

LEOSEAL R



**SAFETY DATA SHEET**  
(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

**SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

Product name : LEOSEAL R

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

Hydrocarbon binder used for road building and maintenance.

**1.3. Details of the supplier of the safety data sheet**

Registered company name : COLAS LIMITED

Address : Unit 6210 Bishops Court, Solihull Parkway, Birmingham, West Midlands B377YB Birmingham UK

Telephone : + 44 3335773577

info@colas.co.uk

http://www.colas.co.uk

**1.4. Emergency telephone number : + 44 1865407333**

Association/Organisation :

**SECTION 2 : HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Skin irritation, Category 2 (Skin Irrit. 2, H315).

Eye irritation, Category 2 (Eye Irrit. 2, H319).

May produce an allergic reaction (EUH208).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

**2.2. Label elements**

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Hazard pictograms :



GHS07

Signal Word :

WARNING

Additional labeling :  
EUH208

Contains REACTION MASS OF 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE AND  
2-METHYL-2H-ISOTHIAZOL-3-ONE (3:1). May produce an allergic reaction.

Hazard statements :

H315

Causes skin irritation.

H319

Causes serious eye irritation.

Precautionary statements - Prevention :

P264

Wash ... thoroughly after handling.

P280

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/ ...

Precautionary statements - Response :

P302 + P352

IF ON SKIN: Wash with plenty of water/...

P305 + P351 + P338

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

P321

Specific treatment (see ... on this label).

P332 + P313

If skin irritation occurs: Get medical advice/attention.

P337 + P313

If eye irritation persists: Get medical advice/attention.

P362 + P364

Take off contaminated clothing and wash it before reuse.

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**2.3. Other hazards**

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC)  $\geq 0.1\%$  published by the European Chemicals Agency (ECHA) under article 59 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances  $\geq 0.1\%$  with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

Specific hazard :

- burns, splashing, inhalation, irritant dermal action

**SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2. Mixtures**

**Composition :**

Identification	Classification (EC) 1272/2008	Note	%
CAS: 8052-42-4 EC: 232-490-9 REACH: 01-2119480172-44  BITUME		[i]	50 $\leq$ x % < 100
INDEX: 019-002-00-8 CAS: 1310-58-3 EC: 215-181-3  POTASSIUM HYDROXIDE	GHS05, GHS07 Dgr Acute Tox. 4, H302 Skin Corr. 1A, H314	[i]	0 $\leq$ x % < 1
INDEX: 613-167-00-5 CAS: 55965-84-9  REACTION MASS OF 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONE (3:1)	GHS06, GHS05, GHS09 Dgr Acute Tox. 3, H301 Acute Tox. 2, H310 Skin Corr. 1C, H314 Skin Sens. 1A, H317 Eye Dam. 1, H318 Acute Tox. 2, H330 Aquatic Acute 1, H400 M Acute = 100 Aquatic Chronic 1, H410 M Chronic = 100 EUH071	B	0 $\leq$ x % < 1

**Specific concentration limits:**

Identification	Specific concentration limits	ATE
INDEX: 019-002-00-8 CAS: 1310-58-3 EC: 215-181-3  POTASSIUM HYDROXIDE	Skin Corr. 1A: H314 C $\geq$ 5% Skin Corr. 1B: H314 2% $\leq$ C < 5% Skin Irrit. 2: H315 0.5% $\leq$ C < 2% Eye Dam. 1: H318 C $\geq$ 2% Eye Irrit. 2: H319 0.5% $\leq$ C < 2%	
INDEX: 613-167-00-5 CAS: 55965-84-9  REACTION MASS OF 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE AND 2-METHYL-2H-ISOTHIAZOL-3-ONE (3:1)	Skin Corr. 1C: H314 C $\geq$ 0.6% Skin Irrit. 2: H315 0.06% $\leq$ C < 0.6% Eye Dam. 1: H318 C $\geq$ 0.6% Eye Irrit. 2: H319 0.06% $\leq$ C < 0.6% Skin Sens. 1A: H317 C $\geq$ 0.0015%	

**Information on ingredients :**

(Full text of H-phrases: see section 16)

[i] Substance for which maximum workplace exposure limits are available.

