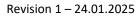


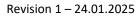


| IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE COMPANY | | | | | | |
|---|--|---|--|---|--|--|
| 1.1 | Product identifier | | | | | |
| | Commercial name Pr | oduct code | | | | |
| | PTA CATALYST 328 | | | | | |
| 1.2 | Relevant identified uses of the mixure and adviced uses | | | | | |
| | Industrial use. Catalyst for synthe | sis | | | | |
| | No particular use advised against | | | | | |
| 1.3 | Information on the supplier of th | e safety data sheet | | | | |
| | Name | FAGGI ENRICO S.P | .A. | | | |
| | Adress | Via Majorana, 101 | /103 50019 Sesto Fi | orentino FI | | |
| | Telephone number | 055311861 | | | | |
| | Fax number | 055311791 | | | | |
| | Competent person responsible | lorenzo.magaldi@ | faggi.it | | | |
| | | | | | | |
| 1.4 | · | | | | | |
| | | n England, in Scotlar | nd (NHS 24) and in W | /ales (NHS Direct | | |
| | Wales) | 0 , | , | , | | |
| 1.5 | Registration number | | | | | |
| | - | able for this product | as it is a mixture | | | |
| | HAZARDS IDENTIFICATION | <u> </u> | | | | |
| 2.1 | | cording to Regulation | on (EC) no. 1272/200 |)8 | | |
| | | | (=0, ==: =, =0 | | | |
| 2.2 | - | | | | | |
| | 1 | | | | | |
| 2.3 | 11 | Under certain co | nditions, the mixture | e of coal dust and | | |
| | | | air can give rise to an explosive atmosphere. Damp | | | |
| | | _ | coal removes oxygen from the air, causing serious | | | |
| | | | | - | | |
| | | | ,0 | | | |
| | COMPOSITION INFORMATION O | N INGREDIENTS | | | | |
| 3.1 | Mixure | | | | | |
| | Product identifier | Concentration | Concentration Classification | | | |
| | | % | | | | |
| | | | Dangerous class | Category codes | | |
| | Active Carbon | 99.2 ≤ C ≤ 99.8 | None | None | | |
| | CAS 7440-44-0 | | | | | |
| | N. Reach: 01-2119488894-16 | | | | | |
| | | | | | | |
| | Palladium | 0.2 ≤ C ≤ 0.8 | None | None | | |
| | CAS 7440-05-03 | | | | | |
| | N. Reach 01-2120140175-66-XXX | X | | | | |
| | FIRST AID MEASURES | | | | | |
| 4.1 | Description of first aid measures | | | | | |
| | - | | n air. If breathing is o | lifficult, call a | | |
| | | | 3.0 | , | | |
| | | ely and drink two gla | asses of water. | | | |
| | Skin contact: Remove contaminated clothing and shoes and wash immediately and | | | | | |
| | abundantly with water for at least 15 minutes. Get medical attention if irritation occurs. | | | | | |
| | | _ | | • | | |
| | 1.1 1.2 1.3 1.4 1.5 2.1 2.2 2.3 | 1.1 Product identifier Commercial name | 1.1 Product identifier Commercial name | 1.1 Product identifier Commercial name Product code PTA CATALYST 328 1.2 Relevant identified uses of the mixure and adviced uses Industrial use. Catalyst for synthesis No particular use advised against. 1.3 Information on the supplier of the safety data sheet Name FAGGI ENRICO S.P.A. Adress Via Majorana, 101/103 50019 Sesto Fi Telephone number 055311861 Fax number 055311861 Fax number 055311791 Competent person responsible for the safety data sheet 1.4 Emergency telephone number 111 - Medical helpline operating in England, in Scotland (NHS 24) and in Wales) 1.5 Registration number A registration number is not available for this product as it is a mixture HAZARDS IDENTIFICATION 2.1 Classification of the substance according to Regulation (EC) no. 1272/200 Not dangerous 2.2 Label elements Not applicable Other hazards Under certain conditions, the mixture air can give rise to an explosive atmos coal removes oxygen from the air, can dangers for people in low oxygen employees a coal removes oxygen from the air, can dangers for people in low oxygen employees a coal removes oxygen from the air, can dangers for people in low oxygen employees a coal removes oxygen from the air, can dangers for people in low oxygen employees a coal removes oxygen from the air, can dangers for people in low oxygen employees a coal removes oxygen from the air, can dangers for people in low oxygen employees a coal removes oxygen from the air, can dangers for people in low oxygen employees a coal removes oxygen from the air, can dangers for people in low oxygen employees a coal removes oxygen from the air, and any or can remove for the safety data sheet Palladium Ox2 ≤ C ≤ 0.8 None CAS 7440-05-03 N. Reach 01-2120140175-66-XXXX FIRST AID MEASURES Jescription of first aid measures Inhalation: Remove from exposure and breathe fresh air. If breathing is can be a facility of the safety data sheet 1.4 Description of first aid measures Inhalation: Remove from exposure and breathe fresh air. If breathing is can be a facility of the safety data | | |



