



DEFENSE LOGISTICS AGENCY
DEFENSE NATIONAL STOCKPILE CENTER
8725 JOHN J. KINGMAN ROAD, SUITE 3229
FT. BELVOIR, VIRGINIA 22060-6223

IN REPLY
REFER TO DNSC-C2

March 12, 2003

Dear Prospective Chromite Customer:

On Thursday, April 24, 2003 at 1:00 PM, local time, the Defense Logistics Agency, Defense National Stockpile Center (DNSC), will open and consider offers for the sale of 192,244 Short Dry Tons (SDT) of chromite ore in fiscal year 2003, of this quantity 85,618 SDT are chemical grade and 106,626 SDT are refractory grade. This material is being offered under Solicitation of Offers **DLA-Chromite, Chemical & Refractory Grades-003**.

To clarify the bidding process with the objective of accepting all offers, DNSC encourages all potential Offerors to thoroughly review DLA-Chromite, Chemical & Refractory Grades-003, paying particular attention to the following list of requirements:

1. **Fill in and complete I.1 Sale of Government Property and Award, I.2 Item Offer Page**, and all Certifications under this solicitation in **Sections I.3 through I.9**.
2. Please review the Certifications (Sections **I.4 through I.6**) carefully, particularly Section I.4 **Certificate of Independent Price Determination**. Offers cannot be discussed among Offerors, and all offer prices must be developed independently. **ALL** sections must be completed and submitted with your offer.
3. In addition DNSC requires a recent income statement and balance sheet for the company and any other documentation that will verify the financial level of business transactions. DNSC will establish a financial exposure limit for each Offeror. Please review Financial Exposure Limit, Section A.3. **DLA-Chromite, Chemical & Refractory Grades-003**

Thank you for your interest in the DNSC's chromite sales program. Should you have any questions or concerns regarding the sale of chromite please contact Danny Lester at 703-767-5482.

Sincerely,

/S/

RICHARD A. TALBOTT
Contracting Officer

Issued: March 12, 2003

DLA-CHROMITE, CHEMICAL & REFRACTORY GRADES-003

**SOLICITATION OF OFFERS
FOR
CHROMITE, CHEMICAL & REFRACTORY GRADES ORE**



*Defense Logistics Agency
Defense National Stockpile Center
8725 John J. Kingman Road, Suite 3229
Fort Belvoir, VA 22060-6223*

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SECTION A - SOLICITATION

A.1 Introduction (SEP 02)

- a. The Defense Logistics Agency (DLA), Defense National Stockpile Center (DNSC), is soliciting offers for the sale of approximately 192,244 Short Dry Tons (SDT) of chromite ore in Fiscal Year 2003. Of this quantity 85,618 SDT are chemical grade and 106,626 SDT are refractory grade. Offerings will be held at 1:00 p.m., local time, on the fourth Thursday of each month at Fort Belvoir, VA. **The initial offering will be held at 1:00 p.m., local time, Ft. Belvoir, VA, on Thursday, April 24, 2003.** Offers must be received at the address in Section B.2.a. by 1:00 p.m., local time, Fort Belvoir, VA. In the event that the fourth Thursday of any month is a holiday, or DNSC is otherwise closed at that time, offers for that day will be received at 1:00 p.m. on the next DNSC business day.
- b. Handling and outloading will be performed by and at the expense of the Contractor.

A.2 Description (JAN 95)

- a. A description of the material offered for sale is listed in **J.1 Analysis** and **I.2 Item Offer Page-DLA-CHROMITE, CHEMICAL & REFRACTORY GRADE-003**. The material is located at the storage location specified in **J.2 Storage Locations**.
- b. Government analysis indicate that the material conforms to the data listed in Section I.2, and Section J.1; **however, no warranty or guarantee is made that the material so conforms or that it will be suitable for any particular purpose.**

A.3 Financial Exposure Limit (MAR 02)

- a. The Defense National Stockpile Center (DNSC) will establish a financial exposure limit (maximum level of business DNSC will allow) for each Offeror. The financial exposure limit shall be determined based upon the following:
 1. Financial Position of the Offeror
 2. Past Performance
 3. References (Suppliers, Financial Institutions)
 4. Credit Reports
- b. If the Contractor reaches its financial exposure limit, subsequent sales will cease until such time as the Contractor satisfactorily performs existing contracts or the Government increases the exposure limit.

A.4 Foreign Trade Statistics Regulations (MAR 02)

- a. The Contractor shall determine any export license requirements, obtain any export license or other official authorization required for export, and carry out any U.S. Customs formalities for the export of any material awarded under this Solicitation.
- b. The Contractor shall comply with United States Bureau of Export Administration Foreign Trade Statistics and Export Administration Regulations as set forth in 15 CFR Parts 30 and 732 (as amended by 65 FR 42556-42575, July 10, 2000 or any subsequent rule making).
- c. If the Contractor is not a United States domestic entity or does not have a physical presence in the United States, and the material is to be exported, the Contractor shall either --
 1. Engage a United States forwarding agent or other agent in accordance with 15 CFR 30.4(a) and (c); or
 2. Engage a United States Order Party, in accordance with 15 CFR 30.4(a)(1)(iii), to conduct all negotiations, correspondence, and arrangements for sale, and to arrange for export of the material purchased.
- d. The Defense National Stockpile Center shall not be named as the United States Principal Party in Interest and will not execute any Shipper's Export Declaration required by the Foreign Trade Statistics regulations.

SECTION B – PREPARATION AND SUBMISSION OF OFFERS

B.1 Submittals (SEP 02)

Offerors shall submit all of the following documents along with the offer unless otherwise noted:

- a. **Section I.1 Sale of Government Property Negotiated Sales Contract (JAN 03)** with the section entitled “Execution by Contractor” completed.
- b. **Section I.2, Item Offer Page – DLA-CHROMITE, CHEMICAL & REFRACTORY GRADES-003 (JAN 03)** with (1) Unit Price Per SDT; (2) Quantity; (3) Total offer; (4) Company Name; (5) Signature; (6) Name and Title; and (7) Date blocks completed.
- c. **Section I.3 Anticipated Removal Schedule (JAN 03)**
- d. **Section I.4, Certificate of Independent Price Determination (JAN 01).**
- e. **Section I.5, Certification Regarding Debarment, Suspension, Proposed Debarment, Environmental Compliance and Other Responsibility Matters (JUL 97).**
- f. **Representations, Certifications and Identifications at Section I.4 through I.9.** Offerors please note: If Annual Representations, Certifications and Identifications have previously been submitted they need not be resubmitted. However, **I.4 Certificate of Independent Price Determination and I.5 Certification Regarding Debarment, Suspension, Proposed Debarment, Environmental Compliance and Other Responsibility Matters shall be submitted with each offer.**
- g. Copies of the most recent income statement and balance sheet for the company and any other documentation that will verify the financial level of business transactions; e.g., a list of references. DNSC may require the Contractor to submit updated information at any time.
- h. Offerors shall submit financial documentation to the following address/facsimile number:

Attn: DNSC-C2, Chromite Contract Specialist
Defense National Stockpile Center
8725 John J. Kingman Rd., Suite 3229
Fort Belvoir, VA 22060-6223
Fax: (703) 767-5494

- i. Any other terms the Offeror wishes to negotiate. (See Section **B.7**)

B.2 General Information (JUL 97)

- a. Facsimile offers and modifications will be accepted in accordance with Section **B.6**. Offers may also be submitted by mail or hand delivered enclosed in a sealed envelope and addressed to:

ATTN: DNSC-R (Bid Custodian)
Defense National Stockpile Center
8725 John J. Kingman Road
Suite 3229
Fort Belvoir, Virginia 22060-6223
Facsimile No: (703) 767-5541

Place the name and address of the Offeror in the upper left corner and the following information in the lower left corner on the face of the envelope:

SOLICITATION OF OFFERS
DLA-CHROMITE, CHEMICAL & REFRACTORY GRADE-003

- b. The Offeror agrees, if its offer is accepted by the Government within **twenty (20)** working days from the date specified in the Solicitation for receipt of offers, to purchase any or all material on which offers are made at the price offered and to take delivery of the material within the time specified in the executed **Section I.1 Sale of Government Property Negotiated Sales Contract (JAN 03)**.
- c. Unless a designation of agent is on file at DNSC, an Offeror submitting an offer as agent for another party shall submit written proof, either prior to or with the offer, that it is authorized to act as agent and shall tender the offer in the name of the principal.

B.3 Minimum/Maximum Quantity (JAN 95)

Offers shall be submitted for a minimum of 500 SDT unless a smaller amount is all that is available for that line item.

B.4 Submission of Offers (JAN 95)

Offers for chromite, ore may be submitted as follows:

- a. Whole pile accepting the Government's weights and analysis of record for final settlement. A Government representative will witness outloading to ensure all material is removed and the site is left in satisfactory condition.
- b. A portion of the pile, accepting the material as SDT with the analysis of record used for final payment. Offeror shall, at its expense, weigh the material on an approved and certified scale and have the material analyzed for moisture by an independent sampler/analyst. A Government representative will witness all weighing, sampling, and outloading to ensure accuracy of weights and that all material is removed and the site is left in satisfactory condition.
- c. A whole pile or portion of a pile, accepting the material by short ton unit (STU). Offeror shall, at its expense, weigh the material on an approved and certified scale and have the material sampled and analyzed for moisture and chromic oxide content by an independent sampler/analyst. Analysis for chromic oxide content is required if the offer is submitted in short ton units. A Government representative will witness all weighing, sampling and outloading to ensure accuracy of weights and that all material is removed and site is left in satisfactory condition.

B.5 Late Submissions, Modifications, and Withdrawals of Offers (NOV 00)

- a. Offerors are responsible for submitting offers, and any revisions, and modifications, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. Offerors may use and transmission method authorized by the solicitation (i.e., regular mail, electronic commerce or facsimile).
- b. (1) Any offer, modification, or revision, that is received at the designated Government office after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the sale and—
 - (i) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of offers; or
 - (ii) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or
 - (iii) It was the only offer received.
- (2) However, a late modification of an otherwise successful offer, that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

- c. Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of the installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.
- d. If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the Government office designated for receipt of offers by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation closing date, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.
- e. Offers may be withdrawn by written notice at any time before award. If the solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before award. Offers may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the offer before award.
- f. Offerors may submit modifications to their offer at any time before closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.
- g. The Contracting Officer must promptly notify any offeror if its offer, modification, or revision was received late, and must inform the offeror whether its offer will be considered, unless contract award is imminent.

B.6 Facsimile Submissions (JUL 97)

Facsimile offers and modifications will be accepted any time prior to the exact time set for receipt of offers. Facsimile withdrawals will be accepted any time before award. **Offerors must use the facsimile number: (703) 767-5541.**

- a. Definition: "Facsimile submission," as used in this Solicitation, means an offer, modification of an offer, or withdrawal of an offer that is transmitted to and received by the Government via electronic equipment that communicates and reproduces both printed and handwritten material.
- b. Offerors may submit facsimile submissions as responses to this Solicitation. These responses must arrive at the place, and by the time, specified in the Solicitation.
- c. Facsimile submissions that fail to furnish required representations or information, that reject any of the terms, conditions, and provisions of the Solicitation, that contain garbled information, or are otherwise incomplete, may be excluded from consideration.
- d. Facsimile submissions must contain the required signatures.
- e. The Government reserves the right to make award solely on the facsimile submission. However, if requested to do so by the Contracting Officer, the apparently successful Offeror agrees to promptly submit the complete original signed submission.

- f.** If the Offeror chooses to transmit a facsimile submission, the Government will not be responsible for any failure attributable to the transmission or receipt of the facsimile submission including, but not limited to, the following:
- (1) Receipt of garbled or incomplete submission.
 - (2) Availability or condition of the receiving facsimile equipment.
 - (3) Incompatibility between the sending and receiving equipment.
 - (4) Delay in transmission or receipt of submission.
 - (5) Failure of the Offeror to properly identify the submission.
 - (6) Illegibility of submission.
 - (7) Security of submission data.