**Other data :**

Chemical nature

Preparation : anionic aqueous emulsion of bituminous binder

The continuous phase is made of anionic or non-ionic resins. The phase separation obtained during use or occurring unintentionally is called breaking.

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**SECTION 4 : FIRST AID MEASURES**

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

**4.1. description of first aid measures**

**In the event of exposure by inhalation :**

In the event of an allergic reaction, seek medical attention.

Immediately remove to fresh air. If breathing difficulties are experienced, seek medical attention. If breathing has stopped, commence artificial resuscitation and seek medical attention immediately.

**In the event of splashes or contact with eyes :**

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

Wash immediately with copious amounts of water, keeping eyelids apart for at least 15 minutes and consult a specialist.

In case of contact with the hot product, COOL THE EYE IMMEDIATELY WITH COPIOUS AMOUNTS OF COLD WATER for 10 minutes, keeping the eye open if possible. Take the person to a specialised medical centre.

**In the event of splashes or contact with skin :**

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In case of burns :

Apply immediately copious amounts of cold water for at least 20 minutes

Never remove the product adhering to the skin.

Immediately go to hospital.

**In the event of swallowing :**

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Seek medical attention immediately, showing the label.

Rinse out one's mouth with milk or water to relieve affected area. Do not induce vomiting to avoid any heartburn.

Go to a specialized hospital immediately for emergency care.

**4.2. Most important symptoms and effects, both acute and delayed**

No data available.

**4.3. Indication of any immediate medical attention and special treatment needed**

No data available.

**SECTION 5 : FIREFIGHTING MEASURES**

Bituminous emulsions are non-flammable products.

**5.1. Extinguishing media**

**Suitable methods of extinction**

Cool containers with water spray.

**5.2. Special hazards arising from the substance or mixture**

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)

- carbon dioxide (CO<sub>2</sub>)

**5.3. Advice for firefighters**

No data available.

**SECTION 6 : ACCIDENTAL RELEASE MEASURES**

**6.1. Personal precautions, protective equipment and emergency procedures**

Consult the safety measures listed under headings 7 and 8.

**For non first aid worker**

Avoid any contact with the skin and eyes.

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**For first aid worker**

First aid workers will be equipped with suitable personal protective equipment (See section 8).

**6.2. Environmental precautions**

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

**6.3. Methods and material for containment and cleaning up**

Clean preferably with a detergent, do not use solvents.

- recovery : contain and collect the spilled product, sand the surfaces concerned if necessary.

- elimination : recover all wastes and dispose in compliance with current regulations.

**6.4. Reference to other sections**

No data available.

**SECTION 7 : HANDLING AND STORAGE**

Requirements relating to storage premises apply to all facilities where the mixture is handled.

**7.1. Precautions for safe handling**

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Engineering / preventive measures

- Workers exposure :

- if the product is sprayed with a hose, it is recommended to wear protective mask and clothes.

- Wear the protective equipment given in §8 before handling the product.

Reduce the risk of accidents by arranging machinery and equipment so as to prevent the hot product from spilling or leaking.

**Fire prevention :**

Prevent access by unauthorised personnel.

- never use solvent to free blockage.

- never weld or cut if tanks or pipes are still containing gases.

In general, do not use an open flame in the proximity of hot bitumen without taking all necessary precautions.

**Recommended equipment and procedures :**

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid skin and eye contact with this mixture.

Precautions :

- avoid breathing vapours.

- do not eat, drink and smoke when the product is moved or used.

During product transfer :

- always transfer the product under suction. Never reverse in a flexible tubing to avoid any bursting.

- do not transfer with a flexible hose through an opening, not provided for the purpose

- do not fill from height or use spray methods when filling containers to prevent foaming.

- do not fill the emulsion into any containers holding a product whose temperature exceeds 100°C.

ADVICE :

- Use only containers, pipes and joints resistant to hot bitumen and hydrocarbons.

**Prohibited equipment and procedures :**

No smoking, eating or drinking in areas where the mixture is used.

