DELHI TRANSCO LIMITED

WEB NOTIFICATION

Short term Sealed quotation / tender are invited in the office of D.G.M.(T) O&M) (East), Room No. 105, 220KV Office Complex, PatparGanj, Delhi-110 092 from the experienced companies/contractors in relevant business for the following works:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Quotation/ Tender Enquiry No.</th>
<th>Name of Work</th>
<th>Estimated Cost(Rs)</th>
<th>Earnest Money Deposit (EMD) (Rs)</th>
<th>Quotation /Tender Fee(Rs)</th>
<th>Work Completion period</th>
<th>Scheduled Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F.DTL/206/2019-20/Mgr(T) O&amp;M-E-III/TR-771/Q31/48 dt 05.02.2020</td>
<td>supply and application of various arresting materials at 220 kv S/stn Park Street.</td>
<td>N/A</td>
<td>Rs.1000/- per document (Non-Refundable) inclusive of 18%GST</td>
<td>Rs.590/-</td>
<td>15 days from the date of receiving of purchase order</td>
<td>Start of Sale of Quotation /Tender 05-02-20 at 10.00 A.M.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Start of bid submission of quotation 05-02-20 at 11.00 A.M.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>End of Sale of Quotation /Tender 11-02-20 at 5:00PM</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>End of Bid Submission 12-02-20 at 10:30 A.M.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Opening of Quotation/ Tender 12-02-20 at 11:30 AM</td>
</tr>
</tbody>
</table>

The quotation form & other documents can be obtained from office of Manager (T) O&M-II, E-III, 220 KV Grid Sub-Stn. Kashmere Gate, Kudasiya Ghat, Opp ISBT New Delhi-110006, after furnishing a request & requisite amount of fee Rs.590/- non-refundable in the form of Bank Draft / Demand Draft / Pay Order in favour of DELHI TRANSCO LIMITED; payable at Delhi. In case the enquiry document is downloaded from the website then the enquiry document fee should be enclosed with offer by clearly specifying the same on the face of offer envelop. The request for purchasing of quotation document should be made on original letter head of the party and should contain the signature along with seal/stamp of contractor showing his competency as partnership, proprietorship, authorized signatory etc. In case the request is to issue the quotation document to the bearer of the application then the request should contain clearly the name of the bearer and attested/authenticated signature of the bearer of the application.
These things should also be clarified while submitting offer and other documents with the offer. In case of any difference in the address in the documents submitted by the contractor then that should also be clarified properly. The quotation will be submitted & opened at Office of D.G.M.(T) O&M) (East) , Room No. 105, 220KV Office Complex, PatparGanj, Delhi-110 092 . Complete Quotation/Tender documents can also be downloaded from the website of DTL http://www.dtl.gov.in.

NOTE:

1. In case the enquiry document is downloaded from the web site then the enquiry document fee should be enclosed with offer, clearly specifying the same on the face of offer envelop.
2. The face of the envelope of quotation/enquiry must have following details, failing which the Quotation shall not be opened/considered & liable to be rejected.
   a) Name of work/supply.
   b) Enquiry No. / Tender No. with Date.
   c) Date of opening.
   d) Details of Earnest money & Quotation/Enquiry document fee, DD/Pay Order No. with Date and Amount., Name of Bank & Branch.
   e) Name and address of the party.
   f) Registration No., if any.
   g) Validity period of quotation must be 120 days from the date of opening.
3. Incomplete quotations are liable to be rejected. Offer must be signed by the contractor with rubber stamp.
4. Rates quoted should be inclusive of all taxes & duties etc.

Other terms and conditions as per Annexure -‘A’ shall also be applicable.

Manager (T) O&M, E-3
Subject: Supply and application of various arresting materials at 220 kv S/stn Park Street.

It is requested to quote the rates in the following format with terms and conditions mentioned hereunder and as per Annexure-“A”, enclosed herewith in the sealed envelope:-

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>DESCRIPTION</th>
<th>QTY.</th>
<th>UNIT RATE IN (Rs.)</th>
<th>AMOUNT IN (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3 M Scotchfillputy 38 mm*1.5 Mtr</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3 M Scotch 70 tape 1&quot;* 30 ft</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3 M Scotch 1626 Spray</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3 M Scotch Spray 1605</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Service/application charges</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Amount Exclusive of Taxes

Taxes GST @ 18%

Total Amount inclusive of Taxes

**NOTE:**
1. In case the enquiry document is downloaded from the web site then the enquiry document fee should be enclosed with offer, clearly specifying the same on the face of offerenvelop.
2. The face of the envelope of quotation/enquiry must have following details, failing which the Quotation shall not be opened/considered & liable to be rejected.
   a) Name of work/supply.
   b) Enquiry No. / Tender No. with Date.
   c) Date of opening.
   d) Details of Earnest money & Quotation/Enquiry document fee, DD/Pay Order No. with Date and Amount, Name of Bank.
   e) Name and address of the party.
   f) Registration No., if any.
   g) Validity period of quotation must be 120 days from the date of opening.
3. Incomplete quotations are liable to be rejected. Offer must be signed by the contractor with rubberstamp.
4. Rates quoted should be inclusive of all taxes & duties etc.

