



SAFETY DATA SHEET

Halar 6614

1. Identification

Product identifier

Product name Halar 6614
Product number HALAR-6614-25KG

Recommended use of the chemical and restrictions on use

Application Industrial use.
Uses advised against This product is designed for use by technically competent persons. Any use of this product, other than for its stated use, should not be attempted without expert review.

Details of the supplier of the safety data sheet

Supplier Kurt J Lesker Company
Manufacturer Kurt J Lesker Company
 1925 Route 51
 Jefferson Hills, PA 15025
 +1 412-387-9200

 Kurt J Lesker Company LTD
 United Kingdom
 Austin House
 Sidney Little Road
 Churchfields Industrial Estate
 St Leonards on Sea, East Sussex, TN38 9PU, United Kingdom
 Customer Service: +44 (0) 1424 458100
 msds@lesker.com

Emergency telephone number

Emergency telephone Emergency Numbers
 North America [USA, Canada, Mexico]: 1-866-519-4752
 Mainland China: (+86) 4001 2001 74
 Europe: {int'l call prefix}-1-760-476-3961
 Asia Pacific: {int'l call prefix}-1-760-476-3960
 Middle East & Africa: {int'l call prefix}-1-760-476-3959
 South Korea: +080-880-0455
 Philippines: (+63) 2 83953471

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Combustible Dust - USH01
Health hazards Eye Irrit. 2B - H320 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 STOT SE 2 - H371 STOT RE 2 - H373
Environmental hazards Aquatic Acute 3 - H402 Aquatic Chronic 3 - H412

Label elements

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Hazard symbols



Signal word

Danger

Hazard statements

USH01 May form combustible dust concentrations in air.
 H320 Causes eye irritation.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H371 May cause damage to organs .
 H373 May cause damage to organs through prolonged or repeated exposure.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust.
 P264 Wash contaminated skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P284 In case of inadequate ventilation wear respiratory protection.
 P302+P352 If on skin: Wash with plenty of water.
 P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P311 If exposed or concerned: Call a poison center or doctor.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P405 Store locked up.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains

Wollastonite, Chromium Oxide (powder)

3. Composition/information on ingredients

Mixtures

1-chloro-1,2,2-trifluoroethene, ethene, 3,3,3-trifluoro-2-(trifluoromethyl)prop-1-ene CAS number: 54302-04-4	69%
Wollastonite CAS number: 13983-17-0	15%
Benzenamine, 4,4'-sulfonylbis- CAS number: 80-08-0	5.0%
Chromium Oxide (powder) CAS number: 1308-38-9	5.0%
Cobalt Oxide CAS number: 1308-06-1	5.0%

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Titanium Oxide (TiO, TiO ₂ , Ti ₂ O ₃ , Ti ₃ O ₅ , Ti ₄ O ₇ powder and pieces)	1.0%
CAS number: 13463-67-7	

Composition comments *The exact percentage withheld as a trade secret in accordance with 29 CFR 1910.1200.

4. First-aid measures

Description of first aid measures

Inhalation	Move affected person to fresh air at once. If breathing stops, provide artificial respiration. If in doubt, get medical attention promptly. Keep affected person under observation. Remove affected person from source of contamination. Symptoms of lung edema (shortness of breath) may develop up to 24 hours after exposure.
Ingestion	Get medical attention if a large quantity has been ingested. Never give anything by mouth to an unconscious person.
Skin Contact	Remove contamination with soap and water or recognized skin cleansing agent. In case of possible exposure to degradation products, use suitable respiratory protection. If calcium gluconate gel is available, rub it into affected skin. Consult a physician for specific advice.
Eye contact	Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

Inhalation	Irritating to respiratory system. May cause coughing and difficulties in breathing. Headache. Consult a physician for specific advice.
Ingestion	This is unlikely to occur but symptoms similar to those of ingestion may develop.
Skin contact	Irritating to skin. Powder may irritate skin. Prolonged contact may cause redness, irritation and dry skin.
Eye contact	Causes eye irritation. Continue to rinse for at least 15 minutes and get medical attention.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	The product is not flammable. Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Water spray.

Special hazards arising from the substance or mixture

Hazardous combustion products	Corrosive gases or vapors. Hydrogen chloride (HCl). Hydrogen fluoride (HF). Phosgene (COCl ₂).
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Advice for firefighters

Protective actions during firefighting	Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. No action shall be taken without appropriate training or involving any personal risk.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk.

Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13. Avoid generation and spreading of dust. Avoid spreading dust or contaminated materials.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers. Static electricity and formation of sparks must be prevented. Ground/bond container and receiving equipment. Dust may form explosive mixture with air.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Provide eyewash station and safety shower.

Conditions for safe storage, including any incompatibilities

Storage precautions Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Avoid dust formation. Do not store near heat sources or expose to high temperatures.

Storage class Chemical storage.

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

Titanium Oxide (TiO, TiO₂, Ti₂O₃, Ti₃O₅, Ti₄O₇ powder and pieces)

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³

A4

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust

ACGIH = American Conference of Governmental Industrial Hygienists.

A4 = Not Classifiable as a Human Carcinogen.

OSHA = Occupational Safety and Health Administration.

Ingredient comments No exposure limits known for ingredient(s).

Titanium Oxide (TiO, TiO₂, Ti₂O₃, Ti₃O₅, Ti₄O₇ powder and pieces) (CAS: 13463-67-7)

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Immediate danger to life and health 5000 mg/m³

Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Dust-resistant, chemical splash goggles. Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated.

