scotia Occupational Exposure LimitsCanada	butyl acrylate	n-Butyl acrylate	2 ppm	Not Available	Not Available	TLV Basis: skin, eye & upper respiratory tract irritation

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. 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.
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ImpermiGrip

Individual protection measures, such as personal protective equipment	  
Eye and face protection	▶ Safety glasses with side shields. ▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	▶ Wear chemical protective gloves, e.g. PVC. ▶ 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 watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care.
Body protection	See Other protection below
Other protection	▶ Overalls. ▶ PVC Apron. ▶ PVC protective suit may be required if exposure severe. ▶ Eyewash unit. ▶ Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity. ▶ For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets). ▶ Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds.

Respiratory protection

Respiratory protection is only required in the likelihood that relevant exposure limits may be approached or exceeded, e.g. application in enclosed spaces with restricted air exchange. Concentrations of potentially hazardous substances in air will remain low during normal outdoor application and will not pose a risk to the applicator.

Type AK-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

SECTION 9 Physical and chemical properties**Information on basic physical and chemical properties**

Appearance/Colour	Paste		
Physical state	Liquid	Relative density (Water = 1)	1.6
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	0.05 ppm	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)	3000 - 8000
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	35	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Flammable.	Oxidising properties	Not Available
Upper Explosive Limit (%)	8	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1.2	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	0.53	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
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
Particle Characteristics	Not Available		

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ImpermiGrip

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur.
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	Based on available data, the classification criteria are not met.
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	Based on available data, the classification criteria are not met.
h) STOT - Single Exposure	There is sufficient evidence to classify this material as toxic to specific organs through single exposure
i) STOT - Repeated Exposure	Based on available data, the classification criteria are not met.
j) Aspiration Hazard	Based on available data, the classification criteria are not met.

Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Workers in plants manufacturing methyl methacrylate may experience headaches, pains in the extremities, tiredness, memory loss and sleep disturbance, with hormonal disturbance in women. Inhalation of the substance may cause low blood pressure, central nervous system depression, liver and kidney degeneration and death from failure of breathing. The material has NOT been classified by EC Directives or other classification systems as 'harmful by inhalation'. This is because of the lack of corroborating animal or human evidence.
Ingestion	At sufficiently high doses the material may be hepatotoxic (i.e. poisonous to the liver). Oral doses can produce low blood pressure, central nervous system depression and drowsiness, liver and kidney degeneration and death after cessation of breathing. The material has NOT been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence.
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Reports of dental technicians, surgeons and manufacturing employees with direct skin contact with methyl methacrylate show altered sensation such as numbing and tingling sensation on the fingers, with mild local nerve damage. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	This material causes serious eye irritation.
Chronic	Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Prolonged and repeated exposures can cause liver and kidney damage, low blood pressure and heart attack. There may be increased deaths from colon or rectal cancer. Long term local injection may cause tumour of the local tissues. When inhaled, it may cause watery and sore nostrils and destruction of the organ of smell. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity.

ImpermiGrip	TOXICITY		IRRITATION	
	Not Available		Not Available	
methyl methacrylate	TOXICITY		IRRITATION	
	Dermal (rabbit) LD50: >5000 mg/kg ^[2]		Eye (Rodent - rabbit): 150mg	
	Inhalation (Rat) LC50: 29.8 mg/l4h ^[1]		Eye: no adverse effect observed (not irritating) ^[1]	
	Oral (Rat) LD50: 7872 mg/kg ^[2]		Skin (Human - woman): 2%/48H	
			Skin (Rodent - rabbit): 10gm	
			Skin: adverse effect observed (irritating) ^[1]	