B.7 Consideration of Offers (FEB 98)

- a.** The Government reserves the right to --
- (1) Reject any or all offers;
 - (2) Waive any informalities and minor irregularities in an offer;
 - (3) Award a quantity less than the quantity offered on at the unit price offered;
 - (4) Accept any one item or group of items in an offer, as may be in the best interest of the Government;
 - (5) Award quantities in excess of that stated as being available for sale.
- b.** Offerors may submit multiple offers at various unit prices and may specify a maximum quantity.
- c.** The Government may request specific documentation to support the offer submitted. Failure to provide the documentation, if requested, may result in the Offeror being ineligible for award. Data will be treated as proprietary and will not be released by the Government.

B.8 Evaluation of Offers (SEP 02)

- a. General - The evaluation factors are listed below in descending order of importance:

- (1) Unit price.
- (2) Payment terms.
- (3) Removal schedule.

All evaluation factors other than unit price, when combined, are significantly less important than unit price.

- b. To be considered, offers must meet the following minimum requirements:

- (1) Submission of the information requested in Section **B.1**;
- (2) Submission of pricing which complies with the provisions of Section **B.4**;

- c. The maximum acceptable payment terms are net thirty (30) calendar days from DNSC's receipt of current, accurate, and complete Shipping Instructions.

B.9 Negotiation Procedures (SEP 02)

The Government intends to evaluate offers and award a contract after conducting discussions with all offerors whose offers have been determined to be within the competitive range. However, the Government reserves the right to award without discussions. Accordingly, offerors are advised to include their best possible terms in their initial offer.

If the Government determines that holding discussions is in its best interest, the following procedure will be utilized:

- a. **Competitive Range** - The competitive range shall be determined on the basis of price and other factors that are stated in the solicitation and will include all offers which comply with Section **B.8.b.** that have a reasonable chance of being selected for award. Offers not included in the competitive range will not be given further consideration.
- b. **Negotiations/Discussions** - Only offerors within the competitive range will be contacted to schedule the day and time for discussions to be conducted. Negotiations will be conducted only with the company official signing **Section I.1 Sale of Government Property Negotiated Sales Contract (JAN 03)** or a specifically authorized individual identified in **Section I.7 Authorized Negotiators (JUN 95)**. The content and extent of the discussions is a matter of the Contracting Officer's judgment, based on the particular facts of the sale and each offeror's initial offer.
- c. **Discussion Session** - Only one discussion session per offeror is intended. In order to facilitate meaningful discussions, offerors should:
 - (1) Be prepared to discuss:
 - A. Only those prices and terms included in the initial offer;

- B. Supporting documentation and justification for the derivation of prices offered and other terms the offeror wishes to negotiate;
 - C. Payment terms;
 - D. Removal schedule; and
- (2) Arrange to have appropriate support personnel present during discussions, i.e., Purchasing, Marketing, etc.
- d. Best and Final Offer Requests** - At the conclusion of discussions, all offerors with which discussions were conducted will be requested to submit a best and final offer (BAFO). Oral requests for best and final offers will be confirmed in writing. Each individual BAFO request will include the following:
- (1) Notice that discussions are concluded;
 - (2) Time and date by which BAFOs must be submitted;
 - (3) Notice that BAFOs are subject to Section **B.5 Late Submissions, Modifications, and Withdrawals of Offers (NOV 00)**;
 - (4) A record of negotiated issues and understandings between the Government and the offeror (as applicable);
 - (5) A list of remaining questions/deficiencies (if any);
 - (6) A caution to offerors to provide supporting documentation for any changes to their prior offers as revised during discussions; and
 - (7) Notice that the Government intends to evaluate best and final offers and award a contract without further discussions.
- e. Best and Final Offer Responses** - BAFOs should strictly conform to the best and final offer request. If no response is received to the BAFO request, the initial offer will be considered as the best and final offer. Changes that are not fully supported by documentation may not be evaluated or considered.
- f. Subsequent Discussions/BAFO Requests** - Generally, only one best and final offer will be requested. After receipt of best and final offers, discussions will not be reopened unless the Government determines it is in its best interest to do so. If discussions are reopened, an additional request for best and final offers will be issued to all offerors still within the competitive range.

B.10 Disclosure of Information (DEC 97)

Proprietary or confidential information disclosed in offers/discussions/BAFOs will not be disclosed to the public or used by the Government except for evaluation purposes.

B.11 Responsibility Determination (SEP 02)

- a. No award shall be made unless the Contracting Officer makes an affirmative determination of responsibility.
- b. To be determined responsible and eligible for an award, Offerors shall have adequate financial resources, a satisfactory performance record with DNSC, and a satisfactory record of integrity and ethics.

For example, an Offeror may be determined to be non-responsible and therefore ineligible for award if there is a record of poor payment (e.g., checks returned for insufficient funds) or poor performance (e.g., failure to pay for or remove material on time). In addition to looking at past performance, DNSC will also review the financial statements and references submitted by the Offeror, as well as the current Dun & Bradstreet report and any other credit reports.

B.12 Contract Award (JUL 97)

A written award or acceptance of an offer signed by the Contracting Officer and furnished to a successful Offeror within the time specified for acceptance shall result in a binding contract incorporating all the terms and conditions of this Solicitation unless otherwise stated in the executed Section **I.1 Sale of Government Property Negotiated Sales Contract (JAN 03)**.

B.13 Unsuccessful Offerors (FEB 98)

The Contracting Officer will notify unsuccessful offeror(s) at the earliest practicable time of the basis for non-award.

SECTION C – INSPECTION (JUN 98)

- a. Offerors, or their designees, at their expense, are encouraged to inspect material and take a grab sample, not to exceed fifty (50) pounds per pile. Offerors shall provide a container for each required sample. The sample will be obtained in the presence of and under the direction of a DNSC representative. The Government does not warrant any samples to be representative of the entire pile. The offeror shall provide the Government with any analysis derived from the grab sample(s).
- b. Requests for an appointment to visually inspect or sample the material must be made in writing or by facsimile submission on company letterhead to the point of contact identified in **Section J. 2 Storage Locations**, at least **ten (10) working days** prior to the date of the requested inspection/sample. Requests shall include the name and title of each individual wishing to visually inspect the material. Offerors will be notified by telephone of the date the material will be available for inspection/sampling. The Government reserves the right to limit the number of individuals granted access to the depot.
- c. Offerors, their agents and representatives shall comply at all times with the rules of the storage location.

SECTION D - PAYMENT

D.1 Payment (FEB 98)

- a. Payment shall be made in U.S. dollars.
- b. Payment shall be made by wire transfer, U.S. Postal Service money order, or company or bank check.
 - (1) Wire transfer payment shall be made in accordance with instructions in **Section J.5**. Fees for wire transfers are the responsibility of the Contractor. If payment is by wire transfer and the wrong account number is used, shipment of material may be delayed by up to one week or the wire transfer may be returned to the sender.
 - (2) All checks must be drawn on a U.S. domestic bank or on the United States branch of an acceptable foreign bank and must be payable in United States currency. **A service charge of \$100.00 will be applied to all returned checks.**
- c. Payment shall be made to the **Defense Finance and Accounting Service - Columbus (DFAS-Columbus)**. If a check is not made payable to DFAS-Columbus, the check may be returned and the \$100.00 fee stated in **D.1.b. (2)** charged. Payment shall be accompanied by **identifying information including the contract number, invoice number, and a description of the material purchased**. Payments without the required identification may be returned and shipment delayed. Payments shall be sent to:

ATTN: DNSC-R, Accounts Receivable
Defense National Stockpile Center
8725 John J. Kingman Road
Suite 3229
Fort Belvoir, VA 22060-6223

- d. Invoices issued for adjustments for variations in quantity or weight, storage charges, or interest shall be paid promptly.
- e. If payment is not made in full within 30 calendar days of issuance of an invoice, the Government will issue a "demand" letter, demanding payment of the outstanding amount. If all moneys due are not paid within 30 calendar days after the date of the Government's demand letter, the Contractor will be considered delinquent and any outstanding charges will be reduced by any subsequent payments. No material will be released until all delinquent charges are paid. (See Sections **F.1.a.** and **G.10.**)

D.2 Payment Due Date (NOV 02)

- a. Payment due dates will be applied as follows:
- (1) If payment terms are not extended, payment will be made before shipment of material and before the end of the contract period specified in the executed **Section I.1 Sale of Government Property Negotiated Sales Contract**.
 - (2) If payment terms are approved, the Contractor shall pay the Government the full amount of **each** shipment no later than 30 calendar days after DNSC receives current, accurate, and complete Shipping Instructions. Notwithstanding any other provision of the contract, payment is due with or without the issuance of an invoice by the Government. If the Contractor fails to make payment timely, the Contractor will be considered delinquent (see Section D.1.e, F.1.a., and G.10), and the Government, at its sole discretion, may revoke the payment terms.
- b. If payment is not received by 4:30 p.m., local time, Fort Belvoir, VA on the payment due date, payment will not be credited until the next Government business day. Interest will accrue accordingly.
- c. In the event the payment due date falls on a Saturday, Sunday, or holiday, then the payment due date will be extended to the next Government business day.

D.3 Interest (JUN 02)

- a. All amounts that become payable by the Contractor to the Government under this contract shall bear simple interest from the date due until paid. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in 41 U.S.C. 611, which is applicable to the period in which the amount becomes due, as provided in paragraph **b.**, below.
- b. Amounts shall be due at the earliest of the following dates:
- (1) The final day of the contract period specified in **Section I.1 Sale of Government Property Negotiated Sales Contract (JAN 03)** (with or without the issuance of an invoice by the Government); or
 - (2) The date of the first written demand for payment under the contract.

SECTION E - REMOVAL

E.1 Removal of Material (JAN 02)

- a. The contract period removal period is based on the quantity of material awarded and begins on the date of contract award.

Quantity(SDT)	Removal Period
500 – 10,000	30 days
10,001 – 30,000	90 days
30,001 – 80,000	180 days
80,001 – 110,000	270 days
110,001 – 192,244	365 days

- b. If the Contractor fails to pay for and remove the material on or before the last day of the contract period, Contractor will be considered delinquent and no material will be shipped until payment has been received.
- c. The contract period includes Saturdays, Sundays, and holidays. If the last day of the contract period is a Saturday, Sunday, or holiday, or the storage location is otherwise closed that day, the contract period will be extended to the next Government workday.

E.2 Storage Charges (JUL 97)

- a. Storage charges shall be assessed on all material remaining after the last day of the contract period. The Government reserves the right to remove any remaining material to a commercial storage facility and be reimbursed by the Contractor for any expenses incurred. Storage charges continue to accrue until all the material has been removed or the contract is terminated for default, in which case the Contractor will be liable for damages, as set forth in Section **G.7 Default** of the Solicitation.
- b. The storage charge is the greater of the following: (1) **\$0.03 per short ton** (bulk weight), if a fraction of a ton remains, the charge will be for a full ton per 30 day period regardless of whether the material remains in storage a period of 30 days or less than 30 days; or (2) commercial storage charges, if applicable.
- c. Storage charges will be invoiced monthly. Payment shall be made promptly.
- d. Payment of storage charges shall not relieve the Contractor of its obligation to remove the material in a timely manner. Acceptance of storage payments by the Government is not a waiver of the Government's right to default the Contractor for failure to remove the material (See Section **G.7 Default**).

