

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 10/02/2025

Reviewed on 10/02/2025

1 Identification

- **Product identifier**

- **Trade name:** KORUNDAL XD

- **Other means of identification**

- **Article number:** 2278

- **Restrictions** Restricted to industrial or professional use.

- **Application of the substance / the mixture** Refractory Material

- **Uses advised against**

Avoid dry cutting, blasting, or dust generation. Users should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

- **Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**

HarbisonWalker International
2000 Park Lane Drive, Suite 400
Pittsburgh
Pennsylvania
15275
USA

- **Information department:**

SDS@thinkHWI.com
+33 (0)2 59 60 31 14

- **Emergency telephone number:**

CHEMTREC EMERGENCY
1-800-424-9300
US/CAN ONLY

2 Hazard(s) identification

- **Classification of the substance or mixture**

The product is not classified, according to the Globally Harmonized System (GHS).

- **Additional information:**

This item is defined as an article per OSHA, REACH, and WHMIS, therefore a SDS, label and its classification are not applicable. However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards.

- **Label elements**

- **GHS label elements** Void

- **Hazard pictograms** Void

- **Signal word** Void

- **Hazard statements** Void

- **Additional information:**

Wear protective gloves/protective clothing/eye protection. Wash thoroughly after handling.

Users should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Overexposure to the respirable dust of crystalline silica (quartz or cristobalite, less than or equal to 5 microns in size) may lead to silicosis in humans, which is a progressive and irreversible lung disease. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Observe good industrial hygiene practices.

Wash hands after handling.

Store away from incompatible materials.

Dispose of waste and residues in accordance with local authority requirements.

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- **Information pertaining to particular dangers for man and environment:**
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = *0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Classification according to (d)(1)(ii) of § 1910.1200**
The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.
- **Hazards not otherwise classified**
There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

1344-28-1	aluminium oxide	80–100%
14808-60-7	Quartz (SiO ₂)	≥5–≤7%

- **Additional information:**
The exact chemical identity and/or percentage (concentration) of the composition has been withheld as a trade secret.

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
- **After swallowing:** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed**
Direct contact with eyes may cause temporary irritation.
Breathing crystalline silica can cause lung disease, including silicosis and lung cancer.

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. For personal protection, see section 8 of the SDS.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Dispose of the collected material according to regulations.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions.
Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· Control parameters

· Components with limit values that require monitoring at the workplace:

1344-28-1 aluminium oxide

PEL	Long-term value: 15*; 5** mg/m ³ *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m ³ as Al; *as respirable fraction, A4

14808-60-7 Quartz (SiO₂)

PEL	Long-term value: 0.05* mg/m ³ *resp. dust; 30mg/m ³ /%SiO ₂ +2
REL	Long-term value: 0.05* mg/m ³ *respirable dust; See Pocket Guide App. A
TLV	Long-term value: 0.025* mg/m ³ *respirable particulate matter, A2

· Regulatory information

PEL: Guide to Occupational Exposure Values (OSHA PELs)
 REL: Guide to Occupational Exposure Values (NIOSH RELs)
 TLV: Guide to Occupational Exposure Values (TLV)

· Additional information:

The lists that were valid during the creation were used as basis.
 Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

· Exposure controls

· Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

· Personal protective equipment:

· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

· Breathing equipment:



Maintain adequate ventilation when dust is present.

Please consult applicable local legislation

Wear appropriate respiratory equipment (EN149:2009 FFP3)

Use a filter mask if dust concentrations exceed exposure limits.

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

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· **Protection of hands:**

Protective gloves



The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Wear safety glasses with side shields (or goggles).

· **Body protection:**



Standard industrial clothing is sufficient for room temperature installations (ISO 6942). Do not shake out work clothes. Do not remove dust with compressed air.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Solid

· **Color:**

Grey

· **Odor:**

uncharacteristic

· **Odor threshold:**

Not determined.

· **Melting point/Melting range:**

Undetermined.

· **Boiling point/Boiling range:**

2,230 °C (3630 °F)

· **Flammability:**

Not determined.

· **Explosion limits:**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

Not applicable.

· **Decomposition temperature:**

Not determined.

· **pH-value:**

Not applicable.

· **Viscosity:**

· **Kinematic:**

Not applicable.

· **Dynamic:**

Not applicable.

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· Solubility in / Miscibility with	
· Water:	Soluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Vapor pressure:	Not applicable.
· Vapor pressure:	
· Density at 20 °C (68 °F):	~2.6 g/cm ³ (~21.697 lbs/gal)
· Relative density	Not determined.
· Bulk density:	560–3,500 kg/m ³
· Vapor density	Not applicable.
· Particle characteristics	Not determined.
· Other information	
· Appearance:	
· Form:	Brick or Cast Shape
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Solvent content:	
· Water:	1.9 %
· VOC content:	0.00 %
· Solids content:	100.0 %
· Change in condition	
· Evaporation rate	Not applicable.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
Incompatibility is based strictly upon potential theoretical reactions between chemicals and may not be specific to industrial application exposure.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **on the skin:** Prolonged skin contact may cause temporary irritation.
- **on the eye:** Direct contact with eyes may cause temporary irritation.
- **Sensitization:** No sensitizing effects known.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.

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- **Specific target organ toxicity - single exposure**
Based on available data, the classification criteria are not met.
- **Specific target organ toxicity - repeated exposure**
Based on available data, the classification criteria are not met.
- **Aspiration hazard** Not applicable
- **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:
- **Interactive effects** No interactive effects between components are known.
- **Carcinogenic categories**

IARC (International Agency for Research on Cancer)		
14808-60-7	Quartz (SiO ₂)	1

14808-60-7	Quartz (SiO ₂)	1
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Additional information
 In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However, in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk.." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

NTP (National Toxicology Program)		
14808-60-7	Quartz (SiO ₂)	K

14808-60-7	Quartz (SiO ₂)	K
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OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		

None of the ingredients is listed.		
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- **Alternative sources for toxicological information**
No non-standard sources for toxicological information where used.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **Other adverse effects**
- **Additional ecological information:**
- **General notes:** Not hazardous for water.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must be specially treated adhering to official regulations.
 Since this product is used in several industries, no Waste Code can be provided by the supplier.
 The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, IMDG, IATA | not regulated |
| · UN proper shipping name | |
| · DOT, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · DOT, ADN, IMDG, IATA | |
| · Class | not regulated |
| · Packing group | |
| · DOT, IMDG, IATA | not regulated |
| · Environmental hazards: | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Special precautions for user | Not applicable. |
| · UN "Model Regulation": | not regulated |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
 No further relevant information available.
- **Sara**
- **Section 355 (extremely hazardous substances):**
 None of the ingredients is listed.

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· Section 313 (Specific toxic chemical listings):

1344-28-1 aluminium oxide

· TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

· Hazardous Air Pollutants

None of the ingredients is listed.

· Proposition 65
· Chemicals known to cause cancer:

 14808-60-7 Quartz (SiO₂)

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

· Carcinogenic categories
· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value)

1344-28-1 aluminium oxide

A4

 14808-60-7 Quartz (SiO₂)

A2

· NIOSH-Ca (National Institute for Occupational Safety and Health)

 14808-60-7 Quartz (SiO₂)

· GHS label elements Void

· Hazard pictograms Void

· Signal word Void

· Hazard statements Void

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge on creation date. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Contact: SDS@thinkHWI.com

· Version number of previous version: 1

· Date of preparation 10/02/2025

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

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VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

US