**7.2. Conditions for safe storage, including any incompatibilities**

No data available.

**Storage**

Tanks and facilities must comply with applicable regulations.

Avoid the use of any pumping devices likely to destabilise the emulsion.

- to be avoided : storage temperatures below 5°C or above 90°C.

NEVER heat a reservoir or tank if the heating elements are not adequately immersed (minimum 15 cm over top).

If the storage time exceeds 15 days, mix the emulsion moderately.

Do not heat the pumps or pipes using an open flame.

- The heating elements should have a surface power below 1 W/cm2.

**Packaging**

Always keep in packaging made of an identical material to the original.

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Suitable packaging materials :  
Recommended : Steel, plastic  
- for lab, use plastic or glass containers  
Unsuitable packaging materials :  
Avoid copper or aluminium alloys.

**7.3. Specific end use(s)**

No data available.

**SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

**Occupational exposure limits :**

- France (INRS - Outils 65 / 2021-1849, 2021-1763, decree of 09/12/2021) :

CAS	VME-ppm :	VME-mg/m3 :	VLE-ppm :	VLE-mg/m3 :	Notes :	TMP No :
1310-58-3				2		

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
8052-42-4	5 mg/m3	10 mg/m3			
1310-58-3		2 mg/m3			

**8.2. Exposure controls**

**Personal protection measures, such as personal protective equipment**

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

**- Eye / face protection**

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

**- Hand protection**

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVC (polyvinyl chloride)
- Butyl Rubber (Isobutylene-isoprene copolymer)

**- Body protection**

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

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After contact with the product, all parts of the body that have been soiled must be washed.

**SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

**Physical state**

Physical state : Viscous liquid.

**Colour**

Unspecified

**Odour**

Odour threshold : Not stated.

**Melting point**

Melting point/melting range : 0 °C.

**Freezing point**

Freezing point / Freezing range : Not stated.

**Boiling point or initial boiling point and boiling range**

Boiling point/boiling range : Not relevant.

**Flammability**

Flammability (solid, gas) : Not stated.

**Lower and upper explosion limit**

Explosive properties, lower explosivity limit (%) : Not stated.

Explosive properties, upper explosivity limit (%) : Not stated.

**Flash point**

Flash point interval : Not relevant.

**Auto-ignition temperature**

Self-ignition temperature : Not relevant.

**Decomposition temperature**

Decomposition point/decomposition range : Not relevant.

**pH**

pH (aqueous solution) :

pH : Not stated.  
Slightly basic.

**Kinematic viscosity**

Viscosity : Not stated.

**Solubility**

Water solubility : Dilutable.

Fat solubility : Not stated.

**Partition coefficient n-octanol/water (log value)**

Partition coefficient: n-octanol/water : Not stated.

**Vapour pressure**

Vapour pressure (50°C) : Not relevant.

**Density and/or relative density**

Density : = 1

**Relative vapour density**

Vapour density : Not stated.

**Particle characteristics**

The mixture does not contain nanoforms.

**9.2. Other information**

No data available.

**9.2.1. Information with regard to physical hazard classes**

No data available.

**9.2.2. Other safety characteristics**

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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**SECTION 10 : STABILITY AND REACTIVITY**

limited stability at usual temperatures of storage, handling and use

**10.1. Reactivity**

No data available.

**10.2. Chemical stability**

This mixture is stable under the recommended handling and storage conditions in section 7.

**10.3. Possibility of hazardous reactions**

No data available.

**10.4. Conditions to avoid**

Avoid :

- frost

Emulsion stability is limited. If emulsion has been stored for more than a few days, it should be circulated before use.

**10.5. Incompatible materials**

Cationic Emulsions

**10.6. Hazardous decomposition products**

The thermal decomposition may release/form :

- carbon monoxide (CO)

- carbon dioxide (CO<sub>2</sub>)

**SECTION 11 : TOXICOLOGICAL INFORMATION**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.

**11.1.1. Substances**

No toxicological data available for the substances.