Hand protection

Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Wash hands thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection

Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Solid. Powder.
Color	Green.
Odor	Odorless.
Odor threshold	Not available.
pH	Not applicable.
Melting point	220°C/428°F
Initial boiling point and range	Not applicable.
Flash point	Not applicable.

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Evaporation rate	Not applicable.
Flammability (solid, gas)	The product is not flammable.
Upper/lower flammability or explosive limits	Not applicable.
Other flammability	May form combustible dust concentrations in air.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Bulk density	> 1.65 g/cm ³
Solubility(ies)	Insoluble in water.
Partition coefficient	Data lacking.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	300°C/572°F
Viscosity	Not applicable.
Explosive properties	Dust may form explosive mixture with air.
Oxidizing properties	Does not meet the criteria for classification as oxidizing.
Molecular weight	Not available.

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions	Under normal conditions of storage and use, no hazardous reactions will occur. May form combustible dust concentrations in air.
Conditions to avoid	Avoid heat, flames and other sources of ignition.
Materials to avoid	Alkali metals. Avoid contact with flammable/combustible materials. Oxidizing agents. Strong acids.
Hazardous decomposition products	Hydrogen chloride (HCl). Hydrogen fluoride (HF). Phosgene (COCl ₂). The release of other hazardous decomposition products is possible.

11. Toxicological information

Information on toxicological effects

Toxicological effects	No data recorded.
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Acute Tox. 4
ATE oral (mg/kg)	5,000.0
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.

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Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

ATE inhalation (dusts/mists mg/l) 30.0

Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitization

Respiratory sensitization Resp. Sens. 1B

Skin sensitization

Skin sensitization Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Positive.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

NTP carcinogenicity Not listed.

OSHA Carcinogenicity Not listed.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE = Specific target organ toxicity-single exposure

Target organs Blood

Specific target organ toxicity - repeated exposure

STOT - repeated exposure STOT RE = Specific target organ toxicity-repeated exposure

Target organs Blood Lungs Spleen

Aspiration hazard

Aspiration hazard Not relevant.

12. Ecological information

Acute aquatic toxicity

Acute toxicity - fish Not available.

Acute toxicity - aquatic invertebrates Not available.

Acute toxicity - aquatic plants Not available.

Acute toxicity - microorganisms Not available.

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Acute toxicity - terrestrial	Not available.
<u>Chronic aquatic toxicity</u>	
Summary	No data available.
<u>Bioaccumulative potential</u>	
Bio-Accumulative Potential	No data available on bioaccumulation.
Partition coefficient	Data lacking.
<u>Mobility in soil</u>	
Mobility	No data available.
<u>Other adverse effects</u>	
Other adverse effects	Not available.

13. Disposal considerations

Waste treatment methods

General information	The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
Disposal methods	Dispose of waste via a licensed waste disposal contractor.

14. Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).
Road transport notes	Not regulated.
Rail transport notes	Not regulated.
Sea transport notes	Not regulated.
Air transport notes	Not regulated.
DOT transport notes	Not regulated.
<u>UN Number</u>	
UN No. (International)	Not applicable.
<u>UN proper shipping name</u>	
Proper shipping name (International)	Not applicable.
<u>Transport hazard class(es)</u>	
Transport Labels (International)	No transport warning sign required.
Transport labels	No transport warning sign required.
DOT transport labels	No transport warning sign required.

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Packing group

Packing group (International) Not applicable.

Environmental hazards

Environmentally Hazardous Substance

No.

Special precautions for user

Not applicable.

DOT TIH Zone Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

SARA 313 Emission Reporting

Present.
Some of the ingredients are listed or exempt.

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

FDA - Essential Chemical

None of the ingredients are listed or exempt.

FDA - Precursor Chemical

None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories

Combustible Dust
Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)

OSHA Highly Hazardous Chemicals

None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

This product can expose you to Titanium Oxide (TiO, TiO₂, Ti₂O₃, Ti₃O₅, Ti₄O₇ powder and pieces), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

This product can expose you to Cobalt Oxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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California Proposition 65 Labelling



WARNING This product can expose you to Titanium Oxide (TiO, TiO₂, Ti₂O₃, Ti₃O₅, Ti₄O₇ powder and pieces), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov. This product can expose you to Cobalt Oxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Air Toxics "Hot Spots" (A-I)

None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances

None of the ingredients are listed or exempt.

Massachusetts "Right To Know" List

None of the ingredients are listed or exempt.

Rhode Island "Right To Know" List

None of the ingredients are listed or exempt.

Label Prop 65 data

Minnesota "Right To Know" List

None of the ingredients are listed or exempt.

Pennsylvania "Right To Know" List

Some of the ingredients are listed or exempt.

New Jersey "Right To Know" List

Some of the ingredients are listed or exempt.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDSL

Some of the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

Australia - AICS

All the ingredients are listed or exempt.

Japan - ENCS

All the ingredients are listed or exempt.

Korea - KECI

All the ingredients are listed or exempt.

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China - IECSC

All the ingredients are listed or exempt.

Philippines - PICCS

Some of the ingredients are listed or exempt.

New Zealand - NZIOC

All the ingredients are listed or exempt.

Taiwan - TCSI

All the ingredients are listed or exempt.

16. Other information

Revision date 6/30/2022

Revision 3

Supersedes date 6/30/2022

SDS No. 5997

Hazard statements in full H317 May cause an allergic skin reaction.
H320 Causes eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H371 May cause damage to organs .
H373 May cause damage to organs through prolonged or repeated exposure.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.
USH01 May form combustible dust concentrations in air.

End of SDS