Safety data sheet
according to 1907/2006/EC, Article 31

Printing date: 14.06.2023 Version No: 1.00 Revision: 14.06.2023

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product Name: Fluonox® Terpolymer Cure Incorporated Metal Bonding - V

Trade Name: KB3300Z

1.2 Relevant identified uses of the substance or mixture and uses advised against

Application of the substance / the preparation: Manufacture of rubber products

Uses advised against: No further relevant information available.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Gujarat Fluorochemicals Limited
12/A Dahej, GIDC, Industrial Estate
Dahej, Gujarat 392130, India
Telephone : +91-2641-618031(Admin)/ 618086-87(Security)
Email : contact@gfl.co.in

1.4 Emergency telephone number:
Emergency Telephone Number: +91-2643-618081 (SHE) / 618086-87(Security)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 with its amendment Regulation (EU) 2020/878

Eye Irrit. 2	H319 Causes serious eye irritation.
Repr. 1B	H360 May damage fertility or the unborn child. Route of exposure: Oral.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
Hazard pictograms

Signal word Danger

Hazard-determining components of labelling:
4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol
Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)
Hazard statements
H319 Causes serious eye irritation.
H360 May damage fertility or the unborn child. Route of exposure: Oral.
H412 Harmful to aquatic life with long lasting effects.
Precautionary statements

P264	Wash thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P405	Store locked up.

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P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:
Restricted to professional users.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not determined.
vPvB: Not determined.

Determination of endocrine-disrupting properties		
CAS: 1478-61-1	4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol	List III

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description:		
CAS: 25190-89-0 EC number: 607-638-4	Vinylidene fluoride/ hexafluoropropene /tetrafluoroethylene	> 96.0%
CAS: 9010-75-7 EC number: 842-322-1	Chlorotrifluoroethylene/ Vinylidene Fluoride Copolymer	< 1.5%
Dangerous components:		
CAS: 1478-61-1 EC number: 216-036-7 Reg.nr.: 01-2120762844-45-XXXX	4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol Repr. 1B, H360; STOT RE 2, H373; Eye Dam. 1, H318; Aquatic Chronic 1, H410	< 1.5%
CAS: 75768-65-9 EC number: 278-305-5 Reg.nr.: 01-2120769707-38-XXXX	Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1) Repr. 1B, H360; STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	< 1.0%

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

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:
Take affected persons out of danger area and lay down.
In case of irregular breathing or respiratory arrest provide artificial respiration.
After inhalation:
Supply fresh air.
Take affected persons into fresh air and keep quiet.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
Do not pull solidified product off the skin.
After contact with the molten product, cool rapidly with cold water.
Seek immediate medical advice.
Do not use solvents.
After eye contact:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Seek medical treatment.
After swallowing: Rinse out mouth and then drink plenty of water.

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4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents:
CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.
For safety reasons unsuitable extinguishing agents: Water with full jet
5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon monoxide
Hydrogen fluoride (HF)
Carbon dioxide
5.3 Advice for firefighters
Protective equipment:
Wear self-contained respiratory protective device.
Wear neoprene gloves during cleaning up work after a fire.
Additional information
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation.
Wear protective clothing.
Avoid formation of dust.
Keep away from ignition sources.
6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Pick up mechanically.
Dispose of the material collected according to regulations.
6.4 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

7.1 Precautions for safe handling
Prevent formation of dust.
Any unavoidable deposit of dust must be regularly removed.
Ensure good ventilation/exhaustion at the workplace.
Information about fire and explosion protection:
Dust can combine with air to form an explosive mixture.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
Information about storage in one common storage facility: Store away from oxidising agents.