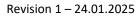


| | | | - | tact lenses. Wash immediately with | • | | |
|----|--|---|--|---|-----------------------|--|--|
| | | at least 15 minutes, opening the eyelids well. Consult a physician if the problem problem processes at least 15 minutes, opening the eyelids well. Consult a physician if the problem | | | | | |
| | | | | | | | |
| | | | ed to see a doctor immediate | • | NO | | |
| | | • Po | ssibility of delayed effects foll | lowing exposure | NO | | |
| | | • Mo | • | om the place of exposure to open | NO | | |
| | | • Re | move clothing and shoes of th | ne exposed individual | YES | | |
| | | | to handle contaminated cloth | | | | |
| | | • Fo | r those providing first aid, wea | ar PPE | YES | | |
| | 4.2 | | mportant symptoms and effec | | | | |
| | | | · · · · · · · · · · · · · · · · · · · | ation can cause irritation due to the | ne abrasive action of | | |
| | | the dus | • | | | | |
| | 4.3 | Indicat | ion of any need to immediate | ly consult a doctor and special tre | atments | | |
| | | | cific provisions are known. | • | | | |
| 5. | | | GHTING MEASURES | | | | |
| | 5.1 | Fire fig | hting | | | | |
| | | | | water spray, foam | | | |
| | | | | dust | | | |
| | 5.2 | | hazards arising from the subs | stance or mixture | | | |
| | | | | ain conditions, coal dust/air mixture | es can produce an | | |
| | | | _ | of dust explosion if the following c | • | | |
| | | - The substance exists in a very finely distributed form (dust, powder). | | | | | |
| | - The substance exists in a very linely distributed form (dust, powder). - The substance is thrown into the air in sufficient quantities. | | | | | | |
| | | | An ignition source is present (flame, spark, electrostatic discharge, etc.). | | | | |
| | 5.3 | Special | recommendations for firefigh | nters | | | |
| | | Avoid r | aising dust clouds. Normal fire | -fighting clothing, such as self-cont | tained open-circuit | | |
| | | compre | essed air breathing apparatus (| (EN137), flame retardant suit (EN46 | 69), flame retardant | | |
| | | gloves | (EN659) and firefighter boots (| (HOA29 or A30) | | | |
| 6. | | ACCIDE | NTAL RELEASE MEASURES | | | | |
| | 6.1 | Person | al precautions, protective equ | ipment and emergency procedure | es | | |
| | | 6.1.1. | For those who do not interven | ene directly | | | |
| | | | Move away in case of dust fo | ormation | | | |
| | | 6.1.2. | For those who intervene dire | ectly | | | |
| | | | In case of dry product, use re | ry product, use respiratory protection devices (filter mask P2) and dust- | | | |
| | | | proof gloves. | | | | |
| | 6.2 | Enviro | nmental precautions | | | | |
| | | No spe | cific provisions are required | | | | |
| | 6.3 Methods and materials for containment and cleaning up | | | | | | |
| | | 6.3.1. | Recommendations on how t | to contain a spill | | | |
| | | | Collect the dispersed product and wash the residue with plenty of water. | | | | |
| | | 6.3.2. | Recommendations on how to | | | | |
| | | | | must not be discharged into the se | wers. Dispose of | | |
| | | | the contaminated water used for extinguishing and the residue of the fire | | | | |
| | | | | ions. To avoid dust formation, spra | | | |
| | | | cleaning. | • | | | |
| | | 6.3.3. Any other information | | | | | |
| | | | None | | | | |



