SAFETY DATA SHEET 2022

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name : ShieldPoly F-15 (za)

Other means of Identification : None

Component : Cure

Relevant identified uses of the substance or mixture and uses advised against : SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Application of the Substance / the Mixture : Hardener

Manufacturer/Importer/Supplier/Distributor Information : ShieldCrete® International

Company Name : ShieldCrete® International Sdn Bhd

Address : 66 Jalan Setiakasih 9 Bukit Damansara, Kuala Lumpur, Malaysia 50490

Contact Numbers : +66 928 639 833 | +63 966 465 5362

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SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification according to Regulation (EC) No 1272/2008

GHS08 Health Hazard

Resp. Sens. 1	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2	H351 Suspected of causing cancer.
STOT RE 2	H373 May cause damage to organs through prolonged or repeated exposure.

GHS07

Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
STOT SE 3	H335 May cause respiratory irritation.

Label Elements

Labelling according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the GB CLP regulation.

Hazard Pictograms:

GHS07  GHS08 

Signal Word:

Danger

Hazard-determining Components of Labelling:

- modified methane diisocyanate (MDI)
- 4,4'-methylenediphenyl diisocyanate
- 4,4'-Methylenediphenyl diisocyanate, oligomers
- reaction mass of 4,4 -methylenediphenyl diisocyanate and
- o-(p-isocyanatobenzyl) phenyl isocyanate

Hazard Statements:

H332	Harmful if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements:

P260	Do not breathe vapors.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container in accordance with regional/national regulations.

Additional Information:

EUH204 Contains isocyanates. May produce an allergic reaction.
As from 24 August 2023 adequate training is required before industrial or professional use.

Other Hazards

- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: COMPOSITES / INFORMATION ON INGREDIENTS

Mixtures

Description: Mixture: consisting of the following components.

DANGEROUS COMPONENTS		
CAS: 39420-98-9 EC number: 643-036-8 Reg.nr.: -	Modified Methane Diisocyanate (MDI) Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	50-75%
CAS: 101-68-8 EINECS: 202-966-0 Reg.nr.: 01-2119457014-47	4,4'-methylenediphenyl diisocyanate Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0.1 % STOT SE 3; C ≥ 5 %	10-25%

CAS: 25686-28-6 NLP: 500-040-3 Reg.nr.: 01-2119457013-49	4,4'-Methylenediphenyl diisocyanate, oligomers Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≥2.5-<10%
EC number: 905-806-4 Reg.nr.: 01-2119457015-45	Reaction mass of 4,4 -methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	≤0.5%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: FIRST AID MEASURES

General Information: Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Inhalation: Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.

Skin Contact: Immediately wash with water and soap and rinse thoroughly.

Eye Contact: Rinse opened eye for several minutes under running water.
If symptoms persist, consult a doctor.

Ingestion: If symptoms persist, consult a doctor.

Most important symptoms and effects, both acute and delayed:
No further relevant information available.

Indication of any immediate medical attention and special treatment needed:
No further relevant information available.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media:
Use fire extinguishing methods suitable to surrounding conditions.

Special hazards arising from the substance or mixture:
During heating or in case of fire poisonous gases are produced.

Advice for firefighters:
Protective equipment: Mount respiratory protective device.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:
Mount respiratory protective device.

Environmental precautions:
Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

Reference to other sections:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling:

Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Avoid inhalation of spray application of the product.
To remove contaminated clothing and protective equipment before entering eating areas.
To wash hands after use.
Not to eat, drink and smoke in work areas.
Information about fire - and explosion protection: Keep respiratory protective device available.

Conditions for safe storage, including any incompatibilities:

Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s):

No further relevant information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Ingredients with limit values that require monitoring at the workplace:

CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate

WEL Short-term value: 0.07 mg/m³
Long-term value: 0.02 mg/m³
Sen; as -NCO

DNELs		
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate		
Dermal	DNEL Short term systemic effects	50 mg/kg/ bw/24h (workers)
Inhalative	DNEL Long term systemic effects	0.05 mg/m3 (workers)
	DNEL Short term systemic effects	0.1 mg/m3 (workers)
	DNEL Short term systemic effects	0.1 mg/m3 (workers)
	DNEL Long term systemic effects	0.05 mg/m3 (workers)
PNECs		
CAS: 39420-98-9 modified methane diisocyanate (MDI)		
PNEC Water	1 mg/l (fresh water)	
	0.1 mg/l (marine water)	
PNEC STP	1 mg/l (sewage treatment plant)	
Ingredients with biological limit values:		
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate		
BMGV	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period of exposure Parameter: isocyanate-derived diamine	

Additional information: The lists valid during the making were used as basis.

Exposure Controls

Appropriate engineering controls: No further data; see item 7.

Individual protection measures, such as personal protective equipment

General Protective and Hygienic Measures:

Keep away from foodstuffs, beverages, and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.

Respiratory Protection:

Select respiratory protection suitable for the actual or predicted level of exposure, the type of compound and its level of danger, certified in accordance with applicable standards. For low exposure applications, use respiratory masks with adequate protection / filters. For applications with an exposure level above the Workplace Exposure Limits (WEL), use breathing masks with adequate filters or assisted breathing masks, according to the risk assessment carried out by the occupational risk prevention services.