SECTION F - SHIPPING

F.1 Request for Shipment (MAY 02)

- a. Handling and outloading will be by and at the expense of the Contractor. At least 10 **working** days prior to the date shipment is required to commence, the Contractor shall furnish commercial bills of lading to the designated depot. Simultaneously the Contractor shall complete and fax the form in Section **J.3 Shipping Instructions** to the Contracting Officer. The Government will only accept shipping instructions from those individuals designated in Section **I.8** as being authorized to release material on behalf of the Contractor. **No material will be released under the provisions of this contract or any other contract the contractor has with DNSC until all outstanding delinquent charges and payments have been satisfied.**
- b. "Shipping Instructions" shall include the following:
 - (1) Item/Pile No.
 - (2) Quantity of material to be released.
 - (3) Designation of type and kind of conveyance.
 - (4) Name of the carrier (please include a telephone number where this contact can be reached).
 - (5) "Ship to" location.
 - (6) Minimum load per conveyance (optional)
 - (7) Desired shipping schedule.
 - (8) Name and telephone number of an agent who can furnish additional shipping information if needed.
 - (9) Any additional pertinent information.
- c. The shipping schedule shall allow sufficient time for the Government to reasonably meet such schedule prior to the last day of the contract period commensurate with existing loading facilities and other commitments at the Government's storage locations. Information regarding Government commitments may be obtained from the Depot Manager specified in Section **J.2**.
- d. The Contractor, its agent and employees shall comply with all applicable rules at the storage depot; Federal, state and local load limitations; and all safety, health, and environmental requirements. Contractor will be responsible for demurrage charges, damage to rail tracks and switches, or any costs associated with derailment.
- e. Requests for shipment shall be for a minimum of 500 SDT or the balance of material at the storage location if a smaller amount is all that is available. Shipping instructions and information requested in paragraph **b.**, above, are to be furnished to the following address:

Defense National Stockpile Center-C
ATTN: **DNSC-C/Chromite** Contract Specialist
8725 John J. Kingman Road
Suite 3229
Ft. Belvoir, VA 22060-6223
Facsimile Number: (703) 767-5484

- f. The Government shall determine the order in which the material is scheduled, coordinated, and out loaded.
- g. The Contractor shall pay \$100 per day if the Contractor's conveyance fails to report to an unstaffed storage location as scheduled. See Section J.2 for identification of unstaffed locations.

F.2 Insurance Requirements (APR 95)

The Contractor shall procure and maintain, and require any subcontractor to procure and maintain, during the entire period of performance under this contract, such insurance as stipulated herein.

- a. Workers' compensation and employer's liability. The Contractor is required to comply with applicable Federal and State workers' compensation and occupational disease statutes. Employer's liability coverage of at least \$100,000 is required, except in States with exclusive or monopolistic funds that do not permit workers' compensation to be written by private carriers.
- b. General liability. Bodily injury liability insurance coverage written on the comprehensive form of policy of at least \$500,000 per occurrence.
- c. Automobile liability insurance written on the comprehensive form of policy is required. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in connection with performing the contract. Policies covering automobiles operated in the United States shall provide coverage of at least \$200,000 per person and \$500,000 per occurrence for bodily injury and \$20,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.

F.3 Weighing (APR 02)

- a. The conveyance (truck, van or railroad car as applicable by location) shall be light (tare) and heavy weighed (gross) with the tare weight of the conveyance deducted from the gross weight to arrive at the net weight of the material. The stenciled tare weight of railroad car and the actual tare weight of trucks or vans shall be used. Weighing shall be done by and at the expense of the Contractor. All weighing and sampling shall be witnessed by a Government representative, with the exception of weighing on railroad scales which will be witnessed by the railroad. Weighing shall be done on the nearest railroad scale or available truck scale.
- b. The Government representative shall certify the correctness of the weighing method used and that the truck scales have been inspected and certified. The Contractor will provide certified scale tickets within ten working days after the entire shipping instruction quantity has been shipped, or at the end of each week's shipment which ever occurs first.
- c. Weight certificates shall be provided at the expense of the Government. Scale tickets shall be provided by the Contractor to the Government Representative on site and will be used for payment purposes.

F.4 Moisture Determination (JAN 98)

- a. A moisture determination shall be made in accordance with standard commercial procedures by an independent sampler/analyst, to be designated by the Contractor and acceptable to the Government, with the results of such analysis being final and binding. Certificates of moisture shall be furnished simultaneously to both parties by the independent sampler/analyst.
- b. The independent sampler/analyst shall furnish to the Government for review and approval of the proposed sampling methods and moisture analysis procedures prior to outloading. These documents, as well as the certificate of moisture, shall be forwarded to:

Directorate of Stockpile Operations
Defense National Stockpile Center
8725 John J. Kingman Road, Suite 3229
Fort Belvoir, VA 22060-6223
FAX: (703) 767-7608

- c. The net weight, as determined in Section F.3, less the moisture content represented by the sample taken (in accordance with paragraph a. above) shall be used to determine the dry weight expressed dry tons of material. The dry ton weight determination shall be final for the computation of the dollar value of the chromite, chemical grade.

- d. The Contractor shall make necessary arrangements to procure the services of the independent sampler/analyst and the Contractor shall bear the cost of these services.
- e. Should moisture determination by an independent sampler/analyst be waived by the Contractor, the wet weight at the time of outloading will be recorded as dry weight for payment purposes.

F.5 Assumption of Risk and Disclaimer of Liability (JAN 02)

The Contractor, its assigns or agents, assumes full responsibility for all injury or damage to persons or property occasioned by or occurring in connection with or incident to any use or possession of this material by the Contractor, Contractor's employees, or any person subject to the Contractor's control. The Government assumes no liability for any damages to the property of the Contractor or any other person or property, or for any personal injury, illness, disability or death to the Contractor, Contractor's employees or any other person subject to Contractor's control, or for any other consequential damages arising from or incident to the purchase, use, loading, processing, disposition, or any subsequent operation performed upon, exposure to or contact with any component, part, constituent or ingredient of this item, material or substance.

F.6 Adjustment for Variation in Quantity or Weight (JAN 95)

The Government reserves the right to vary the quantity or weight delivered by **10%** from the quantity or weight listed in the Solicitation and the Contractor agrees to accept delivery of any quantity or weight within these limits. The contract price will be adjusted upward or downward in accordance with the unit price and on the basis of the quantity or weight actually delivered.

F.7 Environmental Protection (JUN 95)

a. Transportation Requirements

- (1) The transportation of hazardous material is governed by Department of Transportation (DOT) Hazardous Materials Regulations (Title 49 Code of Federal Regulations, Parts 170-189). If the material being transported is covered by DOT Regulations, the Contractor or its agent is responsible for certifying to DOT that hazardous materials are properly classified, described, packaged, marked, and labeled and are in a condition safe to transport based on the Contractor's or its agent's own examination of the material. (See especially 49 CFR 173.7(a) (1).)
- (2) The Government reserves the right to conduct reasonable inspection of the Contractor's or its agent's transportation conveyances or other equipment utilized to effect removal of the material purchased under this Solicitation. Inspection may occur prior to, during, or subsequent to removal of the material from Government storage locations. The Contractor or its agent shall provide Government representatives with access and any reasonable assistance required to conduct this inspection.

b. Material Safety Data Sheets

- (1) Offerors are warned that unprotected exposure to hazardous substances, hazardous materials and hazardous chemicals may significantly increase the risk of health problems. The Contractor shall comply with all applicable Occupational Safety and Health Administration (OSHA) and any other Federal, state or local laws, codes, ordinances, and regulations (including obtaining any required licenses or permits) governing exposure to, and storage, handling, transportation, and disposition of, this material.
- (2) Material Safety Data Sheets as required by OSHA Hazard Communication Standard - 29 CFR 1910.1200 are incorporated herein. (See Section **J.4**) This data provides specific toxicity and health related data for the protection of human health and the environment. Offerors should review this information carefully. It is the responsibility of the Contractor to further communicate this information to the distributor, manufacturer, user and/or transporter of this material as may be required by Federal regulations.
- (3) Offerors shall also refer to 29 CFR 1910 Occupational Safety and Health Standards, specifically sections 1910.1000 through 1050. These occupational standards set standards for permissible exposures, methods of compliance, personal protective equipment, and other measures that must be taken when working with, or in proximity to, hazardous materials, chemicals and substances in the United States and its territories and possessions.

c. Use and Disposition

- (1) The Contractor certifies that it shall use and ultimately dispose of any hazardous material purchased under this Solicitation in accordance with all applicable Federal, state, local and international laws and regulations and in a manner safe for the public and the environment.
- (2) The material offered under this Solicitation is not, in its present form, subject to EPA Hazardous Waste Regulations (40 CFR Part 260, et seq.) issued under the Resource Conservation and Recovery Act. However, it is possible that use of this material will lead to the creation of a hazardous waste. 40 CFR Part 260, et seq., details the responsibilities of generators, transporters, treaters, storers, and disposers of hazardous waste. Failure to comply with these regulations can lead to civil and criminal penalties.

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 Amendments and Modifications (JAN 95)

- a. Changes in terms and conditions of this Solicitation shall be accomplished by written amendment only.
- b. Changes in terms and conditions of any resulting contract shall be accomplished only by written modification signed by the Contracting Officer.

G.2 Title (JUL 02)

Title to the material shall pass to the Contractor after payment is received or the material is shipped, whichever occurs first.

G.3 Risk of Loss (JUL 02)

- a. After the award of the contract and prior to receipt of payment for or shipment of the material, whichever occurs first, the Government shall be responsible for the care and protection of the material, and any loss, damage or destruction occurring during such period will be adjusted by the Government.
- b. After receipt of payment but prior to either shipment or the end of the contract period, the Government shall be responsible only for the exercise of reasonable care for the protection of the material.
- c. After shipment or the end of the contract period, whichever occurs first, all risk of loss damage or destruction, from any cause whatsoever, shall be borne by the Contractor.

G.4 Limitation on Government's Liability (JAN 95)

- a. Except as provided in paragraph b. in any case where liability of the Government to the Contractor has been established, the measure of the Government's liability shall not exceed refund of whatever portion of the purchase price the Contractor has paid.
- b. Where specifically authorized in writing by the Contracting Officer, the Contractor may recover reasonable costs of packing, loading, and transportation incurred in connection with return of material to the Government.

G.5 Protests (NOV 02)

a. General. Companies may file a protest over sales under this Solicitation with the –

- (1) General Accounting Office (GAO);
- (2) Director, Directorate of Stockpile Contracts, DNSC, for a decision at a level above the Contracting Officer;
- (3) Contracting Officer.

Unless otherwise specified, protests will be presumed to be protests to the Contracting Officer.

b. Pre-Award Protests. Protests based upon alleged improprieties in a solicitation that are apparent prior to bid opening or the time set for receipt of initial offers shall be filed prior to bid opening or the time set for receipt of initial offers. In negotiated sales, protests based on alleged improprieties that do not exist in the initial solicitation, but that are subsequently incorporated into the solicitation must be filed not later than the next closing time set for receipt of offers following the incorporation.

c. Post-Award Protests. Protests after award shall be filed not later than 10 calendar days after the basis of the protest is known or should have been known, whichever is earlier, except for protests challenging a negotiated sale under which a debriefing is requested and provided. In that situation, and where the basis was not known prior to the debriefing, the initial protest shall be filed not later than 10 calendar days after the date of the debriefing.

d. Service of Protest.

(1) Protests to the General Accounting Office shall be filed in writing, in accordance with 4 CFR 21, at the following address:

General Counsel
Attn: Procurement Law Control Group
U.S. General Accounting Office
441 G Street, NW
Washington, DC 20548

A copy of any protest to the GAO shall be served on the Contracting Officer at the address in (3) below, within one day of filing the protest. Firms seeking to file a protest with GAO are advised to consult the GAO regulations at 4 CFR 21 and the GAO publication, **Bid Protests at GAO: A Descriptive Guide**. Copies of these documents are available from the General Accounting Office.