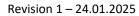


| | 6.4 | References to other sections | | | | |
|----|------|------------------------------|---|--|--|--|
| | | None | | | | |
| 7. | | HANDLING AND STORAGE | | | | |
| | 7.1. | | | | | |
| | | 7.1.1. | Recommendations that allow the substance or mixture to be handled safely, such as containment and prevention measures for fires and for the formation of aerosols and dusts | | | |
| | | | Avoid raising dust clouds especially in the presence of possible sources of ignition. Moist activated carbon removes oxygen from the air, causing serious dangers for people who are in environments with a low oxygen level. Appropriate work procedures must be followed for operations in low oxygen potential environments. | | | |
| | | 7.1.2. | Generic recommendations on occupational hygiene | | | |
| | | | Do not eat, drink and smoke in work areas. Wash your hands after use. Remove | | | |
| | | | contaminated clothing and protective equipment before entering eating areas | | | |
| | 7.2. | | Conditions for safe storage, including any incompatibilities | | | |
| | | 7.2.1. | Management of risks associated with explosive atmospheres, corrosive conditions, flammability hazards, incompatible substances and mixtures, evaporation conditions, potential sources of ignition | | | |
| | | | Store in closed original container | | | |
| | | 7.2.2. | Containment of the effects of weather conditions, pressure, temperature, sunlight, humidity and vibrations | | | |
| | | | Store in closed original closed container. | | | |
| | | 7.2.3. | Conditions for keeping substances / mixtures intact | | | |
| | | 7.2.3. | | | | |
| | | | Keep away from oxidizing substances, unsaturated oils, gases or vapors, direct heat | | | |
| | | 724 | | | | |
| | | 7.2.4. | sources, open flames, other ignition sources and direct sunlight. Provisions relating to ventilation, specific design of storage rooms or containers, quantitative limits in storage conditions, compatibility of packaging | | | |
| | | | None in particular | | | |
| | 7.3. | | Specific end uses | | | |
| | | | Industrial use. Catalyst for synthesis | | | |
| 8. | | | EXPOSURE CONTROL / PERSONAL PROTECTION | | | |
| | 8.1. | | Control parameters | | | |
| | | | No occupational and biological exposure limits have been established for this mixture. The limit values established for the contained substance are listed below | | | |
| | | | Activated carbon EU - Indicative Occupational Exposure Limit Value (IOEL TWA): | | | |
| | | | 1 mg/m3 (respirable dust) DNEL | | | |
| | | | Workers Short term systemic effects, inhelation, 1.94 mg/m² | | | |
| | | | Short-term systemic effects – inhalation: 1.84 mg/m3 Long-term local effects – inhalation: 1.84 mg/m3 | | | |
| | | | General population | | | |
| | | | Short-term systemic effects – inhalation: 0.9 mg/m3 | | | |
| | | | Long-term local effects – inhalation: 0.9 mg/m3 | | | |
| | | | PNEC | | | |
| | | | Soil: 10 mg/kg dry weight of soil | | | |
| | | <u>Palladium</u> | | | | |
| | | | Pag 3 di 3 | | | |



