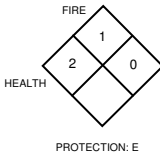


## MATERIAL SAFETY DATA SHEET

Revision date: Aug 2019

1	<b>Identification</b>	Manufacturer Name	Nikita Transphase Adducts (P) Ltd, T-96 Tarapur MIDC, Boisar, 401 506, India Office: +91.22.2444 0141 / +91.22.2444 0142	
		Product Name	ToxiShield DB - 25 MEG	
		Trade Name(s)	ToxiShield DB, Denatonium Benzoate	
		Chemical Name	Denatonium Benzoate in Mono Ethylene Glycol	
		Chemical Formula	C <sub>28</sub> H <sub>34</sub> N <sub>2</sub> O <sub>3</sub> in C <sub>2</sub> H <sub>4</sub> (OH) <sub>2</sub>	
		Mol Wt	158 (avg)	
2	<b>Composition Information on Ingredients</b>	Ingredient Name	Denatonium Benzoate	MEG
		Percentage	>25 %	>72%
		CAS Number	3734-33-6	102-21-1
3	<b>Hazards Identification</b> 	Emergency Overview	EXTREMELY BITTER and POISONOUS. In confined area vapours may cause headache.	
		Potential Health Effects	Short Term	Long Term
		Inhalation	May cause irritation to upper respiratory track.	Not Available
		Skin	May cause mild irritation/redness.	Not Available
		Eye	May cause irritation/redness.	Not Available
		Ingestion	Data Not Available. Safe to assume irritation, nausea, vomiting may occur.	Not Available
		4	<b>First Aid Measures</b>	Inhalation
Skin	Remove contaminated clothing. Wash exposed areas immediately and thoroughly with mild soap and water.			
Eye	Do not rub eyes. Flush thoroughly with water. If irritation persists consult doctor.			
Ingestion	If possible spit out, and clean mouth. Do not induce vomiting. Seek immediate medical help.			
5	<b>Fire Fighting Measures</b>	Flash Point	NA	
		Flammability Limits	IEL : N.A. UEL : N.A.	
		Extinguishing Media	CO <sub>2</sub> , Dry Chemicals, Foam	
		Fire Fighting Procedures	During emergency conditions, exposure to thermal decomposition/combustion products may be hazardous. Approved self-contained, fully covered breathing apparatus must be used.	
		Usual Fire and Explosion Hazard	When exposed to excessive heat and open flames, will emit irritant fumes and/or smoke. No explosive hazards are expected.	
6	<b>Accidental Release Measures</b>	In case of Spillage or Leakage	Handle in area suitable for containment of spills. Mop up with proper equipment. Avoid release to sewers or environment. Place recovered material in properly marked containers for disposal.	
7	<b>Handling and Storage</b>	Precautions	Avoid prolonged breathing of vapors. Avoid prolonged/repeated dermal exposure. Use in areas with adequate ventilation. Keep from excessive heat, sources of fire or sparks.	
		Storage	Keep away from extremely hot areas, and keep containers sealed. Do not leave in open or semi-open condition.	

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8	<b>Exposure Controls / Personal Protection</b>	Skin	Use appropriate clothing/ impermeable gloves etc to prevent exposure.
		Ventilation	Maintain adequate flow of fresh air to maintain exposure levels minimal.
		Respiration	If adequate ventilation not possible, use approved respiratory protection equipment.
		Eye	Approved goggles to be used at all times.
9	<b>Physical &amp; Chemical Properties</b>	Appearance	Clear Water-white to Slightly Yellowish Liquid
		Odor	Slightly sweetish
		Solubility in Water	Miscible in all ratios
		Flash Pt	Above 110C
		Freezing Pt	Below -10C
		Specific Gr	1.1-1.2
		Initial BP	Above 190C
		Vap. Pres	NA
10	<b>Stability &amp; Reactivity</b>	Materials to Avoid	None known.
		Conditions to Avoid	None known.
		Hazardous Decomposition Products	Normal hydrocarbon combustion products, CO, CO <sub>2</sub> , NO <sub>x</sub>
11	<b>Toxicology</b>	Oral LD50	approx 4700 (mg/kg) Rat oral
		Dermal	NA
		Inhalation	NA
12	<b>Ecological Information</b>		Do not discharge into drains or the environment; dispose to authorized chemical waste collection point.
13	<b>Disposal Consideration</b>		Incinerate in authorized facility or Dispose according to local law.
14	<b>Transport Information</b>	Classification	Not Hazardous for transport (According to the current addition of IATA regulation)
15	<b>Regulatory Information</b>	EC labeling symbols	
		R Phrases	R22 Harmful if swallowed.
		S Phrases	S2 Keep out of the reach of children. S13 Keep away from food, drink and animal feeding stuffs. S24 Avoid contact with skin. S36 Wear suitable protective clothing. S37 Wear suitable gloves. S46 If swallowed, seek medical advice immediately and show this container or label.
16	<b>Other Information</b>		This product is extremely bitter and used as a denaturant for MEG, antifreeze and several other applications.

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