Other terms and conditions as per Annexure - ‘A’ & Annexure B shall also be applicable.

Manager (T) O&M, E-3

DELHI TRANSCO LIMITED

ANNEXURE-‘A’

1. **Scope of work:**
   i) The work will be completed as per direction of engineer-in-charge.
   ii) Contractor will satisfy himself with the details of the work to be executed and if considered necessary they should visit the site on any working days and get any other information required in this connection.
   iii) Materials to be supplied should be strictly as per Annexure B.

2. **Rates:**
   The rates quoted shall be firm and including of all taxes, duties etc. The rates should be quoted based on the units specified in words as well as in figures without any cutting, in case of difference of values/rates in figures and words or any confusion it will be constituted to take the rates, which are lowest.

3. **Following document should be submitted along with the offer, failing which offer is liable to be rejected.**
   a). Copy of Permanent Account No.(PAN).
   b). Copy of GSTIN certificate.
   c). Copy of GST challan.

4. **Qualification Requirement:**
   Bidder should submit the copy of similar supply Purchase Order copy along with satisfactory performance / completion report of similar work executed in DTL or other State transmission utility during last 05 years with satisfactory performance.

5. **Earnest Money:**
   Earnest money equivalent to the specified amount, prescribed in the NIQ letter ie. @ 2% of the estimated cost is required to be submitted along with the quotation documents by means of DD/BC/PO/FDR etc in favor of DTL.

6. **Security:**
   The successful tenderer shall have to deposit the security in the form of DD/PO/FDR in favour of DTL, at @ 5% of the total Ex-works price for the proper performance of the contract within Seven days of receipt of purchase order failing which a penalty @ 0.05% per week subject to maximum of 2% shall be imposed, will be released after guarantee period.

7. **Work/Material Approval:**
   The materials shall as per the sample and shall have to be got approved by respective Asstt. Manager (T) 220KV S/Stn.PKS.

8. **Payment:**
   Payment shall be made as per DTL norms through ECS after receipt and approval of work & submission of bill by the party.

9. **Completion Period:**
   The material must be supplied within a period of 15 days from the date of receiving order failing which a penalty @ 0.5% per week or part thereof subject to a maximum of 10% of the value of the unexecuted portion shall be levied.

10. **Arbitration:**
    If any dispute/question of controversy arises between DTL and contractor relating to the contract/order or any clause or thing contained therein, the dispute shall be referred at the arbitration of G.M.(O&M)-II or his nominee and the decision of the G.M.(O&M)-II or his nominee shall be final and binding on both the parties.

11. **Exemption:**
    EMD is to be deposited by all tenderers/bidders, whether registered with DGS&D/NSIC/DTL or such bodies except the exempted categories as per the relevant government rules like small scale enterprises etc. Such exempted category bidders claiming E.M.D. Exemption shall enclose the verified copy of exemption certificate issued by relevant govt. agency, along with the bid failing which their bid shall liable to be rejected.

12. **Interest & Refund of EMD:**
    No interest is payable by DTL on the amount of Earnest Money deposited by the Tenderers/Contractor. Earnest Money is held by DTL till obligations are satisfactorily and completely discharged by the Tenderer/Contractor. The amount of the Earnest Money shall be refunded to the unsuccessful bidders immediately after decision taken by the authority competent to accept the tenders.

13. **Black Listing:**
    Any Party making post tender development directly or indirectly may be black listed for a period up to 3 years. In case tenderer amends/modifies/revise/withdraws the prices/price structure of the offer without the consent of Delhi Transco Limited, after the tender opening and during the period of validity of their offer (i.e. 120 days), the Earnest Money in full or part deposited by them shall be liable to be forfeited or their offer liable to be rejected. They shall also be debarred from participating in future tenders of DTL for the period ranging from 1 to 5 years and shall be placed under Black List. If the supplier fails to supply the work/material in full or in part within stipulated delivery period specified in the purchase order of work/material/equipment is found to be defective or failing of fulfill the Guaranteed Performance of the Contract as specified in the Purchase Order, they shall be debarred or black listed from participating in future tender of DTL for the period ranging from 3 to 5 years.
14 **DEDUCTION FROM CONTRACT PRICE (RECOVERIES):** All costs, damages or expenses, which the purchaser may have paid or which under the contract the contractor is liable, are to be deducted and recovered by the purchaser from any money due or becoming due to contractor from the purchaser or otherwise from the contractor by action of law. In the event of recovery of the necessary extent becoming impossible, owing to insufficient security money and otherwise held amounts, the balance due to the purchaser & may be recovered in any way the purchaser may deemfit.

