

Steel Seal™

DISTRIBUTOR - FREQUENTLY ASKED QUESTIONS



WHAT IS STEEL SEAL MADE FROM?

Steel Seal is made from a unique mixture of chemicals that react when exposed to a high combination of heat and pressure that in turn creates a hardened seal in the damaged area of the head gasket.

HOW DOES STEEL SEAL WORK?

Steel Seal is pushed through the hole or crack by the extreme pressure within the cooling system and the friction caused from the Steel Seal being forced through the crack or hole creates an excess in temperature. It is this excess in temperature that sets off the thermochemical reaction. Steel Seal sets in extremely thin layers within the hole or crack, this is because the unique formulation of Steel Seals allows for a process called 'Thin Layer deposition'. This thin layer deposition process is why Steel Seal sets as strong as steel and is unique to the Steel Seal formulation.

WILL STEEL SEAL CLOG THE COOLING SYSTEM?

Steel Seal is a clear formula that contains no fibrous materials or particles that could clog engine coolant passages. As well as the potential for fibrous materials to clog the cooling system, there are chemical based competitors that have a low tolerance to certain antifreeze and they will clog the cooling system once they mix with the antifreeze.

WILL THE TYPE OF ANTIFREEZE COMPROMISE HOW STEEL SEAL REPAIRS THE HEAD GASKET?

No, Steel Seal is completely compatible with all traditional ethylene glycol antifreeze.

HOW LONG WILL STEEL SEAL LAST?

Steel Seal is a permanent fix if the repaired has been fixed completely. Sometimes it can appear like the seal has not lasted however this is simply due to a partial fix and another treatment of Steel Seal (covered in the Guarantee) will fix this problem.

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WHAT WILL STEEL NOT REPAIR?

Steel Seal will not seal leaks in hoses, seals, water pumps, or extremely large cracks in the head or block resulting in the vehicle not starting. If the vehicle does not run Steel Seal cannot work as it relies on temperature and pressure of the engine running at operating temperature.

CAN I USE STEEL SEAL IF I HAVE USED ANOTHER LIQUID HEAD GASKET REPAIR PRODUCT?

If another product has been used previously, then the cooling system must be flushed thoroughly with water, NOT a flushing agent.

ARE THERE ANY SPECIAL PRECAUTIONS I SHOULD TAKE?

Steel Seal should be kept out of reach of children. Avoid eye or skin contact. If eyes or skin become irritated with Steel Seal™, rinse with cold water immediately. If swallowed, do not induce vomiting. Call a physician immediately.

HOW DOES STEEL SEAL DIFFER FROM ITS COMPETITORS (K-SEAL/BLUE DEVIL)?

The Steel Seal formula is triggered by a thermo-chemical reaction and as such, repairs a blown head gasket in a much different way to many of its competitors. Steel Seal works by reacting with heat to create layers over the damage and fix the issue, similar products such as K-Seal contain fibrous materials that work by clogging the damaged areas. The downside of these products is that the fibrous material found in the formula will actually sit in the bottom of the engine and can cause additional problems with the vehicle over time.

Other chemical based products such as Blue Devil work in a similar way to Steel Seal however contrary to their advertising claims they do not work with all types of antifreeze and have a much lower tolerance to different antifreezes and therefore have a much lower chance of success. It is due to the lower tolerance of these products that causes them to clog up cooling systems due to the chemical reaction that occurs with certain types of antifreeze before the repair even begins. Steel Seal has a much higher tolerance to different types of antifreeze and therefore will not suffer from the same issues such as clogging up the cooling system.

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HOW IS THIS PRODUCT GOING TO FIX A HEAD GASKET? IT SEEMS LIKE 'SNAKE OIL'.

Many people believe that a 'liquid head gasket' fix cannot work, however Steel Seal has been repairing vehicles for over 15 years and is the world's number 1 head gasket repair product. Steel Seal has a proven 99% success rate on all vehicles with a water cooled system. Selling Steel Seal is as much about education as it is sales whether it is to trade or retail.

Trade customers need to be educated on why Steel Seal is better than its competitors, why it commands a higher price than any other liquid head gasket repair product and that the technical support that a customer receives is the highest standard in the market.