Protection of Hands:

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/Face Protection:

Tightly sealed goggles.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Appearance	Fluid
Color	According to product specification
Odor	Characteristic
Odor Threshold	Not determined
pH Value	Not determined
Melting Point / Freezing Point	Undetermined
Initial Boiling Point and Boiling Range	208 °C (CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate)
Flash Point	175 °C (ISO 3679, CAS: 101-68-8 4,4' - methylenediphenyl diisocyanate)
Flammability	Not applicable
Ignition Temp	520 °C
Decomposition Temp	Not determined
Explosion Limits (Lower)	0.4 Vol %

Explosion Limits (Upper)	0.0 Vol %
Kinematic Viscosity 40 °C	> 20.5 (mm2/s)
Solubility in Water	Not miscible or difficult to mix
Partition Coefficient: N-octanol/Water	Not determined
Vapor Pressure at 20°C	0 hPa
Density at 20 °C	1.125 g/cm³
Relative Density	Not determined
Vapor Density	Not determined
Form	Fluid
Auto-ignition Temp	Product is not self-igniting
Explosive Properties	Product does not present an explosion hazard
Solids Content (w/w)	100.0 %
Evaporation Rate	Not determined

Other information: The provisions of directive 2004/42/CE on VOC apply to this product. Refer to the product label and /or technical data sheet for further information.

Information with regard to Physical Hazard Classes:

- Explosives Void
- Flammable gases Void
- Aerosols Void
- Oxidizing gases Void
- Gases under pressure Void
- Flammable liquids Void
- Flammable solids Void
- Self-reactive substances and mixtures Void
- Pyrophoric liquids Void
- Pyrophoric solids Void
- Self-heating substances and mixtures Void
- Substances and mixtures, which emit flammable gases in contact with water Void
- Oxidizing liquids Void
- Oxidizing solids Void
- Organic peroxides Void
- Corrosive to metals Void
- Desensitized explosives Void

SECTION 10: STABILITY AND REACTIVITY

Reactivity: No further relevant information available.

Chemical Stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of Hazardous Reactions: No dangerous reactions known.

Conditions to Avoid: No further relevant information available.

Incompatible Materials: No further relevant information available.

Hazardous Decomposition Products: No dangerous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute Toxicity: Harmful if inhaled.

LD/LC50 Values Relevant for Classification		
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>9,400 mg/kg (rabbit)
Inhalative	LC50/1 h	2.24 mg/l (rat)

Primary Irritant Effect:
Skin corrosion/irritation: Causes severe skin irritation.
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Suspected of causing cancer.
Reproductive toxicity: Based on available data, the classification criteria are not met.
STOT-single exposure: May cause respiratory irritation.
STOT-repeated exposure: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard: Based on available data, the classification criteria are not met.

Information on other hazards:
Endocrine disrupting properties: None of the ingredients is listed.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Aquatic Toxicity	
CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate	
EC50/24 h	>1,000 mg/l (daphnia magna)
EC50/72 h	>1,640 mg/l (desmodesmus suspicatus)
LC50/96 h	>1,000 mg/l (brachydanio rerio)

Persistence and Degradability: No further relevant information available.

Bioaccumulative Potential: No further relevant information available.

Mobility in Soil: No further relevant information available.

Results of PBT and vPvB Assessment: PBT: Not applicable.
vPvB: Not applicable.

Endocrine Disrupting Properties: The product does not contain substances with endocrine disrupting properties.

Other Adverse Effects

Remark: Toxic for fish

Additional Ecological Information
General Notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Product

Recommendation: Disposal must be made according to official regulations.
Must not be disposed together with household garbage.
Do not allow product to reach sewage system.
The information given is based on Directive (EU) 2008/98.

European waste catalogue: This product is considered hazardous waste as defined by EU Directive 2008/98/EC.

European waste catalogue: Recommended identification code 08 01 11* - waste paint and varnish containing organic solvents or other dangerous substances.

Uncleaned Packaging

Recommendation: Disposal must be made according to official regulations.
The package should be properly drained.

SECTION 14: TRANSPORT INFORMATION

UN Number or ID Number
ADR, ADN, IMDG, IATA Void

UN Proper Shipping Name
ADR, ADN, IMDG, IATA Void

Transport Hazard Class(es)
ADR, ADN, IMDG, IATA Void
Class Void

Packing Group
ADR, IMDG, IATA Void

Environmental Hazards
Marine pollutant: No

Special Precautions for User Not Applicable

Maritime transport in bulk according to
IMO instruments Not Applicable

UN "Model Regulation" Void

SECTION 15: REGULATORY INFORMATION

Safety, Health, and Environmental Regulations/Legislation specific for the Substance or Mixture

Labelling according to Regulation (EC) No 1272/2008 GHS Label Elements

Directive 2012/18/EU

Named Dangerous Substances - ANNEX I
None of the ingredients is listed.

List of Substances Subject to Authorization (ANNEX XIV)
None of the ingredients is listed.

Regulation (EC) No 1907/2006 ANNEX XVII
Conditions of restriction: 3, 56a, 74

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

Waterhazard Class

Water hazard class 1 (Self-assessment): hazardous for water.

Other Regulations, Limitations, and Prohibitive Regulations

Substance of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant Phrases from Sections 2 and 3

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.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
EUH204 Contains isocyanates. May produce an allergic reaction.

Classification according to Regulation (EC) No 1272/2008

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

- Acute toxicity - inhalation
- Skin corrosion/irritation
- Serious eye damage/eye irritation
- Respiratory sensitization
- Skin sensitization
- Carcinogenicity
- Specific target organ toxicity (single exposure)
- Specific target organ toxicity (repeated exposure)

Abbreviations and Acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (GB REACH)
PNEC: Predicted No-Effect Concentration (GB REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2