15 **ENTRY PASSES:** All such material to be used by the contractor shall be brought in with proper challan & similar authentic document which shall be got inspected by Engineer along with material as per security rules in force. Contractor shall be responsible for antecedents of the workmen & for getting gate passes. Gate pass shall be issued to them by Security wing of the plant. No labour below the age of 18 years shall be employed on the work & labour so employed must be able-bodies persons. The right of entry of the contractor & his workmen in the stations will be reserved with DTL.

16 **FORCE MAJEURE:** No liability shall be attached to contractor for non-operation of execution of their obligation under this contract as a result of Force Majeure or any other factor beyond the reasonable control of the Management. No liability shall be attached to contractor for any damage due to natural calamities such as Earth vibro meter/Quake, War, Civil Commotion and Willful damage.

17 **REPLACEMENT OF DEFECTIVE AND REJECTED MATERIAL:** The contractor shall replace free of cost at destination any such quantities of material or any parts thereof, which be found defective due to inferior quality or bad material or workmanship etc. during the guarantee period within 30 days or the intimation to the effect. The material on receipt at purchaser’s office/site shall be verified and inspected by the purchaser. If the material is not found to purchaser’s satisfactions and specifications the same shall be rejected and the intimation thereof shall be conveyed to the contractor. The contractor shall also be intimated of the shortage and / or damages in the material received in the Purchaser’s site/offices. The rejected / short Supplied / damaged stock shall be replaced free of cost at destination within 7 days of intimation from DTL failing which the cost of such material shall be recovered from any amounts due to the contractor. Rejected supplies shall be removed within 10 days of receipt of intimation failing which the contractor may lose the claim of material.

18 **Stoppage & Starting of Work:** The Contractor shall accept all risks of stoppage of hindrances of his work by outside interferences. In the event of any obstruction at site, change in scheme, or due to any reasons the contract can be cancelled for the balance quantity of the unexecuted work. The work can also be suspended temporarily due to any reasons and for such period, extension will be given by Manager (T) if required on the written request of the contractor. No idle charges shall be payable by the department. The work shall be started within one hour from the date of notice either through telegram/special messenger/telephonically. The contractor has to execute the work on working days during the working hours. However, if required, the work can be executed on holidays; under special circumstances.

19 **SUB-LETTING OF CONTRACT:** The contractor shall not unreasonably withhold, assign or sublet his contract or any substantial part thereof, without the written consent of purchaser. Such subletting shall not in any way be interpreted as releasing the contract from his liability & obligations under the contract.

20 **TERMINATION OF CONTRACT:** DTL reserves the right to terminate the contract after giving 2 week notice in case of performance of the contractor is not found satisfactory or on account of non-compliance of any of the condition of the contract. In such case the security deposit shall also be forfeited without prejudice to right of the DTL to take any other action of recover any loss suffered by the DTL due to non-performance of the contract.

21 **T & P:** The contractor shall use his own labour, tools & plants required to complete the work.

22 **Guarantee:** The Goods/equipment supplied shall be guaranteed for satisfactory operation for a period of at least one year from the date of commissioning or 18 months from the date of delivery whichever is earlier. During this period the contractor shall replace or Repair (as the case may be) such defective material due to inferior quality and to poor workmanship, free of cost.

23 **LIQUIDITY DAMAGE:** A token penalty of 0.5% per week of period of delay subject to maximum of 10% of the unexecuted portion of the contract would be levied in case of delay in execution of the work beyond the stipulated completion period or extension if any, granted to them by the DELHI TRANSCO LIMITED. Force Major Clause Condition. This penalty amount will be deducted from the penalty delayed by Strikes, fire accidents or any other case, beyond the control of the contractor, a reasonable extension would be granted, subject to satisfactory proof furnished in time and accepted by the DELHI TRANSCOLIMITED.
24 **CONTRACTOR’S REPRESENTATIVE:** The contractor shall depute authorized representative or assign this job to skilled man for execution of the contract, who shall be available for communication during any time, and he shall represent the contractor in his absence & all directions give to him shall be binding on the contractor

25 **Transportation:** In case of transportation works contractor shall strictly observe the regulations as laid down by Delhi Traffic Police. Any damage to DTL property / material during transportation shall be recovered from the contractor’s bill. Safe Transportation and delivery of the material is the responsibility of the supplier for which no extra payment shall be made.