Retail customers need to be educated that these types of products actually exist and are a viable and cheaper alternative to an actual mechanical repair.

Sometimes the only way to get a trade customer to really understand that a product like this can really work is for them to try it for themselves. Giving a sample bottle to a new trade customer to try can really show the customer the confidence you have in the product and that it actually works.

WHY SHOULD I BUY STEEL SEAL WHEN IT IS MORE EXPENSIVE THAN ITS COMPETITORS?

Steel Seal is more expensive than its competitors as it is a premium product; it works in a different way to other head gasket fixes and will not clog the engine.

- **Higher Success Rate** - Steel Seal has a specially developed formulation that works by chemical reaction unlike many of its competitors and this is why it has a higher success rate than other head gasket fixes on the market.
- **Technical Support** – Steel Seal have an expert technical team based in many countries around the world that are always on hand to provide assistance to customers and distributors alike. In the rare occasions Steel Seal does not seem to repair a blown head gasket, it is usually because the head gasket was never blown in the first place. Our technical team specialise in identifying if a customer is even suffering from a blown head gasket. This is because Steel Seal will only repair a blown head gasket however if you have been wrongly diagnosed then Steel Seal will not be able to help you.
- **Anti-Clog Formulation** – Steel Seal has a unique formula that has a higher tolerance to different types and levels of antifreeze, therefore the chances of Steel Seal clogging with the cooling system are removed.

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- **Focus on Repairing Head Gaskets** - Steel Seal prides itself on its goal of repairing head gaskets rather than focus on chemical sales. Steel Seal helps more people repair their blown head gasket than any other liquid head gasket repair product and we are so confident of this we offer a 30 day money back guarantee and a lifetime replacement bottle.
- **Money Back Guarantee** – Steel Seal comes with a money back guarantee. This money back guarantee is valid for 30 days. During this 30 day period a customer may contact Steel Seal for a full refund if the vehicle was not repaired by Steel Seal. After the 30 day period has elapsed the guarantee switches to a lifetime replacement bottle. This is because if after performing the treatment there are no signs of a blown head gasket for 30 days then shortly after this period there are symptoms of a blown head gasket then this means there has been a partial fix and another application of Steel Seal will fix this problem.

WHY NOT JUST REPLACE THE BLOWN HEAD GASKET?

The number one reason a customer purchases Steel Seal over replacing the head gasket is cost. The average cost of replacing a blown head gasket in the UK is over £800.00, when this is compared to the retail sales price of Steel Seal in the UK of £39.99 there is a significant saving of over £760.00. Most people simply cannot afford this type of expense however they having their vehicle off the road is not an option either, whether it is for driving the children to school or getting to work, having a car is a necessity for many families.

Many garages offer Steel Seal as an alternative to a mechanical repair to customers who do not have the money for a mechanical repair.

IS STEEL SEAL ONLY COMPATIBLE WITH CARS?

Steel Seal will work on all vehicles with a water cooled system, regardless if the vehicle is petrol or diesel. This includes scooters, cars, vans and even boats. The car market for Steel Seal can be roughly calculated to provide some scope of the potential growth of Steel Seal within a country. Europe's leading Warranty Provider claims head gasket failures affect 6% of vehicles over 3 years old. Generally this means 60 in every 1,000 vehicles will suffer head gasket failure, this figure will be much higher in countries where people keep their vehicles much longer.

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IS STEEL SEAL A REPLACEMENT FOR A MECHANICAL REPAIR?

Steel Seal is a viable alternative and not intended to be a replacement for a mechanical repair, it is for customers who simply cannot afford the cost of replacing the head gasket. If the garage offers both options then they guarantee to make money regardless of the option chosen by the customer. If the customer chooses to have the head gasket replaced then the garage makes money from the mechanical repair and if the customer cannot afford the replacement but chooses to have a Steel Seal treatment then the garage can charge to do the treatment and an hours labour. Research shows that out of every 10 customers a garage quotes to replace a blown head gasket only 2 customers actually have the blown head gasket replaced with the garage losing the other 8 customers who look for a cheaper alternative.