(2) As an alternative to filing a protest with the Contracting Officer, bidders or offerors may seek an independent review by filing an agency-level protest with the DNSC Director, Directorate of Stockpile Contracts. This process allows for a higher level decision on the initial protest. It is not a review of a Contracting Officer's decision on a protest filed with the Contracting Officer. A protest seeking an agency-level decision should clearly state that it is an "Agency Level Protest Under Executive Order 12979." The protest shall be served in writing at the following address and may be filed by mail, hand delivery, commercial carrier, or fax:

Attn: DNSC-C, Director, Directorate of Stockpile Contracts
Defense National Stockpile Center
8725 John J. Kingman Road, Suite 3229
Ft. Belvoir, VA 22060-6223
Facsimile No.: (703) 767-5411

(3) Protests seeking a decision by the Contracting Officer shall be served in writing at the following address and may be filed by mail, hand delivery, commercial carrier, or fax:

Attn: DNSC-C – (Insert name of the Contracting Officer)
Defense National Stockpile Center
8725 John J. Kingman, Suite 3229
Ft. Belvoir, VA 22060-6223
Facsimile No. (703) 767-5484 or (703) 767-5494

G.6 Disputes (FEB 01)

- a.** This contract is subject to the Contract Disputes Act of 1978 (41 U.S.C. 601-613).
- b.** Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.
- c.** "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph **d.(2)** below. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this paragraph, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

- d.** (1) A claim by the Contractor shall be made in writing and unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be by written decision of the Contracting Officer.
- (2) (i) The Contractor shall provide the certification specified in paragraph (d)(2)(iii) of this clause when submitting any claim exceeding \$100,000.
- (ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.
- (iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."
- (3) The certification may be executed by any person duly authorized to bind the Contractor with respect to a claim.
- e.** For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.
- f.** The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.
- g.** If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the offer.
- h.** The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (properly certified if required), or (2) the date payment otherwise would be due, if that date is later, until the date of payment. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.
- i.** The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

G.7 Default (SEP 02)

- a. (1) The Government may, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to -
- (i) Make payment and remove the material within the time specified in this contract or any extension;
 - (ii) Remove the material within the time specified in this contract irrespective of whether or not payment has been made;
 - (iii) Make progress, so as to endanger performance of this contract; or
 - (iv) Perform any of the other provisions of this contract.
- (2) The Government's right to terminate this contract under a. (1) (iii) through a. (1) (iv) above, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Contracting Officer) after receipt of the notice from the Contracting Officer specifying the failure. Upon the Contractor's failure to cure such default within that period (or such further period as the Contracting Officer may allow), the Contractor shall lose all right, title and interest which it might otherwise have acquired in and to the material as to which a default has occurred.
- (3) If at any time prior to the expiration of this contract, the Contractor makes it clear either by words, actions, or circumstances, that the Contractor is unwilling or unable to perform under this contract, the Government shall not be required to furnish the Contractor notice specifying the failure under this contract, prior to exercising its right to terminate this contract for default and seek damages.
- b. If the Government terminates the contract, the Contractor shall be held liable for damages as described below. However, in no event will damages exceed the original contract price.
- c. If the Government terminates the contract for default, it may subsequently resell the material for the Contractor's account, under the terms and in the manner the Contracting Officer considers appropriate, and assess the Contractor the difference between the contract price and the price obtained on resale. In no event will the Contractor be refunded any money if the Government obtains a greater price on resale, nor will an accounting of money be made until resale is complete. In the event that the Government does not succeed in reselling the material within 12 months, the Contractor may be held liable for the full contract price for the quantity of material on which the default has occurred. In order to calculate the Government's damages on contracts where the contract price is determined on a formula-price basis, the Government will establish the contract price for the quantity of material on which the default has occurred as follows: Using the pricing mechanism set forth in the contract, the Government will set the price as though the material had been priced on the last day of the contract period or the date of the termination notice, whichever is earlier.

- d. If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Government.
- e. The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

G.8 Termination for Convenience of the Government (DEC 97)

- a. The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the Government shall only be liable for actual costs incurred by the Contractor before the effective date of termination.
- b. If a bona fide requirement for the material develops or exists prior to removal of the material from Government control, the Government may withdraw that material from the sale. In the event of a withdrawal under this condition, the Government shall be liable only for the refund of the contract price of the withdrawn material or such portion of the contract price as it may have received plus simple interest at the rate established by the Secretary of the Treasury.

G.9 Excusable Delays (MAY 95)

- a. In the event either party should be prevented from performing under this contract by reason of any unforeseeable cause beyond its control and without its fault or negligence, including, but not restricted to, acts of God or of the public enemy, sovereign acts of the United States, acts of a foreign Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather, performance under the contract shall be suspended in whole or in part until the cause ceases to exist and thereafter the time for fulfillment of the contract shall be extended by the length of time during which the cause prevented performance under the contract.
- b. This section shall also apply to an excusable delay condition that prevents delivery at a consignee's plant if-
 - (1) the delay meets the criteria in paragraph a. above; and
 - (2) the identity of the consignee is known to the Government prior to commencement of the excusable delay condition.
- c. The Contractor shall notify the Contracting Officer, in writing, of the nature and extent of the excusable delay condition promptly after the commencement thereof, but in any event prior to out loading of the material from the storage location from which it is to be shipped. The Contractor shall notify the Contracting Officer, in writing, within ten (10) calendar days when the excusable delay condition ceases to exist.

G.10 Setoff of Funds (JUL 98)

The Contractor agrees that the Government may use all or a portion of any monies received by Government to satisfy, in whole or in part, any debt (e.g. delinquent payments, interest or storage charges), arising out of this or any other transaction.

G.11 Indemnification Agreement (JAN 02)

The Contractor shall save and hold harmless and indemnify the Government against any and all liabilities, claims, and costs of any kind and nature for injury to or death of any person or persons and for loss or damage to any property (Government or otherwise) occurring in connection with or in any way incident to or arising out of the occupancy, use, service, operations, or performance of work resulting from the acts or omissions of the Contractor, Contractor's employees, or any person subject to the Contractor's control in connection with the contract. Whether due to negligence or not of the Contractor, the Contractor agrees to reimburse the United States for any legal expenses (including salaries of attorneys) incurred by the United States in defending any and all claims or suits against the United States, whether well-founded or not, in any way whatsoever alleged to have arisen from the acts or omissions of the Contractor, Contractor's employees, or any persons subject to the Contractor's control.

G.12 Covenant Against Contingent Fees (JAN 95)

- a. The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to add to the contract price or consideration, or otherwise recover, the full amount of the contingent fee.
- b. "Bona fide agency," as used in this paragraph, means an established commercial or selling agency, maintained by a Contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.
- c. "Bona fide employee," as used in this paragraph, means a person, employed by a Contractor and subject to the Contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.
- d. "Contingent fee," as used in this paragraph, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.
- e. "Improper influence," as used in this paragraph, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

SECTION H - DEFINITIONS (NOV 00)

As used throughout this Solicitation, the following terms shall have the meaning set forth below:

- a.** The term "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings.
- b.** The terms "Offeror", "Purchaser", or "Contractor" may be used interchangeably.

SECTION I - SUBMITTALS

COMPLETE AND RETURN ALL OF THE FOLLOWING WITH YOUR OFFER, UNLESS ANNUAL REPRESENTATIONS, CERTIFICATIONS, AND IDENTIFICATIONS HAVE BEEN SUBMITTED THIS FISCAL YEAR THEN SUBMIT I.1, I.2, AND I.3 ONLY:

- I.1 Sale of Government Property Negotiated Sales Contract (JAN 03)**
- I.2 Item Offer Page - DLA-CHROMITE, CHEMICAL & REFRACTORY GRADE-003 (JAN 03)**
- I.3 Anticipated Removal Schedule (JAN 03)**
- I.4 Certificate of Independent Price Determination (JAN 01)**
- I.5 Certification Regarding Debarment, Suspension, Proposed Debarment, Environmental Compliance, and Other Responsibility Matters (JUL 97)**
- I.6 Type of Business Organization (APR 96)**
- I.7 Authorized Negotiators (JUN 95)**
- I.8 Persons Authorized to Request Shipment of Material (FEB 98)**
- I.9 Offeror's Billing Address (JUL 96)**

I.1 Sale of Government Property Negotiated Sales Contract (JAN 03)

I.1 Sale of Government Property Negotiated Sales Contract (JAN 03)

SALE OF GOVERNMENT PROPERTY NEGOTIATED SALES CONTRACT		CONTRACT NUMBER		PAGE	
				1 of Pages	
<p>This contract is entered into by and between the United States of America, hereinafter called the "Government," represented by the Contracting Officer executing this contract and the Contractor below identified. The Government agrees to sell and the Contractor agrees to buy the material described below in accordance with the terms and conditions of DLA-CHROMITE, CHEMICAL & REFRACTORY GRADES-003. In the event of a conflict between the terms of the Solicitation and the Negotiated Sales Contract, the terms of the Negotiated Sales Contract shall govern.</p>					
ITEM	PROPERTY DESCRIPTION AND LOCATION	QUANTITY (No. of Unit(s))	UNIT	UNIT PRICE	AMOUNT
	<p>CONTRACT PERIOD EXPIRES ON:</p>				
EXECUTION BY CONTRACTOR			EXECUTION BY GOVERNMENT		
DATE (Day, Month, Year)			UNITED STATES OF AMERICA		DATE:
NAME OF CONTRACTOR			BY:		
ADDRESS (Street, City, State & Zip Code) (Type or Print)			NAME AND TITLE OF CONTRACTING OFFICER		
<p>Telephone Number: _____ Facsimile Number: _____</p>			<p>_____</p>		
SIGNATURE AND TITLE OF PERSON AUTHORIZED TO SIGN THIS CONTRACT (Type or print name and title under signature)			<p>Contracting Officer _____ (Agency)</p>		

I.2 Item Offer Page - DLA-CHROMITE, CHEMICAL & REFRACTORY GRADE-003 (JAN 03)

I.2 Item Offer Page (JAN 03)

CHEMICAL GRADE MATERIAL

Item	Location	Pile	Origin	Net Weight (SDT)	Unit Price Per SDT	Quantity (SDT)	Total Offer Price
1	Mechanicsburg, PA	012	Africa	28,499	\$		\$
2	Mechanicsburg, PA	015	Africa	14,879	\$		\$

Item	Location	Pile	Origin	Net Weight (SDT)	Unit Price Per SDT	Quantity (SDT)	Total Offer Price
3	Somerville, NJ	001	Africa	34,747	\$		\$

Item	Location	Pile	Origin	Net Weight (SDT)	Unit Price Per SDT	Quantity (SDT)	Total Offer Price
4	Warren, OH	002	Africa	7,493	\$		\$

REFRACTORY GRADE MATERIAL

Item	Location	Pile	Origin	Net Weight (SDT)	Unit Price Per SDT	Quantity (SDT)	Total Offer Price
20	Belle Mead, NJ	001	Unknown	90,944	\$		\$

Item	Location	Pile	Origin	Net Weight (SDT)	Unit Price Per SDT	Quantity (SDT)	Total Offer Price
21	Moss Landing, CA	001	Unknown	15,682	\$		\$

Company Name: _____

Signature: _____

Name and Title: _____

Date: _____

I.3 Anticipated Removal Schedule (JAN 03)

Monthly Minimum Quantity to be Removed	Monthly Maximum Quantity to be Removed	Removal Schedule

I.4 Certificate of Independent Price Determination (JAN 01)

- a. The offeror certifies that:
- (1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;
 - (2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
 - (3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.
- b. Each signature on the offer is considered to be a certification by the signatory that the signatory:
- (1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or offer, and that the signatory has not participated and will not participate in any action contrary to subparagraphs a.(1) through a.(3) above; or
 - (2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs a.(1) through a.(3), above

(insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or offer, and the title of his or her position in the offeror's organization);

- (ii) As an authorized agent, does certify that the principals named in subdivision b.(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs a.(1) through a.(3) above; and
 - (iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs a. (1) through a. (3) above.
- c. **If the offeror deletes or modifies subparagraph a. (2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.**

I.5 Certification Regarding Debarment, Suspension, Proposed Debarment, Environmental Compliance and Other Responsibility Matters (JUL 97)

- a. (1) The Offeror certifies, to the best of its knowledge and belief, that -

- (i) The Offeror and/or any of its Principals -
- (A) Are are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;
 - (B) Have have not , within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; and
 - (C) Are are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision **a. (1)(i)(B)** of this provision.
 - (D) Are are not presently indicted for or otherwise criminally or civilly charged by a Federal, state or local entity with violation of any environmental laws;
 - (E) Have have not within the three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for violation of a Federal, state or local environmental statute or regulation.
- (ii) The Offeror has has not , within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.
- (2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).
- (3) If the Offeror answers affirmatively to **(a)(1)**, above, the Offeror shall include in its offer an explanation of the circumstances, including the outcome.

