

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: Praseodymium oxide file (CAS # 12037-29-5)
FROM: Gary Butterfield
DATE: July 29, 2005
SUBJECT: Screening level for Praseodymium oxide

Praseodymium oxide has a molecular formula of Pr₆O₁₁. Praseodymium oxide has a molecular weight of 1021.4 g/mol.

The following references or databases were searched to identify data to determine the screening level: U.S. Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS), National Institute for Occupational Safety and Health (NIOSH) Registry for Toxic Effects of Chemical Substances (RTECS), American Conference of Governmental and Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), Michigan Department of Environmental Quality (DEQ) library, International Agency for Research on Cancer (IARC) Monographs, Chemical Abstract Service (CAS) Online (1968-July 2005), National Library of Medicine (NLM) - Toxline, and National Toxicology Program (NTP) Status Report.

The CAS and NLM online literature searches were conducted on July 14, 2005. A few toxicity studies on this chemical were located during the literature search. However, these studies were by an inappropriate route of exposure-i.e. injection – for the purpose of calculating a screening level. For this metal oxide, it is also considered inappropriate to use non-inhalation route of exposure-i.e. oral- to use as the basis to calculate an ITSL. Many metal oxides cause adverse effects in the respiratory tract when inhaled. These adverse effects are not seen in oral route studies. Making it logical to conclude that oral route of exposure studies are inappropriate to use as the basis for setting a screening level.

Due to a lack of available toxicity data by the inhalation route of exposure, the ITSL for praseodymium oxide is being set at the default value of 0.1 µg/m³ with annual averaging under R232(i).

GB: LH