SOME STOCKISTS ARE UNSURE ABOUT STOCKING AND SELLING 'LIQUID HEAD GASKET FIXES'

Steel Seal is on the market as an alternative for people who cannot afford to replace their blown head gasket (single parents, low income families, students etc). Steel Seal benefits from having an expert technical team who are able to assist in the application of Steel Seal which gives potential customers confidence in using Steel Seal, this confidence works well to encourage people to purchase the product.

The addition of the money back guarantee (Not available in some countries) or a replacement bottle in the case of a partial fix also helps give customers peace of mind.

SOME CUSTOMERS HAVE HAD BAD EXPERIENCES WITH SIMILAR PRODUCTS IN THE PAST

Due to the unique formulation of Steel Seal and the thermochemical reaction process involved in repairing a blown head gasket using Steel Seal the risk of clogging the cooling system is greatly reduced. Most of the cheaper alternatives on the market using clogging agents to repair the head gasket however these same clogging agents can block areas of the cooling system causing lasting damage.

HOW THE MONEY BACK GUARANTEE WORKS

In some countries Steel Seal has a Money Back Guarantee. This money back guarantee offers the end user peace of mind that in the unlikely event Steel Seal does not repair their blown head gasket they do not lose any money. The goal of Steel Seal is to help get people back on the road and the money back guarantee is our way of showing this.

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The Steel Seal money back guarantee is an easy process for the end users to claim on, the steps are outlined below.

1. The customer contacts you informing you that Steel Seal has not worked.
2. At this point the customer has the option to claim their money back or claim a onetime replacement bottle. A customer would claim a bottle rather than their money back if they have had an improvement in their symptoms. This is referred to as a partial fix and an additional treatment of Steel Seal would fix the issue. If the customer has had no improvement at all then they would usually opt for their money back.
3. If the customer wishes to have a **replacement bottle** then they only need to provide a proof of purchase, such as a receipt or email confirmation and a replacement bottle can be sent out to the customer.
4. If the customer wishes to claim their **money back** they simply have to provide a proof of purchase such as a receipt and either proof that they have replaced the blown head gasket or proof they have destroyed the vehicle such as a scrap receipt. If the customer cannot provide any of the proof then they cannot make a claim for a replacement bottle or claim their money back.

Whenever a customer makes a successful claim we will replace the bottles with your next order so it is important you keep track of your refunds and replacements.

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DISTRIBUTOR - APPLICATION GUIDE



REPAIR IN 3 EASY STEPS

1. Make sure engine is cold and remove the radiator cap. Pour Steel Seal directly into the radiator. Tighten the radiator cap back on. NB: if you do not have a radiator cap pour directly into the expansion/surge tank.
2. **If vehicle is roadworthy** – Start your engine and drive vehicle at freeway speeds for 5 miles and return home (it is advisable to ensure your vehicle is doing between 3000-4000 RPM during your journey).
If vehicle is not roadworthy – Turn heater and fan to maximum. Start your engine and run your vehicle up to temperature. Once your vehicle reaches operating temperature run the vehicle on idle (1000 to 1500) for 30 minutes.
Regardless if your vehicle was roadworthy or not, always allow vehicle to cool down completely. Top up with a 50/50 water antifreeze mix.
3. You can leave Steel Seal in the system and drive vehicle as usual.

STEEL SEAL RECOMMENDED DOSAGE

Engine Size	Bottles
Up to 4 Cylinder	1
Up to 6 Cylinder	2
Up to 8 Cylinder	2
Over 8 Cylinder	Call Customer Support 844-796-7968

PRODUCT: Steel Seal Head Gasket Fix

REVISION: 2 DATED: 01/06/17

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

1.1 Product Identifier

Product Name: **Steel Seal**

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

Identified use(s)

General purpose industrial chemical for use in a wide range of applications. Binding agent; dust binding agent; Flame retardant or fire preventing agent; Flotation agent; Stabiliser; Viscosity control agent. See also Annex to the extended Safety Data Sheet

Uses advised against: None known

1.3 Details of the supplier of the safety data sheet

Steel Seal Ltd
30 Bidavon Industrial Estate
Waterloo Road
Bidford
B50 4JN

Tel: +44(0)1789 330668

Email: info@steelseal.co.uk

1.4 Emergency telephone number

Tel: +44(0)1789 330668 (during usual office hours 8am-5:00pm)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification

H302: Harmful if swallowed

H373: May cause damage to organs Kidneys through prolonged or repeated exposure if swallowed.