**Acute toxicity :**

BITUME (CAS: 8052-42-4)

Oral route :

LD50 > 5000 mg/kg

OECD Guideline 401 (Acute Oral Toxicity)

Species : Rat (recommended by the CLP)

Dermal route :

LD50 > 2000 mg/kg bodyweight/day

OECD Guideline 402 (Acute Dermal Toxicity)

Species : Rabbit (recommended by the CLP)

Inhalation route (n/a) :

LC50 > 94.4

OECD Guideline 403 (Acute Inhalation Toxicity)

Species : Rat (recommended by the CLP)

**Carcinogenicity :**

BITUME (CAS: 8052-42-4)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

**Reproductive toxicant :**

BITUME (CAS: 8052-42-4)

Study on development :

OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Species : Rat

**Specific target organ systemic toxicity - repeated exposure :**

BITUME (CAS: 8052-42-4)

Dermal route :

Duration of exposure : 28 days

C = 200 mg/kg bodyweight/day

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OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)  
Species : Rabbit (recommended by CLP)

Inhalation route :

Duration of exposure : 90 days  
C = 103.9  
Species : Rat (recommended by CLP)

**11.1.2. Mixture**

**Respiratory or skin sensitisation :**

Contains at least one sensitising substance. May cause an allergic reaction.

**11.2. Information on other hazards**

**Endocrine disrupting properties**

The mixture does not contain any substance evaluated as an endocrine disruptor with effects on human health.

**Monograph(s) from the IARC (International Agency for Research on Cancer) :**

CAS 8052-42-4 : IARC Group 2B : The agent is possibly carcinogenic to humans.

**SECTION 12 : ECOLOGICAL INFORMATION**

**12.1. Toxicity**

**12.1.2. Mixtures**

No aquatic toxicity data available for the mixture.

**12.2. Persistence and degradability**

The emulsion is a product used for construction and the binder, after breaking, has a long life span.

**12.3. Bioaccumulative potential**

No data available on anionic emulsions. Bioaccumulation of bitumen is very unlikely because of insolubility and high molecular weight.

**12.4. Mobility in soil**

The product has no soil mobility.

Water : as the emulsion is dilutable and mobile in water, the binder could be conveyed on long distances.

**12.5. Results of PBT and vPvB assessment**

No data available.

**12.6. Endocrine disrupting properties**

The mixture does not contain any substance evaluated as an endocrine disruptor with environmental effects.

**12.7. Other adverse effects**

No data available.

**SECTION 13 : DISPOSAL CONSIDERATIONS**

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

**13.1. Waste treatment methods**

Do not pour into drains or waterways.

**Waste :**

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

**Soiled packaging :**

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

**SECTION 14 : TRANSPORT INFORMATION**

Exempt from transport classification and labelling.

**14.1. UN number or ID number**

-

**14.2. UN proper shipping name**

-



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**14.3. Transport hazard class(es)**

-

**14.4. Packing group**

-

**14.5. Environmental hazards**

-

**14.6. Special precautions for user**

-

**14.7. Maritime transport in bulk according to IMO instruments**

-

**SECTION 15 : REGULATORY INFORMATION**

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

**Classification and labelling information included in section 2:**

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2023/707.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 2024/197. (ATP 21)

**Container information:**

No data available.

**Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):**

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH):  
<https://echa.europa.eu/substances-restricted-under-reach>.

**Explosives precursors :**

The mixture does not contain any substance subject to Regulation (EU) 2019/1148 on the marketing and use of explosives precursors.

**Particular provisions :**

No data available.

**15.2. Chemical safety assessment**

No data available.

**SECTION 16 : OTHER INFORMATION**

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

**Wording of the phrases mentioned in section 3 :**

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

**Abbreviations and acronyms :**

LD50 : The dose of a test substance resulting in 50% lethality in a given time period.

LC50 : The concentration of a test substance resulting in 50% lethality in a given period.

REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.

STEL : Short-term exposure limit

TWA : Time Weighted Averages

TMP : French Occupational Illness table

TLV : Threshold Limit Value (exposure)

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AEV : Average Exposure Value.

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

GHS07 : Exclamation mark

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.