This certification concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under section 1001, title 18, United States Code.

- b.** The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- c.** A certification that any of the items in paragraph **a.** of this provision exists will not necessarily result in withholding of an award under this Solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.
- d.** Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph **a.** of this provision. The knowledge and information of a Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- e.** The certification in paragraph **a.** of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to the other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this Solicitation for default.

I.6 Type of Business Organization (APR 96)

The Offeror represents that--

- a. It operates as a corporation incorporated under the laws of the State of _____, an individual, a partnership, a nonprofit organization, or a joint venture.
- b. If the offeror is a foreign entity, it operates as an individual, a partnership, a nonprofit organization, a joint venture, or a corporation registered for business in _____ (country)
- c. If the offeror is a corporation, it is independent (not owned or controlled by another company), owned or controlled by _____ corporation company registered for business in _____ (state/country).
- d. If the offeror is owned or controlled by another, state the relationship (e.g., wholly owned subsidiary, etc.): _____
- e. The offeror agrees to provide additional information relating to the above representations if requested to do so by the Contracting Officer.

I.7 Authorized Negotiators (JUN 95)

The Offeror represents that the following individuals are authorized to negotiate on its behalf.

Name

Title Telephone

Name

Title Telephone

I.8 Persons Authorized to Request Shipment of Material (FEB 98)

The Offeror shall provide the name(s), title(s), signature(s), and telephone number(s) of representative(s) authorized to sign Section **J.3 Shipping Instructions**:

Typed Name Title

Signature Telephone

Typed Name Title

Signature Telephone

Typed Name Title

Signature Telephone

I.9 Offeror's Billing Address (JUL 96)

The Offeror shall provide its billing address and billing facsimile number below.

SECTION J - LIST OF ATTACHMENTS

J.1 ANALYSIS (JAN 03)

J.2 STORAGE LOCATIONS (JAN 03)

J.3 SHIPPING INSTRUCTIONS (JAN 03)

J.4 MATERIAL SAFETY DATA SHEET (JAN 03)

J.5 FEDWIRE PROCEDURES (JAN 95)

J.2 Storage Locations (JAN 03)

J.2 Storage Locations for Chromite, Chemical & Refractory Grade (JAN 03)

Location	Operational Status	Days	Hours	Accessibility	Responsible Depot	Depot Manager
Somerville, NJ	Staffed	Monday - Friday	0700 - 1430	Truck / Rail		Jim Farley Phone: 908-725-6400 Fax: 908-707-4350
Warren, OH	Staffed	Monday - Friday	0730 - 1430	Truck / Rail		Jack Pittano Phone: 330-652-1456 Fax: 330-652-5167
Mechanicsburg, PA	Un-Staffed	Monday - Tuesday - Thursday Friday -	1100 - 1600 0700 - 1600 0700 - 1100	Truck / Rail	Binghamton, NY	Bill Guiton Phone: 607-773-2602 Fax: 607-773-2722
Belle Mead, NJ	Un-Staffed	Monday - Friday	0715 - 1400	Truck /	Somerville, NJ	James Farley Phone: (908) 725-6400
<i>Note 1: Prior arrangements required before material can be shipped</i>						
Moss Landing, CA	Un-Staffed	Monday - Friday	0700 - 1500	Truck / Rail	Clearfield, UT	Leonard Dillon Phone: (209) 982-9621
<i>Note 1: Prior arrangements required before material can be shipped</i>						

Point of Contact

Defense Logistics Agency
Defense National Stockpile Center
Attn: Robert F Clark
8725 John J Kingman Road, Suite 3229
Fort Belvoir, VA 22060-6223

Telephone Number: (703) 767-7614
Facsimile Number: (703) 767-7608

Shipping Request Number: _____

J.3 Shipping Instructions (JAN 03)

1. a. Contractor: _____

b. Point of Contact: _____ c. Telephone No.: _____

2. a. DNSC Contract No.: _____ b. Commodity: _____

3. Item/Pile: _____

4. Depot: _____

5. a. Quantity: _____

b. Unit Price: _____ c. Total Dollar Value: _____

6. Shipping Method: _____

7. a. Carrier Name: _____

b. Point of Contact: _____ c. Telephone No.: _____

8. Date Shipment Desired: _____

9. Ship To: _____

10. Minimum Load: _____

11. a. Outloader: _____ b. Telephone No.: _____

12. a. Sampler: _____ b. Telephone No.: _____

13. Copy of Payment Attached: Yes No

14. Remarks: _____

15. Contractor's Signature: _____

Date

Telephone

16. Shipment Approved and Authorized: _____

Contracting Officer

Date

J.4 Material Safety Data Sheet (JAN 03)

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SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

-

DEFENSE LOGISTICS AGENCY
DEFENSE NATIONAL STOCKPILE CENTER
8725 JOHN J. KINGMAN ROAD
SUITE 3339
FORT BELVOIR, VA 22060-6223

EMERGENCY TELEPHONE NUMBER:
1-800-424-9300 (NORTH AMERICA)
1-703-527-3887 (INTERNATIONAL)

SUBSTANCE: CHROMITE, CHEMICAL GRADE

TRADE NAMES/SYNONYMS:
DLANA396

CREATION DATE: Sep 25 1992
REVISION DATE: Mar 22 2001

-
SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

-

COMPONENT: CHROMIUM(III) OXIDE
CAS NUMBER: 1308-38-9
EC NUMBER (EINECS): 215-160-9
PERCENTAGE: >44.5

COMPONENT: SILICON DIOXIDE
CAS NUMBER: 7631-86-9
EC NUMBER (EINECS): 231-545-4
PERCENTAGE: <2.5

COMPONENT: VANADIUM
CAS NUMBER: 7440-62-2
EC NUMBER (EINECS): 231-171-1
PERCENTAGE: <0.25

-
SECTION 3 HAZARDS IDENTIFICATION

-

NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=0 REACTIVITY=0

EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: Solid.

MAJOR HEALTH HAZARDS: cancer hazard (in humans)

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation, chest pain

LONG TERM EXPOSURE: chest pain, difficulty breathing, lung damage, tumors, cancer

SKIN CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: same as effects reported in short term exposure

EYE CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: no information on significant adverse effects

INGESTION:

SHORT TERM EXPOSURE: digestive disorders, tumors

LONG TERM EXPOSURE: no information on significant adverse effects

CARCINOGEN STATUS:

OSHA: No

NTP: Yes

IARC: Yes

SECTION 4 FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: If a large amount is swallowed, get medical attention.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: Use extinguishing agents appropriate for surrounding fire.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

WATER RELEASE:

Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:

Large spills: Collect spilled material in appropriate container for disposal. Avoid generating dust. Clean up residue with a high-efficiency particulate filter vacuum.

SECTION 7 HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

CHROMIUM(III) OXIDE:

CHROMIUM, CHROMIC AND CHROMOUS COMPOUNDS (as Cr):

- 0.5 mg/m³ OSHA TWA (soluble salts)
- 1 mg/m³ OSHA TWA (insoluble salts)
- 0.5 mg/m³ ACGIH TWA
- 0.5 mg/m³ NIOSH recommended TWA 10 hour(s)
- 0.5 mg/m³ UK OES TWA (chromium (II) compounds) (chromium (III) compounds)

MEASUREMENT METHOD: Particulate filter; Acid; Flame atomic absorption spectrometry; NIOSH IV # 7024, Chromium

SILICON DIOXIDE:

SILICON DIOXIDE, AMORPHOUS (SILICA, AMORPHOUS):

- 6 mg/m³ OSHA TWA (<1% crystalline silica)
- 10 mg/m³ ACGIH TWA (total particulate) (<1% quartz)
- 6 mg/m³ NIOSH recommended TWA 10 hour(s)
- 4 mg/m³ DFG MAK (inhalable dust fraction)
- 6 mg/m³ UK OES TWA (total inhalable dust)
- 2.4 mg/m³ UK OES TWA (respirable dust)

MEASUREMENT METHOD: Particulate filter; Low-temperature ashing; X-ray diffraction spectrometry; NIOSH IV # 7501

QUARTZ:

- 0.3 mg/m³ OSHA TWA (total particulate)
- 0.1 mg/m³ OSHA TWA (respirable particulate)

0.05 mg/m3 ACGIH TWA (respirable fraction)
0.05 mg/m3 NIOSH recommended TWA 10 hour(s) (respirable dust)
0.3 mg/m3 UK MEL TWA (respirable particulate)

MEASUREMENT METHOD: Particulate filter; Low-temperature ashing; X-ray diffraction spectrometry; NIOSH IV # 7500; ALSO # 7601, # 7602

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

- Any dust, mist, and fume respirator.
- Any air-purifying respirator with a high-efficiency particulate filter.
- Any powered, air-purifying respirator with a dust, mist, and fume filter.
- Any powered, air-purifying respirator with a high-efficiency particulate filter.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

- Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
- Any self-contained breathing apparatus with a full facepiece.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Solid.
BOILING POINT: Not applicable
MELTING POINT: Not available
VAPOR PRESSURE: Not applicable
VAPOR DENSITY: Not applicable
SPECIFIC GRAVITY: Not available
WATER SOLUBILITY: Not available
PH: Not applicable
VOLATILITY: Not applicable
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

-
SECTION 10 STABILITY AND REACTIVITY

-

REACTIVITY: Stable at normal temperatures and pressure.

INCOMPATIBILITIES: halogens, metals, combustible materials, oxidizing materials, metal carbide, acids, metal salts

CHROMIUM(III) OXIDE:

CHLORINE TRIFLUORIDE: Violent reaction with possible ignition.

COPPER CHROMITE: Possible ignition reaction.

GLYCEROL: Possible explosion reaction.

LITHIUM: Violent exothermic reaction at 180 C.

NITROALKANES: Possible explosion reaction.

OXIDIZERS: Incompatible.

OXYGEN DIFLUORIDE: Vigorous reaction.

RUBIDIUM ACETYLIDE: Exothermic reaction.

SILICON DIOXIDE:

CHLORINE TRIFLUORIDE: Fire hazard.

FLUORINE: Fire hazard.

HYDROCHLORIC ACID + WATER: Explosion hazard with gel form.

HYDROFLUORIC ACID: Dissolves, releasing silicon tetrafluoride.

HYDROGEN FLUORIDE: Incompatible.

HYDROGENATED VEGETABLE OILS: Incompatible.

MAGNESIUM (POWDERED): Explosion hazard on heating in the presence of moisture.

MANGANESE TRIFLUORIDE: May react violently on heating, releasing silicon tetrafluoride.

OXIDIZERS (STRONG): Fire and explosion hazard.

OXYGEN DIFLUORIDE: Explosion hazard under certain conditions and in the presence of moisture.

OZONE: Potential explosion hazard at low temperatures if organic material is present.

PHOSPHORIC ACID (CONCENTRATED): Attacks on heating.

SODIUM (BURNING): Reacts with finely divided silica.

VINYL ACETATE (VAPOR): May react vigorously with gel form.