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butyl acrylate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 750 mg/kg ^[2]	Eye (Rodent - rabbit): 500mg/24H - Mild
	Inhalation (Rat) LC50: >5.24 mg/l4h ^[1]	Eye (Rodent - rabbit): 50mg - Mild
	Oral (Rat) LD50: 900 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
		Skin (Human - woman): 0.1%/48H
		Skin (Rodent - rabbit): 10mg/24H - Mild
		Skin (Rodent - rabbit): 500mg - Mild
2-ethylhexyl acrylate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >177 mg/kg ^[1]	Eye (Rodent - rabbit): 500mg/24H - Mild
	Oral (Mouse) LD50; >5000 mg/kg ^[1]	Eye (Rodent - rabbit): 5mg - Severe
		Eye: no adverse effect observed (not irritating) ^[1]
		Skin (Rodent - rabbit): 10mg/24H - Severe
		Skin (Rodent - rabbit): 20mg/24H - Moderate
		Skin (Rodent - rabbit): 500mg - Mild
dipropoxy-p-toluidine	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye: adverse effect observed (irritating) ^[1]
	Oral (Rat) LD50: >25<200 mg/kg ^[1]	Skin: no adverse effect observed (not irritating) ^[1]
fatty acid dimers, C18-unsaturated, 1,3-propanediamides	TOXICITY	IRRITATION
	Oral (Rat) LD50: >10000 mg/kg ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
		Skin: no adverse effect observed (not irritating) ^[1]
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	

ImpermiGrip	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. Allergy causing activity is due to interactions with proteins. 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.
METHYL METHACRYLATE	Inhalation (human) TCLo: 60 mg/m3(15 ppm) [* Manuf. Rohm & Haas] MMA is absorbed after inhalation, oral intake and less readily through the skin. Following inhalation it is partly deposited in the airway where it is metabolised by local enzymes. Acute toxicity is low. Skin, eye and airway irritation can result as well as degeneration of the smell function of the nose.
BUTYL ACRYLATE	for n-butyl acrylate Acute toxicity: After oral administration, n-butyl acrylate is rapidly absorbed and metabolized in male rats (75% was eliminated as CO2, approximately 10% via urine and 2% via feces). The major portion of n-butyl acrylate was hydrolysed by carboxyesterase to acrylic acid and butanol. Following acute exposure, n-butyl acrylate exhibits low toxicity. n-Butyl acrylate has oral LD50s of 3143 mg/kg bw (rats) and 9050 mg/kg bw (male rats), an inhalation LC50 (4-hour, rat) of 10.3 mg/L and a dermal LD50 (rabbit) of 2000 to 3024 mg/kg. n-Butyl acrylate is irritating to skin and eyes and showed a skin sensitising potential in animals.
2-ETHYLHEXYL ACRYLATE	Substance has been investigated as a tumourigen on mouse skin. 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 severe 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. Repeated exposures may produce severe ulceration. For 2-ethylhexyl acrylate: Animal testing shows that 2-ethylhexyl acrylate can cause skin sensitisation and damage sensation of smell, and that chronic exposure can increase the incidence of kidney inflammation. High doses may cause developmental effects. Testing has shown that 2-ethylhexyl acrylate may cause genetic damage and/or mutations. It has not been shown to cause tumours except at very high doses.
FATTY ACID DIMERS, C18-UNSATURATED, 1,3-PROPANEDIAMIDES	No significant acute toxicological data identified in literature search. Laboratory testing shows that the fatty acid amide, cocoamide DEA, causes occupational allergic contact dermatitis, and that allergy to this substance is becoming more common. Alkanolamides are manufactured by condensation of diethanolamine and the methyl ester of long chain fatty acids. The chemicals in the Fatty Nitrogen Derived (FND) Amides are generally similar in terms of physical and chemical properties, environmental fate and toxicity. Its low acute oral toxicity is well established across all subcategories by the available data and show no apparent organ specific toxicity, mutation, reproductive or developmental defects.
ImpermiGrip & METHYL METHACRYLATE & BUTYL ACRYLATE & 2-ETHYLHEXYL ACRYLATE	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. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.
ImpermiGrip & METHYL METHACRYLATE & BUTYL ACRYLATE & 2-ETHYLHEXYL	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. Other allergic skin reactions, e.g. contact

