



Stainless Steel, Aluminium & Welding Chemicals

Overview

- Chemical treatment of stainless steel is a vital component of the fabrication process
- Pickling of stainless steel following welding leaves a visually and chemically clean surface, which allows a greater chance of the stainless steel forming a passive chrome oxide film.

Overview

- S-Weld Clean is an advanced high adhesion pickling gel suitable for all grades of stainless steel, including many high performance alloys and titanium
- A range of stainless steel & aluminium treatment products is now available to maximise surface finish and corrosion resistance

Pickling of stainless steel

- For the removal of weld scale, heat tint, ferric oxides, chlorides and other surface contamination
- Leaves the weld and heat affected zone chemically and visually clean
- Aids the auto passivation process
- Confers greater corrosion protection than grinding or sandblasting
- Non residual, cost effective

Passivation of stainless steel

- Passivation is the process whereby chrome oxide is regenerated in an oxidising environment
- Chrome oxide is depleted by grinding, sandblasting, polishing, pickling, surface damage and contact with corrosive substances

Passivation of stainless steel

- Failure of stainless steel to become or remain passive leads to corrosion
- Corrosion can occur due to the presence of embedded iron oxides and iron chlorides, other surface contamination, or following mechanical surface treatment methods such as grinding, polishing etc.

Passivation of stainless steel

- Surface passivation treatment restores the corrosion resistant properties of stainless steel
- Auto-passivation in air may not occur and does not always ensure corrosion resistance
- Chemical passivation with a nitric acid based passivator enhances the restoration of the chrome oxide passive film

Chemical treatment in fabrication

- Surface preparation, pre-weld cleaning
- Weld spatter protection
- Descaling / pickling
- Environmental compliance - waste disposal
- Passivation i.e. corrosion protection
- Cleaning of finished product

S-Weld Clean

- High technology pickling gel
- Outperforms leading European brands
- Superior gel adhesion technology
- Can even be used on vertical or overhead surfaces
- Stronger and faster acting
- Removal of weld scale & iron contamination which initiates corrosion

S-Weld Clean

- Superior packaging & customer information
- Free acid resistant application brush

Specifications

- Contains :
Nitric Acid 30% and Hydrofluoric Acid 5%
- ASTM 380a compliant formulation
- S-Weld Clean is a high adhesion gel, not a paste
- Pack sizes available 1kg, 2.5kg, 25kg

Other Pickling Products

- Weldbrite spray pickle
- Steelbright pickling solution

Weldbrite Spray Pickle

- High technology gel
- ASTM 380a compliant formulation
- Gel adhesion allows uniform coverage of tanks and vessels with greater safety and reduces run-off and wastage
- Strong and fast acting
- Removal of weld scale & iron contamination which initiates corrosion
- Pack sizes available 20L, 200L

Steelbright Pickling Solution

- For immersion treatment in pickling bath
- Strong and fast acting
- Removal of weld scale & iron contamination which initiates corrosion
- ASTM 380a compliant formulation
- Water dilutable & rinsable
- Pack sizes available 5L, 20L, 200L

Other Stainless Steel Products

- S-Weld Passivator - passivating gel
- S-Weld Neutralizer - neutralising solution
- S-Weld Brite Wash - deoxidising solution & cleaner
- Prosol - pre-weld cleaner

S-Weld Passivator

- Strong oxidising agent to passivate stainless steel following pickling, polishing, sandblasting or grinding during fabrication
- Restores chrome oxide passive layer
- Enhances corrosion resistance of stainless steel
- Easy to apply gel, or solution

S-Weld Passivator

- Essential following grinding or sandblasting of welds when pickling is not performed
- Use in maintenance procedures following corrosion removal from polishing or chemical deoxidisation
- Pack sizes available 2.5kg

S-Weld Brite Wash

- For removal of embedded iron contaminants and corrosion on stainless steel & polished aluminium
- Quickly removes corrosion products
- Removes organic residues such as light oil, grease finger marks
- Essential as a final cleaner after fabrication or installation

