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SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· 1.1 Product identifier

· **Trade name: MICRO ALUMINA "ST"**

· **Other means of identification:** No other identifiers

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

· **Application of the substance / the mixture:** Industrial uses.
· **Uses advised against:** No further relevant information available.

· 1.3 Details of the supplier of the Safety Data Sheet

· **Manufacturer/Supplier:**
K.C. Abrasive Company
3140 Dodge Road
Kansas City, KS 66115
Phone: (913) 342-2900

· 1.4 Emergency telephone number:

ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008**
Classifications listed are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).

Carc. 1A H350 May cause cancer. Route of exposure: Inhalation.

· 2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the Globally Harmonized System within the United States.
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS08

· **Signal word** Danger
· **Hazard-determining components of labelling:**
Quartz (SiO2)
· **Hazard statements**
H350 May cause cancer. Route of exposure: Inhalation.
· **Precautionary statements**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves / eye protection.

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P308+P313 If exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**
Restricted to professional users.

· **2.3 Other hazards** There are no other hazards not otherwise classified that have been identified.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Components:**

CAS: 1344-28-1 EINECS: 215-691-6 Reg.nr.: 01-2119529248-35-XXXX	aluminium oxide substance with a Community workplace exposure limit	50-100%
CAS: 7631-86-9 EINECS: 231-545-4 Reg.nr.: 01-2119379499-16-XXXX	silicon dioxide substance with a Community workplace exposure limit	1-5%
CAS: 14808-60-7 EINECS: 238-878-4	Quartz (SiO2) Carc. 1A, H350i	<1%
CAS: 1309-37-1 EINECS: 215-168-2 Reg.nr.: 01-2119457614-35-XXXX	Red Iron Oxide substance with a Community workplace exposure limit	<1%
CAS: 13463-67-7 EINECS: 236-675-5 Reg.nr.: 01-2119489379-17-XXXX	titanium dioxide Carc. 2, H351	<1%
CAS: 1305-78-8 EINECS: 215-138-9 Reg.nr.: 01-2119862019-36-XXXX	calcium oxide Eye Dam. 1, H318 Skin Irrit. 2, H315; STOT SE 3, H335	<1%

· **Additional information:**
Classification of titanium dioxide as a carcinogen is based on the IARC 2B classification and not the EU CLP classification.
For the wording of the listed Hazard Statements refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.
· **After skin contact:**
Brush off loose particles from skin.

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Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**
Coughing
Breathing difficulty
Slight irritant effect on eyes.
Gastric or intestinal disorders when ingested.
Nausea in case of ingestion.

· **Hazards:**
Danger of impaired breathing.
May cause cancer. Route of exposure: Inhalation.

· **4.3 Indication of any immediate medical attention and special treatment needed**
May produce a emphysemic effect.
If necessary oxygen respiration treatment.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**
The product is not flammable.
Use fire extinguishing methods suitable to surrounding conditions.

· **For safety reasons unsuitable extinguishing agents:** None.

· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.

· **5.3 Advice for firefighters**

· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation
Avoid formation of dust.
Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions** Damp down dust with water spray.

· **6.3 Methods and material for containment and cleaning up**
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Prevent formation of dust.
Any unavoidable deposit of dust must be regularly removed.
Avoid breathing dust.
Use only in well ventilated areas.
Take note of emission threshold.
· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:**
Storage area should be dry and well-ventilated.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
1344-28-1 aluminium oxide	
WEL (Great Britain)	Long-term value: 10* 4** mg/m³ *inhalable dust **respirable dust
PEL (USA)	Long-term value: 15*; 5** mg/m³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m³ as Al; *as respirable fraction
7631-86-9 silicon dioxide	
NIOSH REL (USA)	Long-term value: 6 mg/m³
OSHA PEL (USA)	Long-term value: 80 mg/m³
1309-37-1 Red Iron Oxide	
WEL (Great Britain)	Short-term value: 10* mg/m³ Long-term value: 5* 10** 4*** mg/m³ *fume (as Fe),**total respirable,***respirable
PEL (USA)	Long-term value: 10* 15** 5*** mg/m³ *Fume; Rouge: **Total dust, ***respirable
REL (USA)	Long-term value: 5 mg/m³ Dust & fume, as Fe
TLV (USA)	Long-term value: 5* mg/m³ *as respirable fraction