26 **TESTING:** DTL reserves the right to send the material to any recognized Laboratory for testing of the supplied material (if required) and cost of getting the material tested shall initially be borne by DTL, but in case the material is found to be not conforming to relevant standards/specifications, the testing & transportation charges along with the TA/DA of the official concerned besides the penalty which shall be imposed on you shall be borne by you. In order to avoid any complaints, in case of testing, contractor will send their representative to see the material sent for testing is properly sealed in his presence.

27 Delhi Transco Limited reserves the right to reject the offer/offers without assigning any reason.

28 Delhi Transco Limited reserves the right to cancel the order, if found unsatisfactory performance and will have the right to get the work done from other party at the Risk and Cost of the contractor.

29 Successful bidder shall be liable to provide all technical support, as and when required, for installation and commissioning at site.

30 In case of opening day is holiday/closed day, opening date may be treated as the next working day or can be postponed by the officer opening authority.

31 Contractor whose offer is accepted will be required to execute an agreement on a stamp paper of Rs.100/- within Ten days of the receipt of the written orders. The agreement paper to be furnished by successful contractor and he will not be paid for such paper.

Manager (T) O&M, E-3

Signature of the contractor with stamp
Scotchfil™
Electrical Insulation Putty
Data Sheet

Product Description
Scotchfil Brand electrical insulation putty is a putty-like electrical grade compound in tape form. Scotchfil Putty is UL Recognised as a splice insulation for electrical conductors at temperatures up to 80°C (176°F) when overwrapped with either Super 33+ or Super 88 Vinyl Electrical Tape.

Tape Features
UL “Recognised” Category OCOT2, File No. E59951.
Non-corrosive, synthetic rubber.
Excellent electrical properties.
Excellent ageing properties.
Will not dry out.
Applies cleanly without waste.

To insulate low-voltage (600 volts and less) connections.
To build up cable splices and fill out major irregularities and voids in low-voltage splices (2300 volts and less) in order to obtain a uniform base for further taping.
To round out high-voltage connections to gear.
To smooth bus bar irregularities.
To create a resin dam in resin pressure splices.
To create a moisture seal at ground wire exit in high-voltage splices.
To moisture seal multi-conductor cable connections.

Physical and Electrical Properties

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Black</td>
</tr>
<tr>
<td>Thickness ASTM D1000</td>
<td>3.175mm</td>
</tr>
<tr>
<td>Elongation ASTM D1000</td>
<td>1000% min</td>
</tr>
<tr>
<td>Copper Corrosion</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical Properties</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dielectric Strength</td>
<td>22kV/mm</td>
</tr>
<tr>
<td>ASTM D1000</td>
<td></td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>&gt;1 x 10^6 megaohms</td>
</tr>
<tr>
<td>ASTM D1000</td>
<td></td>
</tr>
</tbody>
</table>

Specifications

Product
The insulating putty must be in tape form, the thickness of which must be a minimum of 2.54mm. The tape must be a rubber-based tape capable of being formed and moulded with moderate finger tension at temperatures as low as 0°C (32°F). Neither the tape nor any of its components shall cause the corrosion of copper. The tape must be compatible with all synthetic cable insulation as well as other splicing tapes.

Engineering/Architectural Specification
All 2300 volts or less feeder connections, taps and splices on wires larger than 10mm² with irregular-shaped connectors shall be first built up with electrical insulating putty to eliminate both sharp corners and voids. Enough insulating putty shall be used until good overall padding is provided. Compress putty to fill all voids and generally smooth out before applying electrical splice protection.

All 600 volts or less splices and terminations on wire larger than 10mm² with irregular-shaped connectors shall be insulated with a minimum of 6mm of electrical insulating putty. The entire connection must be covered with the 6mm of electrical insulating putty. The insulating putty must then be over wrapped with a vinyl tape applied with the same tension as it has when it comes from the roll. This vinyl tape shall provide a uniform covering of at least four layers, half-lapped in two directions.
Creating a resin dam in resin pressure splices Wrap a layer of moderately stretched Scotchfil insulation putty around the cleaned cable jacket at a distance of 75mm from the jacket cutback. Lay the ground wire along the cable jacket and though the Scotchfil putty. Wrap several layers of highly elongated Scotchfil putty around cable and ground wire. Bind Scotchfil putty tightly with several wraps of Scotch brand Super 33+ or Super 88 vinyl electrical tape. The putty and vinyl tape will make a seal though which resin cannot flow.