XENON HEXAFLUORIDE: May react explosively by forming xenon trioxide.

HAZARDOUS DECOMPOSITION:

Thermal decomposition products: miscellaneous decomposition products

POLYMERIZATION: Will not polymerize.

SECTION 11 TOXICOLOGICAL INFORMATION

CHROMIUM(III) OXIDE:

TOXICITY DATA:

150 mg/m³/4 hour(s)-6 week(s) intermittent inhalation-rat TCLO; 15 mg/m³/6 hour(s)-13 week(s) intermittent inhalation-rat TCLO

CARCINOGEN STATUS: IARC: Human Inadequate Evidence, Animal Inadequate Evidence, Group 3 (Trivalent chromium compounds); ACGIH: A4 -Not Classifiable as a Human Carcinogen (Trivalent chromium compounds)

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: skin disorders and allergies

TUMORIGENIC DATA:

90 mg/kg intraperitoneal-rat TDLo; 45 mg/kg intrapleural-rat TDLo; 90 mg/kg intratracheal-rat TDLo

MUTAGENIC DATA:

mutation in microorganisms - Salmonella typhimurium 10 ug/plate (+S9); DNA repair - Bacillus subtilis 10 mmol/L; other mutation test systems - hamster lung 100 mg/L; sister chromatid exchange - hamster lung 34 mg/L; mutation in

mammalian somatic cells - hamster lung 50 mg/L

ADDITIONAL DATA: May cross the placenta.

SILICON DIOXIDE:

CARCINOGEN STATUS: IARC: Human Limited Evidence, Animal Sufficient Evidence, Group 2A (Crystalline silica), Human Inadequate Evidence, Animal Inadequate Evidence, Group 3 (Amorphous silica); EC: Category 2

Adenocarcinomas and squamous-cell carcinomas of the lung in rats were produced after inhalation or repeated intratracheal instillation of various forms of crystalline silica.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders

QUARTZ:

TOXICITY DATA:

16 mppcf/8 hour(s)-17.9 year(s) intermittent inhalation-human TCLO; 300 ug/m³/10 year(s) intermittent inhalation-human LCLo; 90 mg/kg intravenous-rat LDLo; 200 mg/kg intratracheal-rat LDLo; 40 mg/kg intravenous-mouse LDLo; >20 mg/kg intratracheal-mouse LD; 20 mg/kg intravenous-dog LDLo; 80 mg/m³/26 week(s) intermittent inhalation-rat TCLO; 108 mg/m³/6 hour(s)-3 day(s) intermittent inhalation-rat TCLO; 58 mg/m³/13 week(s) intermittent inhalation-rat TCLO; 1475 ug/m³/8 hour(s)-21 week(s) intermittent inhalation-mouse TCLO; 4932 ug/m³/24 hour(s)-39 week(s) continuous inhalation-mouse TCLO; 28 mg/m³/3 week(s) intermittent inhalation-guinea pig TCLO; 3 mg/m³/6 hour(s)-78 week(s) intermittent inhalation-hamster TCLO; 1000 gm/m³/10 day(s) intermittent inhalation-domestic animal TCLO

CARCINOGEN STATUS: NTP: Known Human Carcinogen; IARC: Human Sufficient Evidence, Animal Sufficient Evidence, Group 1; EC: Category 2

Adenocarcinomas and squamous-cell carcinomas of the lung in rats were produced after inhalation or repeated intratracheal instillation of various forms of crystalline silica. Malignant lymphomas developed in rats after intrapleural and intraperitoneal injections of quartz suspensions and intrapleural injection of cristobalite and tridymite.

Epidemiologic studies indicate lung cancer occurs more frequently among silicotics than in the general population.

ACUTE TOXICITY LEVEL: Insufficient Data.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders

TUMORIGENIC DATA:

50 mg/m³ inhalation-rat TCl₀/6 hour(s)-71 week(s) intermittent; 45 mg/kg Intraperitoneal-rat TDLo; 90 mg/kg intravenous-rat TDLo; 90 mg/kg intrapleural-rat TDLo; 111 mg/kg intratracheal-rat TDLo; 100 mg/kg intratracheal-rat TDLo/19 week(s) intermittent; 900 mg/kg implant-rat TDLo; 4000 mg/kg implant-mouse TDLo; 83 mg/kg intrapleural-hamster TDLo; 90 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 450 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 4554 mg/kg implant-rat TD; 200 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD

MUTAGENIC DATA:

micronucleus test - human lung 40 ug/cm²; micronucleus test - hamster lung 160 ug/cm²

ADDITIONAL DATA: Smoking may enhance the toxic effects.

HEALTH EFFECTS:

INHALATION:

CHROMIUM(III) OXIDE: See information on trivalent chromium compounds. May cause irritation, coughing and chest discomfort. Intratracheal administration induced an increased incidence of sarcomas, tumors, and reticulum cell sarcomas of reticulum cell sarcomas of the lung in rats.

ACUTE EXPOSURE:

TRIVALENT CHROMIUM COMPOUNDS: Animal studies indicate absorption from the lungs is slow following intratracheal administration. Allergic reactions may occur in previously exposed persons.

SILICON DIOXIDE: Dusts may cause irritation of the respiratory tract and coughing.

QUARTZ: Exposure to high concentrations may cause physical discomfort of the upper respiratory tract.

CHRONIC EXPOSURE:

TRIVALENT CHROMIUM COMPOUNDS: Repeated exposure may lead to sensitization.

Pneumoconiosis has been reported. Irritation of the bronchus and lung parenchyma, dystrophic changes of the liver and kidneys, and pulmonary adenomas have been reported to occur in animals. Adverse effects on macrophages were reported in rabbits exposed for 4-6 weeks.

SILICON DIOXIDE: Exposure to dusts of crystalline or amorphous silica for 6 months to 30 years may result in silicosis with symptoms of cough, chest pain, dyspnea, tachypnea, marked weakness and weight loss. This pulmonary insufficiency may be characterized by diffuse nodular fibrosis, distortion of bronchi, diminished chest expansion, decreased vital capacity and compensatory and bullous emphysema. Although pulmonary fibrosis has been reported from workers exposed to amorphous silica, the crystalline form is the established cause of fibrotic response in the lung. However, the amorphous form has been reported fibrogenic to a lesser extent. As the disease progresses, cor pulmonale, cardiorespiratory failure, and death may occur. Various forms and preparations of crystalline silica produced adenocarcinomas and squamous cell carcinomas of the lungs in rats.

QUARTZ: Inhalation of very high concentrations of finely divided crystalline silica dust, exposure ranging from a few weeks to 4-5 years, may cause a rapidly developing silicosis, characterized by pulmonary insufficiency with severe dyspnea, violent coughing, tachypnea, weight loss, and cyanosis leading to the development of cor pulmonale and death within a relatively short period of time. A slowly developing silicosis may result from exposure for 6 months-30 years to relatively low levels of the dust. The first symptom is usually a slowly increasing, non-disabling, exertional dyspnea due to pulmonary fibrosis and the emphysema associated with it. Continued exposure may increase the rate of progression of the disease. Also, the fibrogenic action may continue when exposure ceases. As the fibrosis advances, other symptoms may include shortness of breath, productive cough, wheezing, chest tightness or pain, marked weakness, decreased capacity for work, and repeated non-specific chest illnesses. Cyanosis, clubbing of digits, orthopnea, or serious weight loss are not usually evident until the disease is advanced. Pulmonary infections, which may be indicated by hemoptysis, and cardiac decompensation may exacerbate the symptoms. Three major complications, which are the most frequent causes of death, are pulmonary tuberculosis, respiratory insufficiency which is due to the massive emphysematous and fibrotic changes and is sometimes accompanied by chronic cor pulmonale, and acute bronchopulmonary infection. A number of studies have shown that persons diagnosed as having silicosis have an increased risk for dying from lung cancer. This increase has been seen among miners, quarry workers, foundry workers, ceramic workers, granite workers, and stone cutters. In some of these studies, the risk of lung cancer increased with the duration of employment. Various forms and preparations of crystalline silica produced adenocarcinomas and squamous cell carcinomas of the lungs in rats.

SKIN CONTACT:

CHROMIUM(III) OXIDE: See information on trivalent chromium compounds.

ACUTE EXPOSURE:

TRIVALENT CHROMIUM COMPOUNDS: May cause contact dermatitis. Allergic reactions may occur in previously exposed persons.

SILICON DIOXIDE: Prolonged skin contact with dry particulate may cause drying of the skin.

QUARTZ: May cause irritation of intact skin due to mechanical abrasion. If the skin is abraded, a heavy growth of scar tissue may be induced.

CHRONIC EXPOSURE:

TRIVALENT CHROMIUM COMPOUNDS: Repeated contact may cause dermatitis and sensitization.

SILICON DIOXIDE: No data available.

QUARTZ: No data available.

EYE CONTACT:**ACUTE EXPOSURE:**

CHROMIUM(III) OXIDE: May cause irritation.

SILICON DIOXIDE: Dusts may cause irritation with redness and pain.

QUARTZ: May cause irritation due to mechanical action. Particles of Silica in the range of 2-3 micrometers introduced into the corneal stroma of rabbit eyes caused very little reaction. These same particles introduced into the anterior chamber resulted in an inflammatory reaction in 3-5 weeks with the formation of fibrotic nodules in the iridocorneal angle. Finely divided silica injected into the vitreous of rabbit eyes has caused necrosis of the retina and atrophy of the choroid.

CHRONIC EXPOSURE:

CHROMIUM(III) OXIDE: No data available.

SILICON DIOXIDE: No data available.

QUARTZ: An abnormally high silicon content in the cornea, and a gradual decrease in visual acuity due to corneal opacities in the pupillary area, have been reported in a group of foundry workers.

INGESTION:

CHROMIUM(III) OXIDE: See information on trivalent chromium compounds. May cause gastrointestinal irritation. An increased incidence of mammary fibroadenomas was reported in rats when administered in the diet.

ACUTE EXPOSURE:

TRIVALENT CHROMIUM COMPOUNDS: May not be readily absorbed from the gastrointestinal tract.

SILICON DIOXIDE: The effects of ingestion are purely mechanical as the substance is inert chemically and biologically by this route.

QUARTZ: Effects of ingestion are due to mechanical action as crystalline silicas are biologically inert.

CHRONIC EXPOSURE:

TRIVALENT CHROMIUM COMPOUNDS: Administration of 0.45-25 ppm/1 year in drinking water was non-toxic to rats.

SILICON DIOXIDE: No data available.

QUARTZ: No data available.

-
SECTION 12 ECOLOGICAL INFORMATION

-

Not available

-
SECTION 13 DISPOSAL CONSIDERATIONS

-

Dispose in accordance with all applicable regulations.

-
SECTION 14 TRANSPORT INFORMATION

-

U.S. DEPARTMENT OF TRANSPORTATION: No classification assigned.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

LAND TRANSPORT ADR/RID: No classification assigned.

AIR TRANSPORT IATA/ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

-
SECTION 15 REGULATORY INFORMATION

-

U.S. REGULATIONS:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):
Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40):
Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: No
CHRONIC: No
FIRE: No
REACTIVE: No
SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65):
CHROMIUM, CHROMIC AND CHROMOUS COMPOUNDS (as Cr)

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65:

Known to the state of California to cause the following:
Silica, crystalline (airborne particles of respirable size)
Cancer (Oct 01, 1988)

CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: Not determined.

EUROPEAN REGULATIONS:

EC CLASSIFICATION (CALCULATED): Not determined.