S-Weld Brite Wash

- Will not affect surface finish
- Also effective for mild steel
- Final rust remover and cleaner before priming mild steel
- Readily miscible with water at all concentrations
- Pack sizes available 500ml ready to use trigger pack, 5L, 20L & 200L

S-Weld Neutralizer

- Alkaline solution for neutralising acidic pickling waste prior to discharge to sewer
- Built-in acid / base indicator
- Bright pink solution goes clear at neutralisation point
- Reduces hazard of pickling waste
- Aids trade waste compliance

S-Weld Neutralizer

- Can be used as a diagnostic tool to test for the presence of residual pickling gel or solution, especially in corners, crevices and hard to clean areas.
- An aid to worker safety
- Pack sizes available 5L, 20L, 200L

Prosol

- Specialised stainless steel & aluminium pre-weld cleaner
- Replacement for thinners, kerosene, toluene, MEK and other hazardous solvents
- Excellent for architectural market, removing finger prints from hand rails, elevator doors etc

Prosol

- Non-toxic, non-flammable , worker safe, biodegradable
- Slow evaporation makes Prosol economical
- Excellent for final clean-up & parts washing
- Conforms to Boeing D6-17487 specification for aircraft degreasing
- Pack sizes available 300gm aerosol or bulk 4L, 20L, 200L drums

Stainless Steel Maintenance

- Failure to remove embedded contamination due to the work environment, grinding, sand-blasting or polishing after fabrication or installation leaves stainless steel prone to corrosion
- A simple 3-step process can remove existing corrosion & prevent recurrence

3-Step Maintenance Procedure

- Initial clean using S-Brite Wash at a dilution of 1:5 to 1:10 and a compatible pad
- Apply S-Weld Passivator with brush and allow a dwell time of 2 hours. Do not let gel dry out - re-apply if going dry. Rinse off
- Clean & polish with Prosol. Repeat clean using S-Brite Wash at 1:10 regularly

Aluminium treatment chemicals

- Albright - brightener & cleaner
- Alu-Weld - pickling gel
- S-Weld Brite Wash - brightener & cleaner for polished aluminium
- Prosol - pre-weld cleaner

Albright

- All purpose acidic detergent for cleaning and brightening aluminium
- Removes surface oxides, grease, soil
- Fast acting (~5 minutes)
- Non residual
- Water dilutable & rinsable
- Not for use on polished aluminium
- Available in 5L, 20L or 200L drums

Albright

- Ideal for:
 - ship building industry
 - general aluminium fabrication
 - aluminium sidings
 - building maintenance
- Also removes rust, soil, fungi and wood stains from cement, terrazzo tiles and unpolished rock surfaces

Alu-Weld

- Unique aluminium pickling gel
- Pre weld cleaner for weathered or oxidised aluminium during maintenance
- Fast acting (~5 minutes)
- Gel formula stays where required
- Non residual
- Water rinsable
- 2.5kg pack including application brush

Welding Chemicals

- S-Weld Spatterguard - anti-spatter aerosol spray
- Cal-Guard - water based anti-spatter liquid
- Cal-Guard - nozzle dip gel
- Prosol - Pre weld cleaner

Cal-Guard Nozzle Dip Gel

- Protection from spatter of MIG & torch nozzles from spatter
- Extends the operating life of sensitive components of torches & MIG nozzles
- Non toxic
- Economical
- Easy to use
- Available in 400g screw lid jars

S-Weld Spatter Guard

- Effective solvent based anti-spatter spray
- Aerosol presentation, CO₂ propellant
- Non-flammable, no silicone, paintable
- Pack size available, 500g can in cartons of 12 cans

Cal-Guard Anti-spatter Liquid

- Water based anti-spatter liquid for prevention of weld spatter sticking to parent metal
- Effective
- Non toxic, biodegradable
- Non-flammable
- No silicone, paintable

Cal-Guard Anti-spatter Liquid

- Economical
- Pack sizes available 1L, 5L, 20L
- 750ml trigger packs available on request