ThreeBond

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Three Bond Fine Chemical Co., Ltd.

Technical Data
ThreeBond 6658
Strong Alkaline Electrolytic Water

1. Product description

ThreeBond 6658 is strong alkaline electrolytic water excelling in detergency. Although it is a strong alkaline cleaning agent, it has an extremely low irritation to the skin and eyes and can be used safely compared to conventional strong alkaline cleaning agents and solvent-based cleaning agents.

In addition, it is an environmentally-friendly cleaning agent not containing chemicals, such as surfactants and solvents.

Hereinafter, ThreeBond is abbreviated to TB.

2. Features

(1) Strong alkaline electrolytic water with pH of 12.7 produced by the electrolysis of water

(2) Strongly alkaline, but extremely gentle to the skin and eyes

(3) Environmentally-friendly cleaning agent not containing chemicals

(4) Strong alkalinity ensuring high bacteria-elimination and antibacterial effects

3. Applications

(1) Cleaning of machine tools to remove cutting oil and rust preventive oil

(2) Bacteria elimination, antibacterial treatment and cleaning of fabric seats, floor mats and interior parts in cars

(3) Degreasing, bacteria elimination, antibacterial treatment and cleaning of others

4. Properties

Table 1 Properties of TB6658

Test items	Unit	Characteristic value	Test methods	Remarks
Appearance (color)	-	Colorless	3TS-2100-020	-
pH	-	12.7	3TS-6400-002	25°C

5. Characteristics

5.1 Detergency

Table 2 Characteristics of TB6658

Test reagent	Unit	Characteristic value	Test methods
Brake fluid	-	Emulsified	3TS-2400-003 (*1)
Engine oil	-	Emulsified	
Gear oil	-	Emulsified	

*1 Method for testing detergency

(1) Weigh 50 ml of TB6658 in a 100-ml glass container.

(2) After dropping 0.2 g of each oil, close the cap, and shake the container vigorously for 30 seconds.

(3) After leaving it at rest for 1 minute, visually check the appearance, and evaluate the condition as stated below.

Dissolved: The whole liquid became a uniformly transparent solution.

Emulsified: The whole liquid was emulsified without separation of the material to be removed.

Separated: The liquid layer was divided into two layers, and the material to be removed was separated to the upper layer.

(4) If the liquid is emulsified as the result of the evaluation in (3), the product is acceptable. In the case of “separated” or “dissolved,” the product is unacceptable.

5.2 Influence on materials

Table 3 Influence of TB6658 on materials

Resin		Metal		Rubber	
Polypropylene	No problem	Zinc	Blackening	EPDM	No problem
Nylon 6	No problem	Cast iron	No problem	NR	No problem
Polyethylene	No problem	Aluminum	Blackening	NBR	No problem
Phenol	No problem	Steel	No problem	SBR	No problem
ABS	No problem	Copper	Slightly blackening	CR	No problem
PPO	No problem	Brass	Slightly blackening		

*2 Method for testing influence on materials

(1) Impregnate each test piece completely with TB6658.

(2) After a lapse of 30 minutes, take out the test piece, and dry it by air blow.

(3) After a lapse 5 minutes, visually check the appearance of the test piece.

6. Safety test

Table 4 Results of safety test of TB6658

Test items	Test result	Remarks
Skin irritation test	Nonirritating	Conforming to OECD No.439
Eye irritation test	No irritation	Conforming to OECD No.405
Oral toxicity study	LD50 value: 20 ml/kg	

7. Antibacterial property test

Table 5 Results of antibacterial property test

Test bacterium	Before test (viable bacteria count)	After 1 min of spraying of TB6658 (viable bacterial count)
Colon bacillus	8.3×10^5	< 10 (*)
Salmonella	8.3×10^5	< 10
Pseudomonas aeruginosa	4.1×10^5	< 10
Staphylococcus aureus	4.7×10^5	< 10

* < 10 indicates that no bacteria was detected.

8. Usage

8.1 When using cloth impregnated with TB6658

Impregnate cloth with TB6658, and wipe off dirt with the cloth.

8.2 When using a hand sprayer

After spraying TB6658 over the surface to be cleaned, wipe it with cloth. To remove stains or persistent dirt, rub with a brush a few minutes after spraying, and a high cleaning effect can be obtained.

8.3 Guidelines for dilution and application examples

Table 6 pH at each dilution rate and application examples (*)

Dilution rate	pH	Application examples
Undiluted solution	12.7	Removal of grease and rust preventive oil, and cleaning of machine parts
50-fold	11.0	Cleaning of floor faces, and cleaning with high-pressure washers
100-fold	10.5	Cleaning in cars, and removal of light stains

* These dilution rates are shown for your reference. Adjust the concentration in accordance with the purpose of use.

9. Warning

(1) Do not inhale or swallow.

(2) Do not use toward the human body.

(3) Keep out of reach of children.

10. First-aid measures

(1) If swallowed, do not induce vomiting. Immediately get medical attention.

(2) If in eyes, immediately rinse with clean water for about 15 minutes, and get medical attention.

(3) If on skin, sufficiently wash with clean water. If there is any abnormality on the skin, get medical attention.

(4) If any abnormality is found in the body, stop using it, and get medical attention.

(5) If you feel sick while using it, stop using it, and keep quiet in a well-ventilated place. If you do not feel restored, get medical attention.

11. Directions for use

(1) Before using, sufficiently confirm whether the method of application and the purpose of use are appropriate.

(2) Do not use it on high-temperature parts.

(3) Do not spray a large amount of this agent over rubber or plastic parts.

(4) Do not use it on items which cannot be wiped with water or will become defective if wetted with water, car bodies, leather goods, silk products, aluminum products, copper products, zinc products or jewelry items.

(5) Before using on any painted surface, check that the surface is not affected by the product.

(6) When using for an automobile brake, make sure that the product has dried completely, and test the braking force before driving.

(7) In winter, white crystals may be formed. The cleaning effect will not be affected. Use as is.

(8) Carbon dioxide in the air will dissolve in TB6658, and the pH will drop. Tightly seal the container.

(9) If it has frozen, do not use fire to warm it. Let it melt naturally.

(10) For industrial use. Do not use for household purposes.

(11) For hazard and toxicity information not mentioned herein, see the material safety data sheet (MSDS).

12. Storage

Store in a dark indoor place. Do not store it in a place where it will be exposed to direct sunlight, it may easily rust owing to splash of water or high humidity, or it may freeze.

13. Disposal

Dispose of the used cloth and container and the waste liquid after cleaning as industrial waste.

14. Cautions

For Industrial Use Only (Do not use for household purposes.)

This product is developed for general industrial use. Before using this product, the user must accept the following terms:

- The technical data given herein are not guaranteed values, but examples of experimental values obtained by our specified test methods.
  We do not guarantee that the uses described herein do not conflict with any intellectual property right.
- Before using this product, confirm the appropriateness and safety of the use for the application in question, and bear all responsibilities and risks involved in the use.
  Never embed or inject into bodies nor use as a medical implant that may be left in the body.
- We are not liable for personal injury or property damage caused by improper handling of this product.
  If the properties or usage of the product to be used are unclear, never use it.
- For more information on product safety, see the material safety data sheet (MSDS).
  To obtain the MSDS, contact our sales office or customer service center.
- Information in this document is subject to change at our own discretion.