ACRYLATE & FATTY ACID DIMERS, C18-UNSATURATED, 1,3-PROPANEDIAMIDES	urticaria, involve antibody-mediated immune reactions.			
METHYL METHACRYLATE & BUTYL ACRYLATE & 2-ETHYLHEXYL ACRYLATE	Where no 'official' classification for acrylates and methacrylates exists, there have been cautious attempts to create classifications in the absence of contrary evidence. For example Monoalkyl or monoarylestere of acrylic acids should be classified as R36/37/38 and R51/53 Monoalkyl or monoaryl esters of methacrylic acid should be classified as R36/37/38 Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH2=CHCOO or CH2=C(CH3)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate testing. This position has now been revised and acrylates and methacrylates are no longer <i>de facto</i> carcinogens.			
METHYL METHACRYLATE & BUTYL ACRYLATE	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

Impermi	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
methyl methacrylate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>110mg/l	2
	EC50	48h	Crustacea	69mg/l	1
	EC50	96h	Algae or other aquatic plants	170mg/l	1
	LC50	96h	Fish	>79mg/l	2
	EC0(ECx)	48h	Crustacea	48mg/l	1
butyl acrylate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	1.71mg/l	2
	EC50	48h	Crustacea	1.3mg/l	2
	NOEC(ECx)	504h	Crustacea	0.136mg/l	2
	EC50	96h	Algae or other aquatic plants	2.65mg/l	2
	LC50	96h	Fish	1.1mg/l	2
2-ethylhexyl acrylate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	1.71mg/l	2
	EC50	48h	Crustacea	1.3mg/l	2
	NOEC(ECx)	504h	Crustacea	0.136mg/l	2
	EC50	96h	Algae or other aquatic plants	2.65mg/l	2
	LC50	96h	Fish	1.1mg/l	2
dipropoxy-p-toluidine	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	245mg/l	2
	EC50	48h	Crustacea	28.8mg/l	2
	EC50(ECx)	48h	Crustacea	28.8mg/l	2
	LC50	96h	Fish	17mg/l	2
fatty acid dimers, C18-unsaturated, 1,3-propanediamides	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

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.

Continued...

For Methyl Methacrylate (MMA):
Koc: 87; Log Pow: 1.83; Half-life (hr) air: 2.7-3; Half-life (hr) H2O surface water: 6.3-336; Henry's atm m3/mol: 3.24E-04; BOD5: 0.14; log BCF: 0.55.
Environmental Fate: The environmental behavior of MMA is determined by its range of 1.1-9.7 hours atmospheric half-life and moderate volatility. MMA is readily biodegradable. The air, and to a much lower extent, the water, are the preferred target compartments for distribution and neither relevant bioaccumulation nor geo-accumulation are expected.
DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methyl methacrylate	LOW	LOW
butyl acrylate	LOW (Half-life = 14 days)	LOW (Half-life = 0.96 days)
2-ethylhexyl acrylate	LOW	LOW
dipropoxy-p-toluidine	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
methyl methacrylate	LOW (BCF = 6.6)
butyl acrylate	LOW (LogKOW = 2.36)
2-ethylhexyl acrylate	LOW (BCF = 289.73)
dipropoxy-p-toluidine	LOW (LogKOW = 2.01)

Mobility in soil

Ingredient	Mobility
methyl methacrylate	LOW (Log KOC = 10.14)
butyl acrylate	LOW (Log KOC = 40.3)
2-ethylhexyl acrylate	LOW (Log KOC = 429)
dipropoxy-p-toluidine	LOW (Log KOC = 10)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	- Containers may still present a chemical hazard/ danger when empty. - Return to supplier for reuse/ recycling if possible. Otherwise: - If container can not 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. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: - Reduction - Reuse - Recycling - Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. DO NOT allow wash water from cleaning or process equipment to enter drains. - It may be necessary to collect all wash water for treatment before disposal. - In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. - Where in doubt contact the responsible authority. - Recycle wherever possible. - Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. - Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material). - Decontaminate empty containers.
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SECTION 14 Transport information

Labels Required

	
Marine Pollutant	NO

Land transport (TDG)

