

Radiator Seal HP 150ML

Version Revision Date: SDS Number: Date of last issue: 16.03.2017
2.4 30.08.2017 565329-00005 Date of first issue: 05.11.2012

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Radiator Seal HP 150ML

Product code : 5861 500 150

Manufacturer or supplier's details

Company : Wurth Australia Pty Ltd

Address : 2/1 Healey Road
Dandenong South, Victoria, 3175

Telephone : +61 3 8788 1111

Emergency telephone number : 1300 657 765. Advisory office in case of poisoning - National
Poisons Centre: 131 126

E-mail address : prodsafe@wurth.com

Recommended use of the chemical and restrictions on use

Recommended use : Sealant

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Carcinogenicity (Inhalation) : Category 1A

Specific target organ toxicity - : Category 2 (Kidney)
repeated exposure (Oral)

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H350i May cause cancer by inhalation.
H373 May cause damage to organs (Kidney) through pro-
longed or repeated exposure if swallowed.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read
and understood.
P260 Do not breathe mist or vapours.
P281 Use personal protective equipment as required.

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Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Ethylene glycol	107-21-1	>= 10 -< 30
Kieselguhr, soda ash flux-calcined	68855-54-9	>= 0.1 -< 10

SECTION 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.
Get medical attention.
- In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.
- In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : May cause cancer by inhalation.
May cause damage to organs through prolonged or repeated exposure if swallowed.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.
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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
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SECTION 7. HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use with local exhaust ventilation.
- Advice on safe handling : Do not get on skin or clothing.
 Do not breathe vapours or spray mist.
 Do not swallow.
 Avoid contact with eyes.
 Handle in accordance with good industrial hygiene and safety practice.
 Keep container tightly closed.
 Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
 When using do not eat, drink or smoke.
 Wash contaminated clothing before re-use.
- Conditions for safe storage : Keep in properly labelled containers.
 Store locked up.
 Keep tightly closed.
 Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:
 Strong oxidizing agents
- Recommended storage temperature : $\geq 5 \text{ }^{\circ}\text{C}$

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethylene glycol	107-21-1	TWA (particulate)	10 mg/m ³	AU OEL
		Further information: Skin absorption		
		TWA (Vapour)	20 ppm 52 mg/m ³	AU OEL
		Further information: Skin absorption		
		STEL (Vapour)	40 ppm 104 mg/m ³	AU OEL
		Further information: Skin absorption		
		C (Aerosol only)	100 mg/m ³	ACGIH

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Engineering measures : Minimize workplace exposure concentrations.
Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Combined particulates and organic vapour type

Hand protection

Material : Nitrile rubber
Break through time : < 480 min
Glove thickness : 0.45 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid
Colour : green
Odour : like fruit
Odour Threshold : No data available
pH : 10 (20 °C)
Method: DIN 19268
Melting point/freezing point : No data available
Initial boiling point and boiling range : 100 °C
Flash point : 111 °C
Method: ISO 3679

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Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	Ignitable (see flash point)
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1.018 g/cm ³ (20 °C)
Solubility(ies) Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	No data available
Flow time	:	15 s (23 °C) Cross section: 4 mm Method: ISO 2431
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents

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Acids

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:**Ethylene glycol:**

Acute oral toxicity : Acute toxicity estimate: 500 mg/kg
Method: Expert judgement
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute inhalation toxicity : LC50 (Rat): > 2.5 mg/l
Exposure time: 6 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Mouse): > 3,500 mg/kg

Kieselguhr, soda ash flux-calcined:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 2.6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:**Ethylene glycol:**

Species: Rabbit

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Result: No skin irritation

Kieselguhr, soda ash flux-calcined:

Species: human skin
Method: OECD Test Guideline 431
Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:**Ethylene glycol:**

Species: Rabbit
Result: No eye irritation

Kieselguhr, soda ash flux-calcined:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:**Ethylene glycol:**

Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Result: negative

Kieselguhr, soda ash flux-calcined:

Test Type: Local lymph node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative

Chronic toxicity**Germ cell mutagenicity**

Not classified based on available information.

Components:**Ethylene glycol:**

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Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Kieselguhr, soda ash flux-calcined:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Carcinogenicity

May cause cancer by inhalation.

Components:**Ethylene glycol:**

Species: Mouse
Application Route: Ingestion
Exposure time: 2 Years
Result: negative

Kieselguhr, soda ash flux-calcined:

Species: Humans
Application Route: inhalation (dust/mist/fume)
Result: positive
Remarks: IARC: (International Agency for Research on Cancer)

Carcinogenicity - Assessment : Positive evidence from human epidemiological studies (inhalation)

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Components:**Ethylene glycol:**

Exposure routes: Ingestion
Target Organs: Kidney
Assessment: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Kieselguhr, soda ash flux-calcined:

Exposure routes: inhalation (dust/mist/fume)
Target Organs: Lungs
Assessment: Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

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Repeated dose toxicity**Components:****Ethylene glycol:**

Species: Rat
NOAEL: 150 mg/kg
Application Route: Ingestion
Exposure time: 2 yr

Species: Dog
NOAEL: 2,200 - 4,400 mg/kg
Application Route: Skin contact
Exposure time: 4 Weeks
Method: OECD Test Guideline 410

Kieselguhr, soda ash flux-calcined:

Species: Rat
LOAEL: 30 mg/m³
Application Route: inhalation (dust/mist/fume)
Exposure time: 13 Weeks
Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Ethylene glycol:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 72,860 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 6,500 - 13,000 mg/l
Exposure time: 96 h

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 15,380 mg/l
Exposure time: 7 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 8,590 mg/l
Exposure time: 7 d

Kieselguhr, soda ash flux-calcined:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

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- Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae : EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- NOELR (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- Toxicity to microorganisms : EC50: > 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Persistence and degradability**Components:****Ethylene glycol:**

- Biodegradability : Result: Readily biodegradable.
Biodegradation: 90 - 100 %
Exposure time: 10 d
Method: OECD Test Guideline 301A

Bioaccumulative potential**Components:****Ethylene glycol:**

- Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): 10
- Partition coefficient: n-octanol/water : log Pow: -1.93

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

- Waste from residues : Dispose of in accordance with local regulations.
- Contaminated packaging : Empty containers should be taken to an approved waste han-

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ding site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

National Regulations**ADG**

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Standard for the Uniform : Schedule 6
Scheduling of Medicines and
Poisons

Prohibition/Licensing Requirements : There is no applicable prohibition or
notification/licensing requirements,
including for carcinogens under
Commonwealth, State or Territory
legislation.

The components of this product are reported in the following inventories:

AICS : All ingredients listed or exempt.

SECTION 16. OTHER INFORMATION**Further information**

Revision Date : 30.08.2017

Sources of key data used to : Internal technical data, data from raw material SDSs, OECD
compile the Safety Data : eChem Portal search results and European Chemicals Agen-
Sheet : cy, <http://echa.europa.eu/>

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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
AU OEL : Australia. Workplace Exposure Standards for Airborne Contaminants.

ACGIH / C : Ceiling limit
AU OEL / TWA : Exposure standard - time weighted average
AU OEL / STEL : Exposure standard - short term exposure limit

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their

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intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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