Shelf Life
Scotchfil electrical insulation putty has a 5 year shelf life (from date of manufacture) when stored under the following recommended storage conditions. Store behind stock in a clean, dry place at a temperature of 21°C (70°F) and 40 to 50% relative humidity. Good stock rotation is also recommended.

Availability
Scotchfil brand electrical putty is available in a 38mm x 1.5M roll from 3M and your local 3M authorised electrical distributor.

Important Notice
Technical information provided by 3M is based on experience and/or tests believed to be reliable, but their accuracy is not guaranteed and the results may not be relevant to every user’s application. For this reason 3M does not accept responsibility or liability, direct or consequential, arising from reliance upon any information provided and the user should determine the suitability of the products for their intended use. Nothing in this statement will be deemed to exclude or restrict 3M’s liability for death or personal injury arising from its negligence. All questions of liability relating to 3M products are governed by the seller’s terms of sale subject where applicable to the prevailing law. If any goods supplied or processed by or on behalf of 3M prove on inspection to be defective in material or workmanship, 3M will (at its option) replace the same or refund to the Buyer the price paid for the goods or services. Except as set out above, all warranties and conditions, whether express or implied, statutory or otherwise are excluded to the fullest extent permissible at law.

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Scotch® Self-Fusing Silicone Rubber Electrical Tape 70

Data Sheet | February 2017

Product Description
Scotch® Self-Fusing Silicone Rubber Electrical Tape 70 is a high-temperature arc and track-resistant tape composed of self-fusing, inorganic silicone rubber with easy-tear and easy-strip liner.

Agency Approvals & Self Certifications
For RoHS information, please visit www.3M.com/ROHS

Product Features
• Excellent track resistance.
• Excellent arc resistance.
• Excellent ozone resistance.
• High dielectric strength
• Class H material (180ºC continuous operation).
• Workable at extremely low temperatures.
• Excellent instantaneous fusion; does not need to be held down.
• Matches Sky Blue Gray Munsell 5BG7.0/0.4.
• Excellent weathering characteristics.
• AA-59163 Class-I Type-I.

Applications
• As an overwrap for protection of terminating high-voltage cables against arcing and tracking. High-voltage cables with these insulations should be overwrapped:
  o Butyl rubber
  o Oil-base rubber
  o Ethylene propylene rubber
  o P.V.C.
  o Low and high-density polyethylene cross-linked
• As primary insulation where Class H (180ºC/356ºF) temperatures are encountered i.e., silicone rubber cables.
• As splice overwrap on spacer cable operating at 15kV and above.

Data
Scotch® Rubber Electrical Tape 70 has a thickness of 12 mils and is available in roll size 1 inch wide x 30 ft. long. The core is 1 inch I.D.
Scotch® Self-Fusing Silicone Rubber Electrical Tape 70

**Installation Techniques**

Scotch® Self-Fusing Silicone Rubber Electrical Tape 70 should be applied in half-lap layers using moderate tension.

Scotch® Rubber Electrical Tape 70 should be applied on all tape-like terminations which will be operated either outdoors or in areas subjected to contamination or moisture. The following procedure should be used:

If possible, connect the termination to its final position. Otherwise, take care not to damage the final overwrap of silicone tape during installation. Overwrap the end seal with several half-lapped layers. Overwrap the entire termination with one additional half-lapped layer. For upright termination, begin from one inch on cable jacket and end at the lug. For inverted termination, end taping on the cable jacket. *Wrap with moderate tension (10 to 100 percent elongation). Apply last lap with zero stretch. Press down to avoid end lifting before fusion takes place.*

Scotch® Rubber Electrical Tape 70 can also be applied over the exposed cable insulation and/or end seal used in conjunction with molded (slip-on) stress cones.

Techniques for the proper use of Scotch® Rubber Electrical Tape 70 are contained in standard and special prints available through the 3M Systems for Splicing and Terminating Program. This material may be obtained through your local 3M Electrical Markets Division representative.

**NOTE REGARDING LINER REMOVAL:**

To separate the liner from the tape when starting a new roll, simply stretch the liner and tape until the silicone tape breaks. The liner will then separate at this point.