14.1. UN number or ID number	1263		
14.2. UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) with not more than 20% nitrocellulose, by mass, if the nitrogen content of the nitrocellulose is not more than 12.6%, by mass; or PAINT RELATED MATERIAL (including paint thinning or reducing compound) with not more than 20% nitrocellulose, by mass, if the nitrogen content of the nitrocellulose is not more than 12.6%, by mass		
14.3. Transport hazard class(es)	<table><tr><td>Class</td><td>3</td></tr></table>	Class	3
Class	3		

	Subsidiary Hazard	Not Applicable
14.4. Packing group	III Note Due to its relatively high viscosity this material can be considered non-hazardous in accordance to ADR 2.2.3.1.5 when packed in receptacles of less than 450 litres	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	59, 142
	Explosive Limit and Limited Quantity Index	5 L
	ERAP Index	Not Applicable

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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

Not Applicable

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

Product name	Group
methyl methacrylate	Not Applicable
butyl acrylate	Not Applicable
2-ethylhexyl acrylate	Not Applicable
dipropoxy-p-toluidine	Not Applicable
fatty acid dimers, C18-unsaturated, 1,3-propanediamides	Not Applicable

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
methyl methacrylate	Not Applicable
butyl acrylate	Not Applicable
2-ethylhexyl acrylate	Not Applicable
dipropoxy-p-toluidine	Not Applicable
fatty acid dimers, C18-unsaturated, 1,3-propanediamides	Not Applicable

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

methyl methacrylate is found on the following regulatory lists

- Canada Categorization decisions for all DSL substances
- Canada Domestic Substances List (DSL)
- Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
- International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

butyl acrylate is found on the following regulatory lists

- Canada Categorization decisions for all DSL substances
- Canada Domestic Substances List (DSL)
- Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
- International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

2-ethylhexyl acrylate is found on the following regulatory lists

- Canada Categorization decisions for all DSL substances
- Canada Domestic Substances List (DSL)
- Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
- International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
- International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

dipropoxy-p-toluidine is found on the following regulatory lists

- Canada Categorization decisions for all DSL substances
- Canada Domestic Substances List (DSL)

fatty acid dimers, C18-unsaturated, 1,3-propanediamides is found on the following regulatory lists

Not Applicable

Additional Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	No (fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
Canada - NDSDL	No (methyl methacrylate; butyl acrylate; 2-ethylhexyl acrylate; dipropoxy-p-toluidine; fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
Japan - ENCS	No (fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
Korea - KECI	No (fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
New Zealand - NZIoC	Yes
Philippines - PICCS	No (fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
USA - TSCA	TSCA Inventory 'Active' substance(s) (methyl methacrylate; butyl acrylate; 2-ethylhexyl acrylate; dipropoxy-p-toluidine); No (fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
Taiwan - TCSI	Yes
Mexico - INSQ	No (dipropoxy-p-toluidine; fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
Vietnam - NCI	Yes
Russia - FBEPH	No (dipropoxy-p-toluidine; fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
UAE - Control List (Banned/Restricted Substances)	No (methyl methacrylate; butyl acrylate; 2-ethylhexyl acrylate; dipropoxy-p-toluidine; fatty acid dimers, C18-unsaturated, 1,3-propanediamides)
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	10/06/2024
Initial Date	17/05/2023

SDS Version Summary

Version	Date of Update	Sections Updated
1.2	10/06/2024	Hazards identification - Classification, Composition / information on ingredients - Ingredients, Identification of the substance / mixture and of the company / undertaking - Supplier Information

Other information

Definitions and abbreviations

- PC - TWA: Permissible Concentration-Time Weighted Average
- PC - STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit,
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSDL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances
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ImpermiGrip

The information contained in the Safety Data Sheet is based on our data available on the date of publication. This information is intended to aid the user in controlling the handling risks . It is not to be construed as a warranty or specification of the product quality. The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications. The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and sufficient for the intended use of the product . In case of any unclarity we advise consulting the supplier or an expert.