



TRU-CHEM
COMPANY, INC.

CHEMICAL PROCESSES FOR INDUSTRY

2756 Sawbury Boulevard, Columbus, Ohio 43235

614/761-8557 FAX 614/761-8010

Toll Free 1-888-TRU-CHEM

T.C. 180 Rinse Aid

PRIMARY APPLICATION

T.C. 180 is a liquid additive designed to improve the performance of primary cleaning solutions. It is suitable for use with acidic, alkaline or water-miscible solvent materials in spray washers or soak tanks. T.C. 180 helps remove difficult soils such as oils, grease, drawing compounds and shop soils that might normally require impractical and costly increases in time, temperature or concentration of the base material. A real energy saver, the material permits removal of difficult soils at reduced temperatures.

T.C. 180 is particularly useful as an additive to three-state T.C. 625-LW iron phosphating materials, substantially improving cleaning results. Non-silicated, non-phosphated, biodegradable, the material may also be used alone as a neutral cleaner in spray washing machines.

CHEMICAL CHARACTERISTICS

Chemical composition	Blend of organic detergents and solvents
Physical form	Light yellow liquid
Odor	Slight butyl
Bulk density	8.8 lbs/gal at 68°F (1056 grams/liter at 20°C)
Specific gravity	1.057 at 68°F, ASTM 1298
Viscosity	36 cps, Brookfield Spindle 1, 60 rpm
Flash point	None
Foaming tendency	Low at 120°F (49°C) or above; moderate to high below
Recommended diluent	Water or water solutions of acid, alkaline or water miscible solvent materials
Maximum solubility	Complete
Rinseability	Good
Behavior in hard water	Good
Biodegradable	Yes
Phosphate-free	Yes
Normal working concentrations	½ to 4% by volume of the entire cleaning solution

Normal operating temperatures	Room temperature and above for tank installations
pH at working concentrations	4.0 to 6.0 concentrated; ;assumes pH of base material when used as an additive; neutral used alone
Effect of working solutions on metal	Rate of metal loss from immersion in T.C. 180, full strength, 120°F (49°C) for 24 hours, projected for one year, is as follows:

<u>Metal (Alloy)</u>	<u>Inches/Year</u>	<u>Millimeters/Year</u>
Stainless steel (304)	0.0001	0.00254
Stainless steel (410)	0.0004	0.01016
Brass	0.0014	0.03556
Titanium	0.0018	0.04572
Copper	0.0020	0.05080
Aluminum (3003)	0.0021	0.05334
Galvanized steel	0.0074	0.18796
Zinc	0.0080	0.20320
Magnesium (AZ31B)	0.0239	0.60706

APPLICATION PROCEDURE

Concentrations, temperatures and exposure times will vary depending upon the type and degree of soils present. Generally, whether added to acid, alkaline or water-miscible solvent materials, in tanks or spray washers, or used alone in spray washer, T.C. 180 should be used between ½ to 4% by volume of the total cleaning solution. Recommended temperatures range from ambient in agitated tank installations to 120°F (49°C) or above in spray washer.

NOTES ON USE

When used alone, no special tank or coils are required. When used as an additive, the Primary material determines necessary equipment.

Safety and Handling Precautions: T.C. 180 is an industrial detergent-cleaner additive. Direct contact causes irritation of eyes. Prolonged skin contact may cause irritation. May be harmful if swallowed. Do not get in eyes. Avoid prolonged skin contact. Wash thoroughly after handling. Do not take internally.

First Aid In Case of Contact: For eyes, flush with plenty of water for at least 15 minutes; seek medical attention. For skin, flush with plenty of water. If swallowed, give several glasses of water to drink. Contact a physician.

KEEP OUT OF REACH OF CHILDREN.

DISPOSAL

When used alone, no special treatment is required. Dilute and discharge according to federal, state and local regulations. When used as an additive, the primary material determines disposal treatment.

PACKAGING

Packaged in large, non-returnable poly-lined fiber drums.

SHIPMENT

May be shipped by any common carrier. Freight classification is "Cleaning Compound, NOIBN, Liquid".

STORAGE

Suitable for general indoor storage. Keep container closed when not in use.

Effect of high temperature storage

No adverse effect at 120°F (49°C)

Effect of low temperature storage

Freezes at 20°F (-6.6°C); restored upon thawing

Effect of prolonged storage

No adverse effect