MATERIAL SAFETY DATA SHEET
according to CE regulation N. 1907/2006

1. Identification of the substance/mixture and of the company/undertaking

Product name: Velpcatalyst with inert layer
Product code: A00000320
Use of the substance: Catalyst
Supplier: VELP Scientifica srl
Via Stazione 16, 20865 Usmate (MB) ITALY
TEL: +39 039 628811 FAX: +39 039 6288120
analyticalsupport@velp.it

Emergency telephone number:
Poison Center Milan, Italy - phone: 0039 02-66101029

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended)
The product is not hazardous.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008
The product is not hazardous.

2.3. Other hazards: No additional hazards are known except those derived from the labelling.

3. Composition

Chemical characterization: Mixtures

Hazardous ingredients: No hazardous ingredients

4. First Aid measures

4.1. Description of first aid measures

General information
If symptoms persist, call a physician.
Remove/Take off immediately all contaminated clothing.
After inhalation
Move to fresh air.
If symptoms persist, call a physician.
After contact with skin
Wash off immediately with soap and plenty of water.
After contact with eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.
After ingestion
Call a physician immediately.
Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms
Irritating to mucous membranes
Irritating to eyes.
Hazards
see point 2

4.3. Indication of any immediate medical attention and special treatment needed

Treatment
Treat symptomatically.

5. Firefighting measures

5.1 Extinguish media

Suitable extinguishing media
The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substances and mixtures

none

5.3 Protective equipment

Special protective equipment for firefighting
In the event of fire, wear self-contained breathing apparatus.
Further information
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Avoid dust formation.
Use personal protective equipment.
Avoid contact with skin, eyes and clothing.
Avoid dust formation.

6.2. Environmental precautions

Retain and dispose of contaminated wash water.

6.3. Methods and material for containment and cleaning up

Take up contaminated material by mechanical means, load into clean containers, and dispose of in accordance with legal regulations.

6.4. Reference to other sections

Additional information
See point 8 for Personal Protection. See point 13 for Disposal considerations.

7. Handling and Storage

7.1 Precautions for safe handling

Advice on safe handling
Avoid inhalation, ingestion and contact with skin and eyes.
Handle and open container with care.
Provide adequate ventilation.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.
Wash hands before eating, drinking, or smoking.
Remove/Take off immediately all contaminated clothing.

Advice on protection against fire and explosion
Keep away from combustible material.
To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers
Keep container tightly closed and dry.
Store at room temperature in the original container.

Further information on storage conditions
Store in original container.

Storage stability
Stable under recommended storage conditions.

7.3 Specific end use(s)
No further recommendations.

8. Exposure Controls/Personal Protection

8.1 Control Parameters
Exposure limit values
Exposure limit values are not available.

Components	N. CAS	Type of value (Type of exposure)	Control parameters	Source
Alumina	1344-28-1	TWA (Respirable fraction)	1 mg/m^3 (alumina)	ACGIH
Copper manganese oxide	12175-02-9	TWA (Inhalable fraction)	0,1 mg/m^3 (Manganese)	ACGIH
		TWA (Respirable fraction)	0,02 mg/m^3 (Manganese)	ACGIH
Dimanganese trioxide	1317-34-6	TWA (Inhalable fraction)	0,1 mg/m^3 (Manganese)	ACGIH
		TWA (Respirable fraction)	0,02 mg/m^3 (Manganese)	ACGIH

The Derived No-Effect Level (DNEL) according to CE Regulation Num. 1907/2006:

Name of substance	Use	Type of exposure	Potential health consequences	Value
Alumina N.CAS: 1344-28-1	Workers	Inhalation	Long-term local effects	15,63 mg/m^3
Observations:	DNEL			
	General population	Ingestion	Long-term systemic effects	3,29 mg/Kg p.c./day
Observations:	DNEL			

The Predicted No Effect Concentration (PNEC) according to CE Regulation Num. 1907/2006:

Name of substance	Environmental compartment	Value
Alumina N.CAS: 1344-28-1	Fresh water	0.0749 mg/l
	Sewage treatment plant	20 mg/l

8.2 Exposure controls

Appropriate engineering controls
In case of formation of dust:
Local exhaust

Respiratory protection: Suitable mask with particle filter P3 (European Norm 143) Applicable national Regulations must be observed. Take note of the limitations regarding wear-time, in conjunction with the Regulations for the use of Respiratory Protective Equipment.

Hand protection: Chemical resistant gloves
These types of protective gloves are offered by various manufacturers. Please note the manufacturers´ detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.