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Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs		
CAS: 1478-61-1 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol		
Oral	DNEL(long/systemic)	0.017 mg/kg bw/day (Consumer)
Dermal	DNEL(long/systemic)	0.017 mg/kg bw/day (Consumer)
		0.033 mg/kg bw/day (Workers (Industrial/Professional))
Inhalative	DNEL(long/systemic)	0.029 mg/m3 (Consumer)
		0.118 mg/m3 (Workers (Industrial/Professional))
CAS: 75768-65-9 Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl) ethylidene]bis[phenol] (1:1)		
Dermal	DNEL(long/systemic)	0.1 mg/kg bw/day (Workers (Industrial/Professional))
Inhalative	DNEL(long/systemic)	0.72 mg/m3 (Workers (Industrial/Professional))

PNECs	
CAS: 1478-61-1 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol	
PNEC(aqua)	0.0052 mg/L (freshwater)
	0.000522 mg/L (marine water)
PNEC(STP)	4.787 mg/L (sewage treatment plant)
PNEC(sediment)	1.21 mg/kg sedi. dw (freshwater)
	0.121 mg/kg sedi. dw (marine water)
PNEC(soil)	0.239 mg/kg soil ww (soil)
CAS: 75768-65-9 Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl) ethylidene]bis[phenol] (1:1)	
PNEC(aqua)	0 mg/L (freshwater)
	0 mg/L (marine water)
PNEC(STP)	10 mg/L (sewage treatment plant)
PNEC(sediment)	0.328 mg/kg sedi. dw (freshwater)
	0.033 mg/kg sedi. dw (marine water)
PNEC(soil)	0.065 mg/kg soil ww (soil)

8.2 Exposure controls
Appropriate engineering controls No further data; see item 7.
Individual protection measures, such as personal protective equipment
General protective and hygienic measures:
Do not eat, drink, smoke or sniff while working.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Store protective clothing separately.
Avoid contact with the eyes and skin.
The usual precautionary measures are to be adhered to when handling chemicals.
Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Wear respirator with high efficiency dust, mist, fume and vapor filters.

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Hand protection


Protective gloves

Only use chemical-protective gloves with CE-labelling of category III.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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 can not 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


Safety glasses

Body protection:


Protective work clothing


Boots

Environmental exposure controls No further relevant information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Physical state	Solid
Form:	Solid
Colour:	White
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Not determined.
Boiling point or initial boiling point and boiling range	Not applicable.
Flammability	Not determined.
Lower and upper explosion limit	
Lower:	Not applicable.
Upper:	Not applicable.
Flash point:	Not applicable.
Ignition temperature:	Not determined.
Decomposition	Not determined.
pH	Not applicable.
Viscosity:	
Kinematic viscosity	Not applicable.

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Dynamic: Not applicable.
Solubility
water: Soluble.
Partition coefficient n-octanol/water (log value)

1478-61-1	4,4'-[2,2,2-trifluoro-1-(trifluoromethyl) ethylidene]diphenol	2,79 log Pow (20 °C, EU Method A.8)
75768-65-9	Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene] bis[phenol] (1:1)	2,28 log Pow (20 °C, HPLC)

Vapour pressure: Not applicable.
Density and/or relative density
Density: Not determined.
Relative density Not determined.
Vapour density Not applicable.
Relative gas density Not applicable.
Particle characteristics See item 3.

9.2 Other information
Explosive properties: Product does not present an explosion hazard.
Oxidising properties No
Evaporation rate Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.
10.2 Chemical stability Stable and hazardous polymerization will not occur
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions No dangerous reactions known.
10.4 Conditions to avoid No further relevant information available.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:		
CAS: 1478-61-1 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol		
Oral	LD50	> 2000 mg/kg (Rat) (OECD Guideline 423)
Dermal	LD50	> 2000 mg/kg (Rat) (OECD Guideline 402)
CAS: 75768-65-9 Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl) ethylidene]bis[phenol] (1:1)		
Oral	LD50	> 2000 mg/kg (Rat) (OECD Guideline 425)

Skin corrosion/irritation Based on available data, the classification criteria are not met.
Serious eye damage/irritation
Causes serious eye irritation.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
Germ cell mutagenicity Based on available data, the classification criteria are not met.