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**Characteristics and Test Data**

<table>
<thead>
<tr>
<th><strong>Physical Properties</strong></th>
<th><strong>Typical Value</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Munsell 5BG7.0/0.4 Sky Blue Gray</td>
</tr>
<tr>
<td>Thickness</td>
<td>0.012 in</td>
</tr>
<tr>
<td>ASTM-D-1000-10</td>
<td></td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>12 lbs./in.</td>
</tr>
<tr>
<td>ASTM-D-1000-10</td>
<td></td>
</tr>
<tr>
<td>Elongation at Break</td>
<td>450%</td>
</tr>
<tr>
<td>ASTM-D-1000-10</td>
<td></td>
</tr>
</tbody>
</table>

| **Electrical Properties**     |                   |
| Dialectical Strength          | 875 V/mil         |
| ASTM-D-1000-10                |                   |
| Arc Resistance                | 1 min. (minimum)  |
| ASTM-D-495-71                 |                   |

*Note: These are typical values and should not be used for specification purposes.*
Scotch® Self-Fusing Silicone Rubber Electrical Tape 70

**Characteristics and Test Data**

**Dissipation Factor:** Table 1 shows the dissipation factor versus temperature of Scotch® Rubber Electrical Tape 70. This test was run according to ASTM-D-150-68 at a stress of 50 V/mil and a frequency of 60 cycles per second.

<table>
<thead>
<tr>
<th>Temperature (°C/°F)</th>
<th>Dissipation Factor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23/73</td>
<td>1.3%</td>
</tr>
<tr>
<td>90/194</td>
<td>1.1%</td>
</tr>
<tr>
<td>130/266</td>
<td>0.5%</td>
</tr>
<tr>
<td>150/302</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

Table 1

**Dielectric Constant:** Table 2 shows the dielectric constant versus temperature of Scotch®Rubber Electrical Tape 70. This test was run according to ASTM-D-150-68 at a stress of 50 V/mil and a frequency of 60 cycles per second.

<table>
<thead>
<tr>
<th>Temperature (°C/°F)</th>
<th>Dielectric Constant</th>
</tr>
</thead>
<tbody>
<tr>
<td>23/73</td>
<td>3.03</td>
</tr>
<tr>
<td>90/194</td>
<td>2.89</td>
</tr>
<tr>
<td>130/266</td>
<td>2.60</td>
</tr>
<tr>
<td>150/302</td>
<td>2.51</td>
</tr>
</tbody>
</table>

Table 2

**Performance Tests**

**Termination Tracking Test:** Reduced-dimension terminations are prepared according to 3M print 2047-B-16 (See Figure 1). Each specimen consists of 8 feet of 15 kV cable and two terminations. The contaminant employed in this test is the formula called out in ASTM Dust and Fog Test D-2132, as shown below:

- Flint (SiO2 floated) 240 mesh: 85 parts
- Clay 325 mesh: 9 parts
- Salt (Na Cl) technical grade: 3 parts
- Paper, filter pulp: 3 parts

This mixture is then ball milled using 3/4- inch diameter ceramic cylinder. The milled dust is then mixed with equal parts by weight of water to make a slurry of paint consistency.

Next, each termination is carefully coated in such a manner as to deposit a uniform and reproducible amount of contamination. The following procedure is used:

1. Mix the slurry thoroughly
2. Submerge the inverted termination into the slurry.
3. Withdraw the termination from the slurry, taking care not to throw off too much excess slurry in rotating the termination from the inverted to an upright position. The majority of the excess slurry should drain off when the termination is upright.
4. Allow the termination to air-dry in the upright position before applying the voltage.

This method, when tested on various surfaces including silicone rubber and glazed porcelain, has repeatedly produced a coating thickness of from 0.12 to 0.15 grams per square inch of surface. The terminations are then tested in a contamination building. All terminations are mounted vertically. The uniform fog rate called out in ASTM-D-2132 is obtained by the use of special atomizing, wide-angle nozzles. An on/off cycle is controlled to give a fog rate of 7 to 9 milligrams per square inch per minute. Each sample is energized at 8.7 kV. The system is set up such that approximately 500 milliamps trip the circuit breaker. All samples are re-contaminated every seven days. The new contaminant is applied over whatever contaminant remains. The sample is considered to have failed when:

1. 500 milliamps over the surface continuously cause the circuit breaker to trip.
2. Cable failure occurs.
3. The surface of the termination is severely burned. The time in hours for each failure is recorded. The results are as follows:

<table>
<thead>
<tr>
<th>Tape Termination Protections</th>
<th>Time to Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>No protection</td>
<td>15 hrs.</td>
</tr>
<tr>
<td>Scotch® Self-Fusing Silicone Rubber Electrical Tape 70</td>
<td>400 hrs.</td>
</tr>
</tbody>
</table>
Product: The insulating tape must be composed of self-fusing, inorganic silicone rubber with an easy-tearing and easy-stripping polyester liner. The product must be Sky Blue Gray and conform to Munsell Color No. 5BG7.0/0.4. The tape must be capable of operating continuously at Class H temperatures (180°C/356°F). The tape must be compatible with all synthetic cable insulations as well as cable splicing compounds.