H319 : Serious eye damage/irritation Category 2

H315 : Skin corrosion/irritation Category 2

Hazard summary

Alkaline. Irritating to eyes and skin

2.2 Label Elements



Signal Word: Warning

Hazard Statements

H302: Harmful if swallowed

H373: May cause damage to organs Kidneys through prolonged or repeated exposure if swallowed.

H319: Causes serious eye irritation.

H315: Causes skin irritation.

Precautionary Statements

P262: Do not get in eyes, on skin, or on clothing.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P281: Use personal protective equipment as required

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501: Dispose of contents/container in accordance with local regulations.

2.3 Other hazards Not classified as PBT or vPvB

3. COMPOSITION/INFORMATION ON INGREDIENTS

Regulation (EC) No. 1272/2008 (CLP)					
Ingredient	CAS Number	EINECS Number	REACH Registration Number	Classification according to Regulation 1272/2008	Content (W/W)
Silicic Acid, Potassium Salt	1312-76-1	215-199-1	01-2119456888-17-xxxx	H319: Eye Irrit. 2 H315: Skin Irrit.2; H335: STOT SE3;	6 - 10%
Silicic Acid, Sodium Salt	1344-09-8	215-687-4	01-2119448725-31-xxxx	H315: Skin Irrit.2;H319: Eye Irrit 2; H335: STOT SE 3;	10 - 20%
Sodium (trihydroxysilyl) Propylmethylphosphonate	84962-98-1	284-799-3		H319: Eye Irrit	0.3 - 0.8%
Mono Ethylene Glycol	107-21-1	203-473-3		H302 Acute Tox.4 H373 STOT RE2	8 - 12%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation

Remove patient from exposure, keep warm and at rest. Obtain medical attention.

Skin contact

Wash affected skin with plenty of water. If symptoms develop, obtain medical attention.

Eye contact

Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.

Ingestion

Do not induce vomiting. Wash out mouth with water and give 200-300ml (half a pint) of water to drink. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Alkaline - Irritating to eyes and skin. The toxicity of potassium silicate is dependent on the silica to alkali ratio and on the pH.

4.3 Indication of any immediate medical attention and special treatment needed

Obtain immediate medical attention.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media: Compatible with all standard firefighting techniques.

Unsuitable extinguishing media: None known

5.2 Special hazards arising from the substance or mixture

Not applicable. Aqueous solution. Non-combustible.

5.3 Advice for fire-fighters

None.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing. Wear eye/face protection

6.2 Environmental precautions

Do not allow to enter drains, sewers or watercourses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation..

6.3 Methods and material for containment and cleaning up

Caution-spillages may be slippery. Contain spillages with sand, earth or any suitable absorbent material. Transfer to container for disposal or recovery

6.4 Reference to other sections

See section 8

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing. Avoid generation of mist. Provide adequate ventilation. Emergency shower and eyewash should be readily available. See Also Section 8.

7.2 Conditions for safe storage, including any incompatibilities

Keep at room temperature not exceeding (50°C) Do not allow material to freeze. Provide an adequate bund wall. Unsuitable containers: Aluminium See section 10

7.3 Specific end use(s)

See Annex to the extended Safety Data Sheet

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Name	STD	TWA – 8hrs		STEL – 15mins		Notes
Mono Ethylene Glycol (CAS: 107-21-1)	WEL		10mg/m ³		104 mg/m ³	SK

8.2 Exposure controls

Wear protective equipment to comply with good occupational hygiene practice. Do not eat, drink or smoke at the work place.

Appropriate engineering controls

Engineering methods to prevent or control exposure are preferred.

Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

Respiratory protection

Respiratory protection not normally required. Advice on respiratory protective equipment is given in the HSE (Health and Safety Executive) publication HS(G)53.