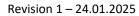


| | | | DNEL | | | | |
|-----|------------------------------|--------|--|--|--|--|--|
| | | | No hazard identified | | | | |
| | | | PNEC | | | | |
| | | | No hazard identified | | | | |
| | 8.2. | | Exposure controls | Exposure controls | | | |
| | | 8.2.1. | Appropriate technical controls | | | | |
| | | | In the wet form, with low du | ıstiness, no risk mar | nagement measures are required | | |
| | | 8.2.2. | Individual protection measu | ures, such as persor | nal protective equipment | | |
| | | | Eye / face protection | • | protections compliant with Directive andard EN166:2001 | | |
| | | | Skin protection (hands) | Gloves of any type | | | |
| | | | Skin (body) protection | Work clothing | | | |
| | | | Respiratory protection | In the wet form, with low dustiness, no risk management measures are required. | | | |
| | | | Thermal hazards | None | | | |
| | | 8.2.3. | Environmental exposure co | | | | |
| | | 0.2.3. | Emissions from manufacturi | | ling those from ventilation | | |
| | | | equipment, should be contr | • | e with environmental protection | | |
| | | | legislation. | | | | |
| 9. | | | PHYSICAL AND CHEMICAL PROPERTIES | | | | |
| | 9.1 | | Information on basic physical and chemical pro | | 1 | | |
| | | | Appearance | | Black wet powder | | |
| | | | Smell | | Odorless | | |
| | | | Odor threshold | | Not applicable | | |
| | | | рН | | 6-7 at 50 g / I 20 ° C (dough) | | |
| | | | Melting point / freezing point | | Not applicable | | |
| | | | Initial boiling point and boili | ng range | Not applicable | | |
| | | | Flash point | | Scientifically not justified studies | | |
| | | | Evaporation rate | | Not applicable | | |
| | | | Flammability (solid, gas) | | Flammable in the dry state | | |
| | | | Upper / lower flammability or explosive limits | | Check section 5.2 | | |
| | | | Vapor pressure | | Not applicable | | |
| | | | Vapor density | | Not applicable | | |
| | | | Relative density (in solid form) | | 2.31 g / cm3 | | |
| | | | The solubility (ies) | | Insoluble | | |
| | Partition coefficient n-octa | | | ol / water | Not applicable | | |
| | | | Self-ignition temperature | | Data not available | | |
| | | | Decomposition temperature | | Not applicable | | |
| | | | Viscosity | | Not applicable | | |
| | | | Explosive properties | | Clouds or dust in confined spaces | | |
| | | | | | can give rise to explosive | | |
| | | | 0.11.1 | | atmospheres | | |
| | 0.0 | | Oxidizing properties | | Not oxidizing | | |
| | 9.2. | | Other information | | | | |
| 4.0 | | | None STARWAND REACTIVITY | • | | | |
| 10. | 45: | | STABILITY AND REACTIVITY | • | | | |
| | 10.1 | | Reactivity | | | | |
| | | | Catalytic properties | | | | |



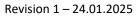


| | 10.2 | Chemical stability | | | |
|-----|------|---|---|--|--|
| | | This product does not exhibit reactivity under the specified conditions of storage, | | | |
| | | shipping and use. | | | |
| | 10.3 | Possibility of hazardous reactions | | | |
| | | Flammable in the dry state | | | |
| | 10.4 | Conditions to avoid | | | |
| | | Do not allow the material to dry components material. | pletely. Do not store together with oxidizing | | |
| | 10.5 | Incompatible materials | | | |
| | | Keep away from strong oxidizing ager | nts | | |
| | 10.6 | Hazardous decomposition products | | | |
| | | CO, CO ₂ | | | |
| 11. | | TOXICOLOGICAL INFORMATION | | | |
| | 11.1 | Information on the toxicological effe | cts of aluminum oxide | | |
| | | Acute toxicity | Oral: Acute toxicological classification | | |
| | | | method (OECD 423): LD50 >2000 mg/kg (rat) | | |
| | | | Inhalation: Based on available data, the | | |
| | | | classification criteria are not met | | |
| | | | Skin: Absorption highly unlikely. There are | | |
| | | | no known health effects | | |
| | | Skin corrosion / irritation | Based on available data, the classification | | |
| | | | criteria are not met | | |
| | | Serious eye damage / eye irritation | Based on available data, the classification | | |
| | | | criteria are not met | | |
| | | Respiratory or skin sensitization | Based on available data, the classification | | |
| | | | criteria are not met | | |
| | | Germ cell mutagenicity | Based on available data, the classification | | |
| | | | criteria are not met | | |
| | | Carcinogenicity | Based on available data, the classification | | |
| | | | criteria are not met | | |
| | | Toxic for reproduction | Based on available data, the classification | | |
| | | | criteria are not met | | |
| | | Specific target organ toxicity (STOT) | Based on available data, the classification | | |
| | | single exposure | criteria are not met | | |
| | | Specific target organ toxicity (STOT) | Based on available data, the classification | | |
| | | repeated exposure | criteria are not met | | |
| | | Aspiration hazard | Based on available data, the classification | | |
| | 11.3 | Oth suits former time | criteria are not met | | |
| | 11.2 | Other information | | | |
| 12 | | None FSOLOGICAL INFORMATION | | | |
| 12. | 13.1 | ECOLOGICAL INFORMATION | New taxia The minture is highly | | |
| | 12.1 | Toxicity | Non-toxic. The mixture is highly | | |
| | | | insoluble in water and unlikely to cross | | |
| | 12.2 | Persistence and degradability | biological membranes. The substance is a refractory material | | |
| | 14.4 | reisistence and degradability | and not subject to decomposition by any | | |
| | | | natural enzymatic or chemical process. | | |
| | 12.3 | Bioaccumulation potential | The mixture is not bioaccumulative | | |
| | 12.4 | Mobility in soil | Not pertinent data | | |
| | 12.5 | Results of PBT and vPvB assessment | Not applicable | | |
| | 12.3 | ACSUITS OF FOLKING ALACASSIIICHT | Pag. 5 di | | |