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Carcinogenicity Based on available data, the classification criteria are not met.
Reproductive toxicity
May damage fertility or the unborn child. Route of exposure: Oral.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure Based on available data, the classification criteria are not met.
Aspiration hazard Based on available data, the classification criteria are not met.
11.2 Information on other hazards

Endocrine disrupting properties		
CAS: 1478-61-1	4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol	List III

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
CAS: 1478-61-1 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol	
EC50 (48h) (static)	2.7 mg/L (Daphnia) (OECD Guideline 202, Daphnia magna)
	2.5 mg/L (Fish) (ISO 15088, Danio rerio)
EC50 (3h) (static)	126.8 mg/L (Bacteria) (OECD Guideline 209, activated sludge) nominal
EC50 (72h) (static)	> 0.808 mg/L (Algae) (OECD Guideline 201, Pseudokirchneriella subcapitata)
NOEC (21d) (static)	0.23 mg/L (Daphnia) (OECD Guideline 211, Daphnia magna) semi-static
NOEC (static)	> 0.125 mg/L (Fish) (OECD 234; Danio rerio) semi-static, 120d
CAS: 75768-65-9 Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl) ethylidene]bis[phenol] (1:1)	
LC50 (48h) (static)	0.79 mg/L (Daphnia) (OECD Guideline 202, Daphnia magna)
LC50 (96h) (static)	1.2 mg/L (Fish) (OECD Guideline 203, Pimephales promelas) nominal
ErC50 (72h) (static)	0.45 mg/L (Algae) (OECD Guideline 201, Pseudokirchneriella subcapitata)
EC50 (72h) (static)	0.087 mg/L (Algae) (OECD Guideline 201, Pseudokirchneriella subcapitata)

12.2 Persistence and degradability

1478-61-1	4,4'-[2,2,2-trifluoro-1-(trifluoromethyl) ethylidene]diphenol	0 % (28 d, OECD Guideline 301 B)
75768-65-9	Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene] bis[phenol] (1:1)	0 % (28 d, OECD Guideline 301 B)

12.3 Bioaccumulative potential

1478-61-1	4,4'-[2,2,2-trifluoro-1-(trifluoromethyl) ethylidene]diphenol	5,2 - 9,8 BCF (OECD Guideline 305)

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12.4 Mobility in soil		
1478-61-1	4,4'-[2,2,2-trifluoro-1-(trifluoromethyl) ethylidene]diphenol	3,36 log Koc (25 °C, pH 6,88, EU Method C.19)
75768-65-9	Benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene] bis[phenol] (1:1)	3,86 - 5,63 log Koc (20 °C, OECD Guideline 121)

12.5 Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties For information on endocrine disrupting properties see section 11.

12.7 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation: Must be specially treated adhering to official regulations.

Uncleaned packaging
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN number or ID number
ADR/RID/ADN, IMDG, IATA Void
14.2 UN proper shipping name
ADR/RID/ADN, IMDG, IATA Void
14.3 Transport hazard class(es)
ADR/RID/ADN, IMDG, IATA
Class Void
14.4 Packing group
ADR/RID/ADN, IMDG, IATA Void
14.5 Environmental hazards: Not applicable.
14.6 Special precautions for user Not applicable.
14.7 Maritime transport in bulk according to IMO instruments Not applicable.

Transport/Additional information: Not dangerous according to the above specifications.
UN "Model Regulation": Void

SECTION 15: Regulatory information

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

Directive 2012/18/EU
Named dangerous substances - ANNEX I None of the ingredients is listed.

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.

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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.

Chemical Inventories:
EU - EINECS
Australia - AICS
Canada - DSL
China - IECSC
Korea - ECL
New Zealand - NZIoC
Philippines - PICCS
Taiwan - TCSI
Thailand - TECI
USA - TSCA

15.2 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
H300 Fatal if swallowed.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
Date of previous version: 09.03.2023

Abbreviations and acronyms:
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
MARPOL: (from Marine Pollutant) International Convention for the Prevention of Marine Pollution from Ships
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
UN: United Nations (also UNO: United Nations Organization)
NOEC: No Observed Effect Concentration
OECD: Organisation for Economic Co-operation and Development
ASTM: American Society for Testing and Materials
WAF: Water Accommodated Fraction
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 (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 2: Acute toxicity – Category 2

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Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3