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

-
SECTION 16 OTHER INFORMATION

-

MSDS SUMMARY OF CHANGES

SECTION 3 HAZARDS IDENTIFICATION
SECTION 7 HANDLING AND STORAGE
SECTION 11 TOXICOLOGICAL INFORMATION
SECTION 14 TRANSPORT INFORMATION
SECTION 15 REGULATORY INFORMATION

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SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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DEFENSE LOGISTICS AGENCY
DEFENSE NATIONAL STOCKPILE CENTER
8725 JOHN J. KINGMAN ROAD
SUITE 3339
FORT BELVOIR, VA 22060-6223

EMERGENCY TELEPHONE NUMBER:
1-800-424-9300 (NORTH AMERICA)
1-703-527-3887 (INTERNATIONAL)

SUBSTANCE: BAUXITE, REFRACTORY

TRADE NAMES/SYNONYMS:
DLA05234

CREATION DATE: Jul 01 1992
REVISION DATE: Jun 17 2002

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SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

-

COMPONENT: ALUMINUM OXIDE
CAS NUMBER: 1344-28-1
EC NUMBER (EINECS): 215-691-6
PERCENTAGE: >86.50

COMPONENT: SILICON DIOXIDE
CAS NUMBER: 7631-86-9

EC NUMBER (EINECS): 231-545-4
PERCENTAGE: <7.00

COMPONENT: TITANIUM DIOXIDE
CAS NUMBER: 13463-67-7
EC NUMBER (EINECS): 236-675-5
PERCENTAGE: <3.75

COMPONENT: FERRIC OXIDE RED
CAS NUMBER: 1309-37-1
EC NUMBER (EINECS): 215-168-2
PERCENTAGE: <2.50

COMPONENT: SODIUM MONOXIDE
CAS NUMBER: 12401-86-4
EC NUMBER (EINECS): 235-641-7
PERCENTAGE: <0.30

COMPONENT: MAGNESIUM OXIDE
CAS NUMBER: 1309-48-4
EC NUMBER (EINECS): 215-171-9
PERCENTAGE: <0.30

COMPONENT: CALCIUM OXIDE
CAS NUMBER: 1305-78-8
EC NUMBER (EINECS): 215-138-9

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PERCENTAGE: <0.30

COMPONENT: POTASSIUM OXIDE
CAS NUMBER: 12136-45-7
EC NUMBER (EINECS): 235-227-6
PERCENTAGE: <0.20

COMPONENT: WATER
CAS NUMBER: 7732-18-5
EC NUMBER (EINECS): 231-791-2
PERCENTAGE: <0.50

-
SECTION 3 HAZARDS IDENTIFICATION

-

NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=0 REACTIVITY=0

EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: Odorless, white crystals or powder.
MAJOR HEALTH HAZARDS: cancer hazard (in humans)

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation, metal fume fever, chest pain, difficulty breathing

LONG TERM EXPOSURE: irritation, weight loss, chest pain, difficulty breathing, lung damage, cancer
SKIN CONTACT:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: irritation
EYE CONTACT:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: eye damage
INGESTION:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: no information on significant adverse effects

CARCINOGEN STATUS:
OSHA: No
NTP: Yes
IARC: Yes

SECTION 4 FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

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INGESTION: If a large amount is swallowed, get medical attention.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: Use extinguishing agents appropriate for surrounding fire.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

-
SECTION 7 HANDLING AND STORAGE

-

STORAGE: Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

-
SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

-

EXPOSURE LIMITS:

BAUXITE, REFRACTORY:

ALUMINUM OXIDE (ALUMINA):

- 5 mg/m3 OSHA TWA (respirable dust fraction)
- 15 mg/m3 OSHA TWA (total dust)
- 10 mg/m3 OSHA TWA (total particulate) (vacated by 58 FR 35338, June 30, 1993)
- 10 mg/m3 ACGIH TWA
- 1.5 mg/m3 DFG MAK (respirable dust fraction)
- 1.5 mg/m3 DFG MAK (peak limitation category-II, 2) (respirable dust fraction) (fume)
- 0.25 fibers/cc AGS TRK (fibrous forms)
- 10 mg/m3 UK OES TWA (total inhalable dust)
- 4 mg/m3 UK OES TWA (respirable dust)

MEASUREMENT METHOD: Particulate filter; Gravimetric; NIOSH IV # 0500, Nuisance Dust (total), # 0600 (respirable)

SILICON DIOXIDE, AMORPHOUS (SILICA, AMORPHOUS):

6 mg/m³ OSHA TWA (<1% crystalline silica)
10 mg/m³ ACGIH TWA (total particulate) (<1% quartz)
6 mg/m³ NIOSH recommended TWA 10 hour(s)
4 mg/m³ DFG MAK (inhalable dust fraction)
6 mg/m³ UK OES TWA (total inhalable dust)
2.4 mg/m³ UK OES TWA (respirable dust)

MEASUREMENT METHOD: Particulate filter; Low-temperature ashing; X-ray diffraction spectrometry; NIOSH IV # 7501

IRON OXIDE DUST AND FUME (as Fe):

10 mg/m³ OSHA TWA (total particulate)
5 mg/m³ ACGIH TWA (total particulate)
5 mg/m³ NIOSH recommended TWA 10 hour(s) (total particulate)
1.5 mg/m³ DFG MAK (respirable dust fraction)
5 mg(Fe)/m³ UK OES TWA
10 mg(Fe)/m³ UK OES STEL

MEASUREMENT METHOD: Particulate filter; Acid; Inductively coupled plasma; NIOSH IV # 7300, Elements

TITANIUM DIOXIDE:

15 mg/m³ OSHA TWA (total dust)
10 mg/m³ OSHA TWA (total particulate) (vacated by 58 FR 35338, June 30, 1993)
10 mg/m³ ACGIH TWA
1.5 mg/m³ DFG MAK (respirable dust fraction)
10 mg/m³ UK OES TWA (total inhalable dust)
4 mg/m³ UK OES TWA (respirable dust)

MEASUREMENT METHOD: Particulate filter; Acid; Flame atomic absorption spectrometry; NIOSH II(3) # S385

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any dust, mist, and fume respirator.

Any air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a dust, mist, and fume filter.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a

pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL DESCRIPTION: Odorless, white crystals or powder.
BOILING POINT: Not applicable
MELTING POINT: Not available
VAPOR PRESSURE: Not applicable
VAPOR DENSITY: Not applicable
SPECIFIC GRAVITY (water=1): 2.0-2.55
WATER SOLUBILITY: insoluble
PH: Not applicable
VOLATILITY: Not applicable
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available
SOLVENT SOLUBILITY:
Decomposes: hydrochloric acid

-
SECTION 10 STABILITY AND REACTIVITY

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REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition.

Avoid contact with incompatible materials.

INCOMPATIBILITIES: halo carbons, halogens, combustible materials, oxidizing materials, acids, metals, metal salts, metal carbide, reducing agents, peroxides

ALUMINUM OXIDE (ALUMINA):

CHLORINATED RUBBER (HOT): Incompatible.
CHLORINE TRIFLUORIDE: Violent reaction and possible ignition.
ETHYLENE OXIDE: May initiate explosive polymerization.
HALOCARBONS: Exothermic reaction above 200 C.
HALOCARBONS + METALS: Exothermic reaction at ambient temperatures.
OXYGEN DIFLUORIDE: Exothermic reaction.
SODIUM NITRATE: May form explosive mixture.
VINYL ACETATE: Possible vigorous reaction.

FERRIC OXIDE RED:

ALUMINUM: Intense, exothermic reaction on ignition; may explode in the presence of water.
ALUMINUM-MAGNESIUM ALLOY (MOLTEN) + WATER: Violent reaction.
ALUMINUM-MAGNESIUM-ZINC ALLOY: May produce sparks on impact.

CALCIUM ACETYLIDE: Burns violently when ignited.

CALCIUM HYPOCHLORITE: May explode.

CARBON MONOXIDE: Possible explosion.

CESIUM ACETYLIDE (CESIUM CARBIDE): Incandescence on warming.

ETHYLENE OXIDE: Violently polymerizes, liberating heat.

GUANIDINIUM PERCHLORATE: Reduces the thermal stability of the salt.

HYDRAZINE: Incompatible.
HYDROGEN PEROXIDE: Decomposed.
MAGNESIUM: Violent reaction.
PERFORMIC ACID: Incompatible.
RUBIDIUM ACETYLIDE: Reacts exothermically.

TITANIUM DIOXIDE:

ALUMINUM: Reaction is accompanied by incandescence.
CALCIUM: Reaction is accompanied by incandescence.
LITHIUM: Reaction occurs around 200 C, with incandescence.
MAGNESIUM: Reaction is accompanied by incandescence.
POTASSIUM: Reaction is accompanied by incandescence.
SODIUM: Reaction is accompanied by incandescence.
ZINC: Reaction is accompanied by incandescence.

SILICON DIOXIDE:

CHLORINE TRIFLUORIDE: Fire hazard.
FLUORINE: Fire hazard.
HYDROCHLORIC ACID + WATER: Explosion hazard with gel form.
HYDROFLUORIC ACID: Dissolves, releasing silicon tetrafluoride.
HYDROGEN FLUORIDE: Incompatible.
HYDROGENATED VEGETABLE OILS: Incompatible.
MAGNESIUM (POWDERED): Explosion hazard on heating in the presence of moisture.
MANGANESE TRIFLUORIDE: May react violently on heating, releasing silicon tetrafluoride.
OXIDIZERS (STRONG): Fire and explosion hazard.
OXYGEN DIFLUORIDE: Explosion hazard under certain conditions and in the presence of moisture.
OZONE: Potential explosion hazard at low temperatures if organic material is present.
PHOSPHORIC ACID (CONCENTRATED): Attacks on heating.
SODIUM (BURNING): Reacts with finely divided silica.
VINYL ACETATE (VAPOR): May react vigorously with gel form.
XENON HEXAFLUORIDE: May react explosively by forming xenon trioxide.

HAZARDOUS DECOMPOSITION:

Thermal decomposition products: miscellaneous decomposition products

POLYMERIZATION: Will not polymerize.

SECTION 11 TOXICOLOGICAL INFORMATION

ALUMINUM OXIDE:

CARCINOGEN STATUS: ACGIH: A4 -Not Classifiable as a Human Carcinogen
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders
TUMORIGENIC DATA:
90 mg/kg intrapleural-rat TDLo; 200 mg/kg implant-rat TDLo; 200 mg/kg implant-rat TD

SILICON DIOXIDE:

CARCINOGEN STATUS: IARC: Human Limited Evidence, Animal Sufficient Evidence,
Group 2A (Crystalline silica), Human Inadequate Evidence, Animal Inadequate

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Evidence, Group 3 (Amorphous silica); EC: Category 2
Adenocarcinomas and squamous-cell carcinomas of the lung in rats were produced after inhalation or repeated intratracheal instillation of various forms of crystalline silica.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders

QUARTZ:

TOXICITY DATA:

16 mppcf/8 hour(s)-17.9 year(s) intermittent inhalation-human TCLo; 300 ug/m³/10 year(s) intermittent inhalation-human LCLo; 90 mg/kg intravenous-rat LDLo; 200 mg/kg intratracheal-rat LDLo; 40 mg/kg intravenous-mouse LDLo; >20 mg/kg intratracheal-mouse LD; 20 mg/kg intravenous-dog LDLo; 80 mg/m³/26 week(s) intermittent inhalation-rat TCLo; 108 mg/m³/6 hour(s)-3 day(s) intermittent inhalation-rat TCLo; 58 mg/m³/13 week(s) intermittent inhalation-rat TCLo; 1475 ug/m³/8 hour(s)-21 week(s) intermittent inhalation-mouse TCLo; 4932 ug/m³/24 hour(s)-39 week(s) continuous inhalation-mouse TCLo; 28 mg/m³/3 week(s) intermittent inhalation-guinea pig TCLo; 3 mg/m³/6 hour(s)-78 week(s) intermittent inhalation-hamster TCLo; 1000 gm/m³/10 day(s) intermittent inhalation-domestic animal TCLo

CARCINOGEN STATUS: NTP: Known Human Carcinogen; IARC: Human Sufficient Evidence, Animal Sufficient Evidence, Group 1; ACGIH: A2 -Suspected Human Carcinogen; EC: Category 2
Adenocarcinomas and squamous-cell carcinomas of the lung in rats were produced after inhalation or repeated intratracheal instillation of various forms of crystalline silica. Malignant lymphomas developed in rats after intrapleural and intraperitoneal injections of quartz suspensions and intrapleural injection of cristobalite and tridymite. Epidemiologic studies indicate lung cancer occurs more frequently among silicotics than in the general population.