| | 12.7 | | Other adverse effects | | | |
|-----|-------|------|--|------------------|--|--|
| 13. | | | DISPOSAL CONSIDERATIONS | | | |
| | 13.1. | | Waste treatment methods | | | |
| | | | Both the mixture and the packaging must be sent to plants authorized for the | | | |
| | | | disposal of industrial waste | | | |
| 14. | | | INFORMAZION ON TRASPORT | | | |
| | | | Not subject to ADR regulations. | | | |
| | | | Steam-activated carbon is used for the preparation of this mixture | and is therefore | | |
| | | | not classified as a dangerous good. Reference of special provision | ADR 646. | | |
| 15. | | | REGULATORY INFORMATION | | | |
| | | 15.1 | Health, safety and environmental legislation and regulations | Applicability | | |
| | | | specific to the substance or mixture | | | |
| | | | Reg. (EC) 1907/2006 / EC Reach | YES | | |
| | | | Reg. (EC) 1272/2008 CLP and following changes and additions | YES | | |
| | | | Reg. (CE) 2037/2000 "Substances that deplete the ozone layer" | NO | | |
| | | | Reg. (EC) 850/2004 "Persistent organic pollutants" | NO | | |
| | | | Reg. (EC) 689/2008 "export and import of dangerous chemicals" | NO | | |
| | | | Substance listed in Annex I of Dir. 2012/18 / EU so-called Seveso | NO | | |
| | | | Legislative Decree 81/2008 Consolidated Law on health and safety at work | YES | | |
| | | | Directive 2014/103 / EU "Adr" | NO | | |
| | | 15.2 | Chemical safety assessment | | | |
| | | 23.2 | A chemical safety assessment was not carried out | | | |
| 16. | | | OTHER INFORMATION | | | |
| | | | Changes compared to previous edition | | | |
| | | | First revision | | | |
| | | | Key to abbreviations and acronyms | | | |
| | | | ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road | | | |
| | | | GHS: Globally Harmonized System of Classification and Labeling of Substances | | | |
| | | | EINECS: European Inventory of Chemical Substances | | | |
| | | | CAS: Chemical Abstract Service | | | |
| | | | STA: Acute Toxicity Estimate | | | |
| | | | PBT: Persistent, Bioaccumulative and Toxic. | | | |
| | | | vPvB: (very persistent and very bioaccumulative). Very persistent | and very | | |
| | | | bioaccumulative | | | |
| | | | LD: lethal dose | | | |
| | | | PNEC: predicted no effect concentration | | | |
| | | | DNEL: derived no effect level | | | |
| | | | TLV (ceiling value): threshold limit value | | | |
| | | | STEL: short-term exposure limit | | | |
| | | | EU-OEL: European occupational exposure limit | | | |
| | | | TWA: time-weighted average | | | |
| | | | EC: effective concentration | | | |
| | | | NOAEL: no observed adverse effect level | | | |
| | | | LC: lethal concentration | | | |
| | | | NOEC: no observed effect concentration | | | |





| LOEC: lowest observed effect concentration |
|---|
| Bw: body weight |
| Koc: organic carbon-water partition coefficient |
| Main bibliographic references and data sources |
| ECHA database on registered substances and those under registration: |
| http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances |
| Indication, for mixtures, of which methods of evaluation of the information have |
| been used for the purposes of classification |
| Classification: Non dangerous |
| Classification procedure: Calculation method |
| Adequate training for workers in order to ensure the protection of human health |
| and the environment |
| Training on Chemical Risk pursuant to Legislative Decree 81/08 Title IX dangerous |
| substances |
| Training on PPE |
| |