Eye protection

Chemical goggles (EN 166)

Skin & hand protection

Wear suitable protective clothing and gloves. Plastic or rubber gloves. For example EN374-3, level 6 breakthrough time (>480min). Wear suitable overalls. For example EN ISO 13982 (dust), EN 14605

(liquid splashes)

8.2.3 Environmental exposure controls

The primary hazard of potassium silicate is the alkalinity. Avoid release to the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Liquid. Almost colourless
Odour	Odourless
Odour threshold	Not applicable
pH value	Alkaline 11.2
Melting point/freezing point	Not Applicable
Boiling point/boiling range	100°C
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Explosive limit ranges	Not applicable
Vapour pressure(mm Hg)	Not applicable
Vapour density (Air=1)	No data
Density	No data
Solubility (Water)	Soluble
Solubility (Other)	No data
Partition of coefficient	No data
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity	Not applicable
Explosive properties	Not applicable
Oxidising properties	Not applicable

10. STABILITY AND REACTIVITY

10.1 Reactivity

See section 10.3

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

When arc welding vessels containing aqueous solutions of this material, take care to control any explosion risk from hydrogen evolved by electrolysis. Aqueous solutions will react with aluminium, zinc, tin, and their alloys evolving hydrogen gas which can form an explosive mixture with air. Can react violently if in contact with acids. Can react with sugar residue to form carbon monoxide

10.4 Conditions to avoid

See section 10.3

10.5 Incompatible materials

See section 10.3

10.6 Hazardous decomposition products

None known

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity

All symptoms of acute toxicity are due to high alkalinity. Material cause irritation. Oral LD50 (rat) >5000 mg/kg bw

Acute inhalation toxicity

Mist is irritation to the respiratory tract. All symptoms of acute toxicity are due to high alkalinity. Inhalation LC50 (rat) >2.06 g/m³.

Acute Dermal Toxicity

Skin contact- Repeated and/or prolonged skin contact may cause slight irritation. Dermal LD50 (rat) >5000mg/kg bw

Eye contact- Liquid or mist may cause discomfort and mild irritation

Skin Corrosion/Irritation

Repeated or prolonged skin contact may cause slight irritation

Serious eye damage/eye irritation

Liquid or mist may cause discomfort and mild irritation

Sensitisation

Not sensitising

Mutagenicity

No evidence of genotoxicity. In vitro/in vivo negative

Carcinogenicity

No structural alerts.

Reproductive toxicity

No evidence of reproductive toxicity or development toxicity.

STOT- single exposure

Not classified

STOT-repeated exposure

Not classified. NOAEL oral (rat) 159mg/kg bw/d

Aspiration hazard

Not classified

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Fish (*Leuciscus idus*) LC50 (48 hour) >146 mg/l Aquatic invertebrates: (*Daphnia magna*) EC50 (24 hour) >146 mg/l

12.2 Persistence and degradability

Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica.

12.3 Bio accumulative potential

Inorganic. The substance has no potential for bioaccumulation.

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB,

12.6 Other adverse effects

The alkalinity of this material will have a local effect on ecosystems sensitive to changes in pH.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Discharge of this product to sewage treatment works is dependent on local regulations with regard to pH controls. Dispose of this material and its containers to hazardous or special waste collection point. This material is classified as hazardous waste under EC Directive 2008/98/EC (and amendments). This material is classified as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No. 894. Disposal should be in accordance with local, state or national legislation.

14. TRANSPORT INFORMATION

14.1 UN Number

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'

14.2 Proper Shipping Name

Not applicable

14.3 Transport hazard class

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental

Not classified as a Marine Pollutant

14.6 Special precautions for users

Unsuitable packaging - Aluminium

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. REGULATORY INFORMATION

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

TSCA Inventory Status: Reported/Included.

AICS Inventory Status: Reported/Included.

DSL/NDSL Inventory Status: Reported/Included.

German Water Hazard Classification VwVwS: Product ID number 1316, WGK class 1 (low hazard to water)

15.2 Chemical safety assessment

Information available on request

16. OTHER INFORMATION

Glossary

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

STOT SE 3 : Specific target organ toxicity — single exposure Category 3

DNEL : Derived No Effect Level

PNEC : Predicted No Effect Concentration PBT: Persistent, Bioaccumulative and Toxic

Source of key data used to compile the data sheet

Supplier information

Modifications from last revision

N/A

Date: 01/06/17