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13463-67-7 titanium dioxide	
WEL (Great Britain)	Long-term value: 10* 4** mg/m³ *total inhalable **respirable
PEL (USA)	Long-term value: 15* mg/m³ *total dust
REL (USA)	See Pocket Guide App. A
TLV (USA)	Long-term value: 10 mg/m³ withdrawn from NIC
1305-78-8 calcium oxide	
IOELV (EU)	Short-term value: 4 mg/m³ Long-term value: 1 mg/m³ Respirable fraction
WEL (Great Britain)	Long-term value: 2 mg/m³
PEL (USA)	Long-term value: 5 mg/m³
REL (USA)	Long-term value: 2 mg/m³
TLV (USA)	Long-term value: 2 mg/m³
14808-60-7 Quartz (SiO2)	
WEL (Great Britain)	Long-term value: 0,1 mg/m³ respirable dust, averaged over 8 hours
PEL (USA)	see Quartz listing
REL (USA)	Long-term value: 0,05* mg/m³ *respirable dust; See Pocket Guide App. A
TLV (USA)	Long-term value: 0,025* mg/m³ *as respirable fraction

· **8.2 Exposure controls**

· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Do not inhale dust / smoke / mist.
Avoid close or long term contact with the skin.
Avoid contact with the eyes.

· **Respiratory protection:**
Suitable respiratory protective device recommended.
Avoid inhalation of the chemical/ the product/ the preparation by organizational measures.
For spills, respiratory protection may be advisable.
Wear appropriate NIOSH or EU approved respirator when ventilation is inadequate and occupational exposure limits are exceeded.

· **Protection of hands:**
Wear gloves for the protection against mechanical hazards according to NIOSH or EN 388.

· **Eye protection:**

Safety glasses

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Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:**
Not required under normal conditions of use.
Protection may be required for spills.

· **Limitation and supervision of exposure into the environment:** No special requirements.

· **Risk management measures:** No special requirements.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· **Appearance**	
Form:	Crystalline powder
Colour:	White
· **Odour:**	Odourless
· **Odour threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Melting point/freezing point:**	2000 °C (3.632 °F)
· **Initial boiling point and boiling range:**	Not determined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Not determined.
· **Auto/Self-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidising properties**	Non-oxidising.
· **Vapour pressure:**	Not applicable.
· **Density:**	
Relative density:	3,94
Vapour density:	Not applicable.
Evaporation rate:	Not applicable.
· **Solubility in / Miscibility with water:**	Insoluble.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **9.2 Other information**	No further relevant information available.

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions**
As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.
Reacts with strong acids and alkali.
· **10.4 Conditions to avoid** Prevent formation of dust.
· **10.5 Incompatible materials** No further relevant information available.
· **10.6 Hazardous decomposition products**

Under fire conditions only:
Toxic metal oxide smoke

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.
· **LD/LC50 values relevant for classification:** None.
· **Primary irritant effect**
· **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer):**		
13463-67-7	titanium dioxide	2B
14808-60-7	Quartz (SiO2)	1

· **NTP (National Toxicology Program):**		
14808-60-7	Quartz (SiO2)	K

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable routes of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Repeated dose toxicity:**
Long-term inhalation of silica dusts may cause obstructive pulmonary disease including silicosis.
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:**
May cause cancer. Route of exposure: Inhalation.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

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· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** Generally not hazardous for water
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Negative ecological effects are, according to the current state of knowledge, not expected.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Contact waste processors for recycling information.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **DOT, ADR, IMDG, IATA**	Not Regulated
· **14.2 UN proper shipping name**	
· **DOT, ADR, IMDG, IATA**	Not Regulated
· **14.3 Transport hazard class(es)**	
· **DOT, ADR, IMDG, IATA**	
· **Class**	Not Regulated
· **14.4 Packing group**	
· **DOT, ADR, IMDG, IATA**	Not Regulated

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· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.

SECTION 15: Regulatory information

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

· **United States (USA)**

· **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

Aluminum oxide listing is only relevant to fibrous forms and is not applicable to the product as supplied.

1344-28-1	aluminium oxide

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide
14808-60-7	Quartz (SiO2)

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer)**

13463-67-7	titanium dioxide	2B
14808-60-7	Quartz (SiO2)	1

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

13463-67-7	titanium dioxide
14808-60-7	Quartz (SiO2)

· **Canadian Domestic Substances List (DSL)**

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All ingredients are listed.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

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

SECTION 16: Other information

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

· **Relevant phrases**
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H350i May cause cancer by inhalation. Route of exposure: Inhalation.
H351 Suspected of causing cancer. Route of exposure: Inhalation.

· **Abbreviations and acronyms:**
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistant, Bio-accumulable, Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Carc. 1A: Carcinogenicity – Category 1A
Carc. 1A: Carcinogenicity – Category 1Ai
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**
Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

SDS Prepared by:
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