Eye protection: Safety glasses with side-shields

Body protection: Working clothes

9. Physical and Chemical properties

Information on basic physical and chemical properties

Physical state: solid
Color: not specified
Odor: odorless
Particle size: not tested.
Odour threshold: not tested.
pH value: 8,1 aqueous dispersion
Melting point: > 300 °C
Boiling point: Not determined
Flash point: Not applicable
Evaporation rate: Not applicable

Lower explosion limit:	Not applicable
Upper explosive limit:	Not applicable
Combustion number:	n.b. not tested
Minimum ignition energy:	not determined
Vapour pressure:	Not applicable
Vapour density relative to air:	not determined
Relative Density:	not determined
Solubility in water:	0,00005 g/l
Octanol/water partition coefficient (log Pow):	not determined
Ignition temperature:	Not applicable
Self-ignition temperature:	not tested.
Thermal decomposition:	> 600°C
Viscosity (dynamic):	cannot be determined
Viscosity (kinematic):	cannot be determined
Explosive properties :	Explosive according to EU supply regulations : Not explosive Method : Expert judgement
Oxidizing properties:	Type of oxidizing effect : The substance or mixture is not classified as oxidizing.
Method:	Expert judgement

9.2 Other information

Density:	not tested.
Surface tension:	Not applicable
Minimum ignition energy:	not determined
Particle size:	not determined
Self-ignition:	not determined

10. Stability and Reactivity

Reactivity:	Stable
Chemical Stability:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions:	No dangerous reaction known under conditions of normal use.
Conditions to avoid:	Exposure to moisture (hygroscopic). Elevated temperatures
Incompatible materials:	Strong acids Strong bases

Hazardous decomposition products: No decomposition if stored and applied as directed.

11. Toxicological Information

11.1. Information on toxicological effects

Information related to the product itself:

Acute oral toxicity:	not tested.
Acute dermal toxicity:	not tested.
Acute inhalation toxicity:	not tested.
Irritant effect on skin:	not tested.
Irritant effect on eyes:	not tested.
Sensitization:	not tested.
Repeated dose toxicity:	not tested.
Genetic toxicity in vitro:	not tested.
Assessment of mutagenicity:	No information available.
Carcinogenicity:	not tested.
Assessment of carcinogenicity:	No information available.
Developmental toxicity/teratogenicity:	not tested.
Toxicity to reproduction/fertility:	not tested.
Assessment of toxicity to reproduction:	No information available.
Assessment of teratogenicity:	No information available.

Remarks

The product itself has not been tested.

The classification was made by the conventional (calculation) method of the CLP Regulation (EC) No 1272/2008.

12. Ecological Information

12.1. Toxicity

Information related to the product itself:

Fish toxicity:	not determined.
Daphnia toxicity:	not determined.
Algae toxicity:	not determined.
Bacteria toxicity:	not determined.
Toxicity to soil-dwelling organisms:	not determined.
Toxicity to terrestrial plants:	not determined.
Toxicity to other environmentally relevant organisms:	not determined.
Sediment toxicity:	not determined.

12.2. Persistence and degradability

Information related to the product itself:

Physico-chemical eliminability:	not determined.
Photodegradation:	not determined.
Biodegradability:	This property is substance-specific and therefore cannot be given for the preparation.
Dissolved Organic carbon (DOC):	not available
Chemical oxygen demand (COD):	not available
Biochemical oxygen demand (BOD5):	not available

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12.3. Bioaccumulative potential

Information related to the product itself:

Bioaccumulation:	not determined.

12.4. Mobility in soil

Information related to the product itself:

Behaviour in environmental compartments:	no data available

12.5. Results of PBT and vPvB assessment

Information related to the product itself:	this substance / mixture does not contain components considered to be either persistent, bioaccumulative and toxic (PBT) or very perishable and very bioaccumulative (vPvB) at concentrations of 0.1% or higher

12.6. Other adverse effects

Information related to the product itself:

Behavior of the substance in the environment:	no data available

Additional ecotoxicological remarks

The product itself has not been tested.
According to the Conventional Method of Directive 1999/45/EC, this product should not be classified as Dangerous for the Environment.
The product should not be allowed to enter drains, water courses or the soil.
Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods

Product

Used catalysts may have different hazards or properties than the original product. This SDS does not apply to used catalysts.
Product should be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator and/or the competent Authorities

Uncleaned packaging

Contaminated packaging material should be treated equivalent to residual chemicals. Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation.

14. Transport Information

Section 14.1. to 14.5.

ADR	not restricted
AND	not restricted
RID	not restricted
IATA	not restricted
IMDG	not restricted

14.6. Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code (International Bulk Chemicals Code)

No transport as bulk according IBC - Code.

15. Regulatory information

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

REACH - list of substances that are extremely problematic candidates for authorization (Article 59): not applicable

Regulation (CE) n°1005/2009 on substances that deplete the ozone layer: not applicable

Regulation (CE) n°850/2004 on regulation on persistent organic pollutants: not applicable

Other regulations
Italian general rules: D.Lgs. 81 April 9 2008,DPR 1124 of 30/06/1965, ministerial circular 46 of 12/06/1979, ministerial circular 61 of 04/06/1981, D.Lgs. 52 of 03/02/1997, D.Lgs. 65 of 14/03/2003, D.Lgs of April, 3 2006. Community rules of a general nature: Regulation (CE) n° 1907/2006 (REACH) and n° 1272/2008 (CLP), Directives 67/548/CEE of 27/06/67, 1999/45/CE of May, 31 1999 and 89/391/CEE of 12/06/89.

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

16. Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation,

Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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