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

1.1 Product identifier

• Trade name: OPTICAL POWDER "ST", CRYSTAL FINISHING POWDER "ST", ALUMINUM OXIDE POWDER "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). Care 14, H350, May cause cancer, Route of exposure: Inhald

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



· 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.

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P280 Wear protective gloves / eye protection.

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

CAS: 1344-28-1	aluminium oxide	50-100%
EINECS: 215-691-6	substance with a Community workplace exposure limit	
Reg.nr.: 01-2119529248-35-XXXX		
CAS: 13463-67-7	titanium dioxide	1-5%
EINECS: 236-675-5	🚯 Carc. 2, H351	
Reg.nr.: 01-2119489379-17-XXXX		
CAS: 7631-86-9	silicon dioxide	1-5%
EINECS: 231-545-4	substance with a Community workplace exposure limit	
Reg.nr.: 01-2119379499-16-XXXX		
CAS: 14808-60-7	Quartz (SiO2)	<1%
EINECS: 238-878-4	🗞 Carc. 1A, H350i	
CAS: 1345-25-1	iron oxide	<1%
EINECS: 215-721-8	substance with a Community workplace exposure limit	
CAS: 1309-48-4	magnesium oxide	<1%
EINECS: 215-171-9	substance with a Community workplace exposure limit	
Index number: 025-199-09-0		
CAS: 1305-78-8	calcium oxide	<1%
EINECS: 215-138-9	📀 Eye Dam. 1, H318	
Reg.nr.: 01-2119862019-36-XXXX		
CAS: 1314-23-4	zirconium dioxide	<1%
EINECS: 215-227-2	substance with a Community workplace exposure limit	
Reg.nr.: 01-2119486976-14-XXXX		
CAS: 11129-60-5	Manganese oxide	<1%
EINECS: 234-378-5	substance with a Community workplace exposure limit	
Additional information:		
	s a carcinogen is based on the IARC 2B classification and	d not the E
CLP classification.		
For the listed ingredient(s), the ider	ntity and/or exact percentages are being withheld as a trade (Cor	secret.

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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.

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

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	(Cont'd. from page
6.1 Personal precautions, protective equipment and emergency proced	ures
Use personal protective equipment as required.	
Use respiratory protective device against the effects of fumes/dust/aerosol.	
Ensure adequate ventilation	
Avoid formation of dust.	
Avoid breathing dust.	
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.	
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/m ³ *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	
	•	(Cont'd. on page 5)

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13463-67-7 titanium	diavida	(Cont'd. from pag
WEL (Great Britain)	Long-term value: 10* 4** mg/m ³ *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	
7631-86-9 silicon d	oxide	
NIOSH REL (USA)	Long-term value: 6 mg/m ³	
OSHA PEL (USA)	Long-term value: 80 mg/m ³	
1309-48-4 magnesi	um oxide	
-	Long-term value: 10* 4** mg/m³ (as Mg) *inhalable dust **fume and respirable dust	
PEL (USA)	Long-term value: 15* mg/m³ fume; *total particulate	
TLV (USA)	Long-term value: 10* mg/m³ *as inhalable fraction	
1305-78-8 calcium	oxide	
IOELV (EU)	Short-term value: 4 mg/m ³ Long-term value: 1 mg/m ³ Respirable fraction	
WEL (Great Britain)	Long-term value: 2 mg/m ³	
PEL (USA)	Long-term value: 5 mg/m ³	
REL (USA)	Long-term value: 2 mg/m ³	
TLV (USA)	Long-term value: 2 mg/m ³	
1314-23-4 zirconiur	n dioxide	
WEL (Great Britain)	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as Zr	
PEL (USA)	Long-term value: 5 mg/m³ as Zr	
REL (USA)	Short-term value: 10 mg/m³ Long-term value: 5 mg/m³ as Zr	
TLV (USA)	Short-term value: 10 mg/m³ Long-term value: 5 mg/m³ as Zr	
11129-60-5 Mangar	ese oxide	
IOELV (EU)	Long-term value: 0,2* 0,05** mg/m ³ as Mn; *inhalable, **respirable fraction	
WEL (Great Britain)	Long-term value: 0,5 mg/m³ as Mn	
		(Cont'd. on pag

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	(Cont'd. fr	om page
PEL (USA)	Ceiling limit: 5 mg/m³ as Mn	
REL (USA)	Short-term value: 3 mg/m ³	
	Long-term value: 1 mg/m³ as Mn	
TLV (USA)	Long-term value: 0,02* 0,1** mg/m ³	
	as Mn; *respirable **inhalable fraction	
1345-25-1 iron o	oxide	
REL (USA)	Long-term value: 1 mg/m³ as Fe	
TLV (USA)	Long-term value: 1 mg/m ³	
	as Fe	
14808-60-7 Qua		
WEL (Great Brita	ain) Long-term value: 0,1 mg/m ³	
	respirable dust, averaged over 8 hours	
PEL (USA) REL (USA)	see Quartz listing Long-term value: 0,05* mg/m³	
REL (USA)	*respirable dust; See Pocket Guide App. A	
TLV (USA)	Long-term value: 0,025* mg/m ³	
	*as respirable fraction	
The usual precau Keep away from Wash hands befor Avoid close or low Avoid contact wit Do not breathe d Respiratory pro Suitable respirator Avoid inhalation of For spills, respirator Wear appropriator exposure limits a Protection of ha	ust. tection: bry protective device recommended. of the chemical/ the product/ the preparation by organizational measures. atory protection may be advisable. te NIOSH or EU approved respirator when ventilation is inadequate and occu are exceeded.	upatior
 Body protection 	ational guidelines concerning the use of protective eyewear.	
	er normal conditions of use. e required for spills.	
i locotori may b	e required for spills.	

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(Cont'd. from page 6) • 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 physic • Appearance	cal and chemical properties				
Form:	Crystalline powder				
Colour:	Light brown				
· 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: 2980 °C (5.396 °F)					
· 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:	3,9				
Vapour density:	Not applicable.				
Evaporation rate:	Not applicable.				
 Solubility in / Miscibility with 					
water:	Insoluble.				
· Partition coefficient: n-octanol/wa	ter: Not determined.				
· Viscosity					
Dynamic:	Not applicable.				
Kinematic:	Not applicable.				
• 9.2 Other information	No further relevant information available.				

SECTION 10: Stability and reactivity

• **10.1 Reactivity** No further relevant information available.

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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

14808-60-7 Quartz (SiO2)

• NTP (National Toxicology Program):

14808-60-7 Quartz (SiO2)

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable routes of exposure:

Ingestion. Inhalation. Eve contact.

Skin contact.

· Repeated dose toxicity:

Repeated or long-term inhalation of product dusts may cause pulmonary disease.

• 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.

- · 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.

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Trade name: OPTICAL POWDER "ST", CRYSTAL FINISHING POWDER "ST", ALUMINUM OXIDE POWDER "ST"

· 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.

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	
14.5 Environmental hazards:		

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• Marine pollutant:

No

Not applicable.

Not applicable.

14.6 Special precautions for user

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

SECTION 15: Regulatory information	SECTION	15: Regulatory in	formation
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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): 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) 11129-60-5 Manganese oxide D · 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) All ingredients are listed. · Other regulations, limitations and prohibitive regulations

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· 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: ChemTel Inc. 1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtelinc.com

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