ALUMINIUM OXIDE

0351
October 2000

CAS No: 1344-28-1
RTECS No: BD1200000

alpha-Aluminum oxide
Alumina
Aluminum trioxide
Al_2O_3
Molecular mass: 101.9

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Not combustible.		In case of fire in the surroundings: all extinguishing agents allowed.
EXPLOSION			
EXPOSURE		**PREVENT DISPERSION OF DUST!**	
Inhalation	Cough.	Local exhaust or breathing protection.	Fresh air, rest.
Skin		Protective gloves.	Rinse and then wash skin with water and soap.
Eyes	Redness.	Safety goggles, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water. (Extra personal protection: P1 filter respirator for inert particles).	

EMERGENCY RESPONSE	STORAGE

IPCS
International Programme on Chemical Safety

Prepared in the context of cooperation between the International Programme on Chemical Safety and the European Commission
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IMPORTANT DATA

Physical State; Appearance
WHITE POWDER.

Occupational exposure limits
TLV: 10 mg/m^3 (as TWA) A4, for particulate matter containing no asbestos and 1% crystalline silica (ACGIH 2000).
MAK: 1.5 mg/m^3; respirable fraction of the aerosol (1999)
MAK: class II,2 (1999)

Routes of exposure
The substance can be absorbed into the body by inhalation of its aerosol.

Inhalation risk
Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.

Effects of short-term exposure
Inhalation of high concentrations of dusts of this substance may cause eyes and upper respiratory tract irritation.

Effects of long-term or repeated exposure
The substance may have effects on the central nervous system.

PHYSICAL PROPERTIES

Boiling point: 3000°C
Melting point: 2054°C
Density: 3.97 g/cm^3
Solubility in water: none

ENVIRONMENTAL DATA

NOTES

There is a different and hard crystalline form of aluminium oxide which occurs abundantly in nature under the name corundum (CAS 1302-74-5).
Other melting points: 2015°C (approx.) (corundum).
Occurs also as the minerals: bauxite, bayerite, boehmite, diaspore, gibbsite.

ADDITIONAL INFORMATION

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