ACUTE TOXICITY LEVEL: Insufficient Data.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders

TUMORIGENIC DATA:

50 mg/m³ inhalation-rat TCLo/6 hour(s)-71 week(s) intermittent; 45 mg/kg intraperitoneal-rat TDLo; 90 mg/kg intravenous-rat TDLo; 90 mg/kg intrapleural-rat TDLo; 111 mg/kg intratracheal-rat TDLo; 100 mg/kg intratracheal-rat TDLo/19 week(s) intermittent; 900 mg/kg implant-rat TDLo; 4000 mg/kg implant-mouse TDLo; 83 mg/kg intrapleural-hamster TDLo; 90 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 450 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 4554 mg/kg implant-rat TD; 200 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD

MUTAGENIC DATA:

micronucleus test - human lung 40 ug/cm²; micronucleus test - hamster lung 160 ug/cm²

ADDITIONAL DATA: Smoking may enhance the toxic effects.

TITANIUM DIOXIDE:

IRRITATION DATA:

300 ug/3 day(s)-intermittent skin-human mild

TOXICITY DATA:

6820 mg/m³/4 hour(s) inhalation-rat LC50; >24000 mg/kg oral-rat LD50; >100 ug/kg intratracheal-rat LD; 250 mg/m³/6 hour(s)-4 week(s) intermittent

inhalation-rat TCLo; 50 mg/m³/6 hour(s)-13 week(s) intermittent

inhalation-rat TCLo; 10 mg/m³/6 hour(s)-13 week(s) intermittent

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inhalation-mouse TCLo; 250 mg/m³/6 hour(s)-13 week(s) intermittent
inhalation-hamster TCLo

CARCINOGEN STATUS: IARC: Human Inadequate Evidence, Animal Limited Evidence, Group 3; ACGIH: A4 -Not Classifiable as a Human Carcinogen

Increased incidences of lung adenomas in rats of both sexes and of cystic keratinizing lesions diagnosed as squamous-cell carcinomas in female rats were observed in animals that had inhaled high but not low doses of

titanium

dioxide. Intratracheal administration of titanium dioxide in combination with benzo(a)pyrene to hamsters resulted in an increase in the incidence of benign and malignant tumors of the larynx, trachea and lungs over that in benzo(a)pyrene-treated controls.

ACUTE TOXICITY LEVEL:

Moderately Toxic: inhalation

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders

TUMORIGENIC DATA:

250 mg/m³ inhalation-rat TCLo/6 hour(s)-2 year(s) intermittent; 360 mg/kg intramuscular-rat TDLo/2 year(s) intermittent; 260 mg/kg intramuscular-rat TD/84 week(s) intermittent; 10 mg/m³ inhalation-rat TC/18 hour(s)-2 year(s) intermittent

MUTAGENIC DATA:

micronucleus test - mouse intraperitoneal 3 gm/kg 3 day(s)-continuous;
micronucleus test - hamster ovary 5 umol/L; DNA inhibition - hamster lung 500 mg/L; sister chromatid exchange - hamster ovary 1 umol/L

FERRIC OXIDE RED:

TOXICITY DATA:

30 mg/kg subcutaneous-dog LDLo; 500 ug/m³/24 hour(s)-61 day(s) continuous inhalation-rat TCLo

CARCINOGEN STATUS: IARC: Human Inadequate Evidence, Animal Evidence Suggesting

Lack of Carcinogenicity, Group 3; ACGIH: A4 -Not Classifiable as a Human Carcinogen

ACUTE TOXICITY LEVEL: Insufficient Data.

TUMORIGENIC DATA:

135 mg/kg subcutaneous-rat TDLo

HEALTH EFFECTS:

INHALATION:

ALUMINUM OXIDE (ALUMINA): Inhalation of high concentrations may cause coughing, shortness of breath, respiratory tract irritation due to mechanical action, unpleasant deposits in the nasal passages, and exacerbation of symptoms in persons with impaired pulmonary function.

Humans

exposed chronically to aluminum oxide, particle size approximately 1.2 microns, did not experience either systemic or respiratory adverse effects. Hydrated aluminum oxide, injected intratracheally, produced dense and numerous nodules of advanced fibrosis in rats, a reticulin network with occasional collagen fibers in mice and guinea pigs, and only a slight reticulin network in rabbits. A production process in which aluminum oxide (bauxite), iron, coke, and silica are fused at 2000 C poses a threat of Shaver's disease, a rapidly progressive and often fatal interstitial fibrosis of the lungs. See information on metal fume fever.

SILICON DIOXIDE: CARCINOGEN (CRYSTALLINE SILICA).

FERRIC OXIDE RED: See information on metal fume fever. Chronic exposure may cause dyspnea and chronic bronchitis. Repeated exposure, usually from 6-10

years, to iron oxide dust or fume may cause a benign pneumoconiosis (siderosis) which may cause X-ray shadows that can be indistinguishable from fibrotic pneumoconiosis.

ACUTE EXPOSURE:

METAL FUME FEVER: Metal fume fever, an influenza-like illness, may occur due to the inhalation of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed

4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur. Tolerance to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.

SILICON DIOXIDE: Dusts may cause irritation of the respiratory tract and coughing.

TITANIUM DIOXIDE: Inhalation may cause irritation and coughing. Nuisance dusts may cause unpleasant deposits in the nasal passages.

CHRONIC EXPOSURE:

METAL FUME FEVER: There is no form of chronic metal fume fever, however, repeated bouts with symptoms as described above are quite common. Resistance to the condition develops after a few days of exposure, but is quickly lost in 1 or 2 days.

SILICON DIOXIDE: Exposure to dusts of crystalline or amorphous silica for 6 months to 30 years may result in silicosis with symptoms of cough, chest

pain, dyspnea, tachypnea, marked weakness and weight loss. This pulmonary insufficiency may be characterised by diffuse nodular fibrosis, distortion

of bronchi, diminished chest expansion, decreased vital capacity and compensatory and bullous emphysema. Although pulmonary fibrosis has been reported from workers exposed to amorphous silica, the crystalline form is

the established cause of fibrotic response in the lung. However, the amorphous form has been reported fibrogenic to a lesser extent. As the disease progresses, cor pulmonale, cardiorespiratory failure, and death may occur. Various forms and preparations of crystalline silica produced adenocarcinomas and squamous cell carcinomas of the lungs in rats.

TITANIUM DIOXIDE: A few cases of slight fibrosis without disabling injury have been reported from occupational exposure. Rats repeatedly exposed to concentrations of 10-328 million particles/ft³ for as long as 13 months showed small focal areas of emphysema which were attributed to large deposits of dust. Rats exposed to concentrations of 10, 50, and 250 mg/m³ for 6 hours/day, 5 days/week for 2 years showed no abnormal clinical signs, body weight changes, or excess mortality in any exposed group.

There were however dose-dependent increases in the incidence of pneumonia, tracheitis and rhinitis with squamous metaplasia in the anterior nasal cavity. At 10 mg/m³, the pulmonary response satisfied the criteria for a nuisance dust. Bronchioalveolar adenomas and cystic keratinizing squamous cell carcinomas occurred only at the 250 mg/m³ level, twenty-five times

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the threshold limit value. These lung tumors were different from common human lung cancers in terms of tumor type, location, and tumorigenesis, and were devoid of tumor metastasis.

SKIN CONTACT:

ACUTE EXPOSURE:

ALUMINUM OXIDE (ALUMINA): Contact may cause an irritant dermatitis accompanied by pruritis.

SILICON DIOXIDE: Prolonged skin contact with dry particulate may cause drying of the skin.

FERRIC OXIDE RED: No data available.

TITANIUM DIOXIDE: Topically it is reported to be devoid of toxicity and chemically non-irritating. However, titanium dioxide may occasionally be so occlusive that it produces miliaria.

CHRONIC EXPOSURE:

ALUMINUM OXIDE (ALUMINA): No data available.

SILICON DIOXIDE: No data available.

FERRIC OXIDE RED: No data available.

TITANIUM DIOXIDE: Application of 300 ug for 3 days intermittently to human skin produced mild irritation.

EYE CONTACT:

ACUTE EXPOSURE:

ALUMINUM OXIDE (ALUMINA): Dust may cause mechanical irritation with redness and possibly swelling of the conjunctiva.

SILICON DIOXIDE: Dusts may cause irritation with redness and pain.

FERRIC OXIDE RED: Particles of iron or iron compounds which become imbedded in the eye may cause siderosis with varied effects. Discoloring of the iris to yellowish green or brown is the earliest and most common sign of siderosis.

TITANIUM DIOXIDE: Introduction by tattooing into the cornea of rabbit eyes and patients with corneal scars resulted in permanent white coloration, but no irritation.

CHRONIC EXPOSURE:

ALUMINUM OXIDE (ALUMINA): No data available.

SILICON DIOXIDE: No data available.

FERRIC OXIDE RED: No data available.

TITANIUM DIOXIDE: No data available.

INGESTION:

ACUTE EXPOSURE:

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ALUMINUM OXIDE (ALUMINA): No data available.

SILICON DIOXIDE: The effects of ingestion are purely mechanical as the substance is inert chemically and biologically.

FERRIC OXIDE RED: No data available.

TITANIUM DIOXIDE: Titanium dioxide has been reported to be physiologically inert. Ingestion of large quantities may cause intestinal obstruction. However, a pound has been ingested without apparent harm or distress.

CHRONIC EXPOSURE:

ALUMINUM OXIDE (ALUMINA): Some aluminum compounds cause constipation.

SILICON DIOXIDE: No data available.

FERRIC OXIDE RED: No data available.

TITANIUM DIOXIDE: Mice and rats fed 50,000 and 25,000 ppm for 103 weeks showed no evidence of toxicity and no increased incidence of tumors.

SECTION 12 ECOLOGICAL INFORMATION

Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

SECTION 14 TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: No classification assigned.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

LAND TRANSPORT ADR/RID: No classification assigned.

AIR TRANSPORT IATA/ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

SECTION 15 REGULATORY INFORMATION

U.S. REGULATIONS:

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):
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Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40):
Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: No
CHRONIC: Yes
FIRE: No
REACTIVE: No
SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65):
ALUMINUM OXIDE (ALUMINA): fibrous forms

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65: Not regulated.

CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: Not determined.

EUROPEAN REGULATIONS:

EC CLASSIFICATION (CALCULATED): Not determined.

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): Not listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

SECTION 16 OTHER INFORMATION

MSDS SUMMARY OF CHANGES

SECTION 3 HAZARDS IDENTIFICATION
SECTION 11 TOXICOLOGICAL INFORMATION

J.5 Fedwire Procedures (JAN 95)

The Sender should use a bank that offers wire transfer capability. The Federal Reserve Bank of New York will then process the money for deposit to the Defense National Stockpile Account with the Department of the Treasury.

PROCEDURES FOR DEPOSIT SLIP(S) FOR FEDWIRE:

To ensure the funds are credited to the Defense National Stockpile Center the following information is required on any wire transfer of funds.

1. Treasury Dept. Code – Routing No. to the Treasury
MUST BE ON SLIP "021030004".
2. Amount of funds to be transferred.
3. Treasury Department Name – **This item is critical** –
MUST APPEAR EXACTLY AS SHOWN BELOW
TREAS NYC/(CTR/BNF=/AC-00006355)
4. Third Party Information – Purchaser's Name, Commodity, and Contract Number.