Engineering/Architectural Specifications: All tape or tape-like terminations which will be operated either outdoors or in areas subjected to contamination or moisture shall be overwrapped with at least one layer of Scotch® Self-Fusing Silicone Rubber Electrical Tape 70.

The exposed cable insulation on the lug side of assembled stress cone kits, which will be operated either outdoors or in areas subjected to contamination or moisture, shall be overwrapped with at least one layer of Scotch® Rubber Electrical Tape 70.

All splices on spacer cable operating at 15kV and above shall be overwrapped with Scotch® Rubber Electrical Tape 70.

All splices on silicone rubber cables or other cables which can operate at room temperatures in excess of 130°C/266°F, but not exceeding 180°C/366°F, shall use Scotch® Rubber Electrical Tape 70 as the primary insulating material.

Shelf-Life
Scotch® Rubber Electrical Tape 70 has a 5-year shelf life (from the date of manufacture) when stored under the following recommended conditions. Store behind present stock in a clean dry place at a temperature of 10°C/50°F to 27°C/80°F and 40% to 50% relative humidity. Prolonged exposure to temperatures in excess of 49°C (120°F) can cause a loss of fusion in the tape. Proper stock rotation is recommended.

Availability
Scotch® Rubber Electrical Tape 70 is available from your electrical distributor in 1-inch by 30-foot rolls.
Scotch® Self-Fusing Silicone Rubber Electrical Tape 70

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All other trademarks are property of their respective owners.

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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: DEGREASING SPRAY
MANUFACTURER: 3M
DIVISION: 3M Germany
Electrical Markets Division
ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 05/10/10
Supercedes Date: 05/07/10
Document Group: 11-8229-4

Product Use:
Intended Use: Degreasing of Electrical Conductors

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>PETROLEUM DISTILLATE</td>
<td>64742-49-0</td>
<td>50-60</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>20-30</td>
</tr>
<tr>
<td>PROPANE</td>
<td>74-98-6</td>
<td>1-10</td>
</tr>
<tr>
<td>BUTANE</td>
<td>106-97-8</td>
<td>1-10</td>
</tr>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>67-63-0</td>
<td>5-10</td>
</tr>
<tr>
<td>CARBON DIOXIDE PROPELLANT</td>
<td>124-38-9</td>
<td>1-5</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Aerosol
Odor, Color, Grade: colorless, solvent-like odor
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: Aerosol container contains flammable gas under pressure. Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause severe eye irritation. May cause target organ effects.
MATERIAL SAFETY DATA SHEET DEGREASING SPRAY  05/10/10

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Skin Contact:
Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:
Intentional concentration and inhalation may be harmful or fatal.
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Single exposure, above recommended guidelines, may cause:
   Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. 

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
   Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact:  Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.
MATERIAL SAFETY DATA SHEET DEGREASING SPRAY  05/10/10

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. Get immediate medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 NOTE TO PHYSICIANS
Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>&gt;=250.00 ºC</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt;=-42 ºC</td>
</tr>
<tr>
<td>Flammable Limits - LEL</td>
<td>1.7 %</td>
</tr>
<tr>
<td>Flammable Limits - UEL</td>
<td>10.6</td>
</tr>
</tbody>
</table>

5.2 EXTINGUISHING MEDIA
Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode. Extremely flammable liquid and vapor. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Aerosol container contains flammable material under pressure.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures:
Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation and personal protective equipment. Evacuate unprotected and untrained personnel from the hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area. WARNING! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. If it can be done safely, place the leaking containers in an exhaust hood or well-ventilated area. WARNING! To avoid problems with pressure buildup, slowly leaking pressurized aerosol cans should not be placed in sealed containers. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or
vapors in the spill area to burn or explode. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Dispose of collected material as soon as possible.

Contain spill, using absorbent if necessary. Collect spilled material with non-sparking tools. Clean up residue. Place depressurized cans and clean up wastes in a metal container approved for transportation. Seal the container. Contain spill. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Contents may be under pressure, open carefully. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Do not pierce or burn container, even after use. No smoking while handling this material. Do not spray near flames or sources of ignition. Avoid breathing of vapors, mists or spray. Aerosol container contains flammable gas under pressure. Avoid static discharge. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Avoid contact with oxidizing agents.

7.2 STORAGE

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use with functioning spray booth or local exhaust. Do not use in a confined area or areas with little or no air movement. Do not remain in area where available oxygen may be reduced. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection
Avoid eye contact with vapors, mists, or spray. The following eye protection(s) are recommended: Indirect Vented Goggles.

8.2.2 Skin Protection
Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Gloves made from the following material(s) are recommended: Nitrile Rubber.
8.2.3 Respiratory Protection
Avoid breathing of vapors, mists or spray. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or full face air-purifying respirator with organic vapor cartridges Half facepiece or full face supplied-air respirator. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETONE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td>ACETONE</td>
<td>ACGIH</td>
<td>STEL</td>
<td>750 ppm</td>
<td></td>
</tr>
<tr>
<td>ACETONE</td>
<td>OSHA</td>
<td>TWA</td>
<td>2400 mg/m³</td>
<td></td>
</tr>
<tr>
<td>CARBON DIOXIDE PROPELLANT</td>
<td>ACGIH</td>
<td>TWA</td>
<td>5000 ppm</td>
<td></td>
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<tr>
<td>CARBON DIOXIDE PROPELLANT</td>
<td>ACGIH</td>
<td>STEL</td>
<td>30000 ppm</td>
<td></td>
</tr>
<tr>
<td>CARBON DIOXIDE PROPELLANT</td>
<td>OSHA</td>
<td>TWA</td>
<td>9000 mg/m³</td>
<td></td>
</tr>
<tr>
<td>PETROLEUM DISTILLATE</td>
<td>CMRG</td>
<td>TWA</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200 ppm</td>
<td></td>
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<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>ACGIH</td>
<td>STEL</td>
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<td></td>
</tr>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>OSHA</td>
<td>TWA</td>
<td>980 mg/m³</td>
<td></td>
</tr>
<tr>
<td>PROPANE</td>
<td>OSHA</td>
<td>TWA</td>
<td>1800 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| Specific Physical Form:                      | Aerosol                     |
| Odor, Color, Grade:                         | colorless, solvent-like odor|
| General Physical Form:                       | Liquid                      |
| Autoignition temperature                     | >=250.00 °C                 |
| Flash Point                                  | >=-42 °C                    |
| Flammable Limits - LEL                       | 1.7 %                       |
| Flammable Limits - UEL                       | 10.6                        |
| Boiling point                                | Not Applicable              |
| Density                                      | 0.725 g/ml [Details: CONDITIONS: 20 deg. C] |
| Vapor Density                                | No Data Available           |
| Vapor Pressure                               | 3.5 bar                     |
| Specific Gravity                             | 0.725 [Ref Std: WATER=1]   |
| pH                                           | Not Applicable              |
| Melting point                                | Not Applicable              |
| Solubility in Water                          | Slight (less than 10%)      |
| Evaporation rate                             | No Data Available           |
| Volatile Organic Compounds                   | 100.00 g/l                 |
| Kow - Oct/Water partition coef               | No Data Available           |
MATERIAL SAFETY DATA SHEET DEGREASING SPRAY  05/10/10

Viscosity  

Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat
High shear and high temperature conditions
Sparks and/or flames

10.2 Materials to avoid
Strong oxidizing agents

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbons</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.
Facility must be capable of handling aerosol cans. Dispose of empty product containers in a sanitary landfill.
MATERIAL SAFETY DATA SHEET DEGREASING SPRAY  05/10/10

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS
Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - Yes  Pressure Hazard - Yes  Reactivity Hazard - No  Immediate Hazard - Yes  Delayed Hazard - Yes

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.
SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2  Flammability: 4  Reactivity: 0  Special Hazards: None

Aerosol Storage Code: 3

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:
Section 1: Product use information was modified.
Section 1: Initial issue message was modified.

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3M MSDSs are available at www.3M.com
Dehumidifier 3M 1605 Spray (400ml)

Scotch™ 1605 penetrates and displaces moisture. It also defrosts frozen sections. Scotch™ 1605 then forms a thin protective film and thus prevents the renewed ingress of moisture. It is completely neutral toward paints, plastics, rubber and fabrics. It is effective over a wide temperature range from 4. 74°C to + 175°C. Corrosion protection: apply a medium thick film, where necessary, repeat the process.

Applications: Can be used in Electrical and electronic equipment, switches, relays, motors, batteries, ignition systems, tools, instruments, threads etc.

Typical Properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Beige</td>
</tr>
<tr>
<td>Content</td>
<td>400 ML</td>
</tr>
<tr>
<td>Base</td>
<td>Treated heavy naphthenic petroleum distillate</td>
</tr>
<tr>
<td>Solvent</td>
<td>Aliphatic hydrocarbons Petroleum distillates</td>
</tr>
<tr>
<td>Propellant</td>
<td>Propane Butane</td>
</tr>
<tr>
<td>Adhesion</td>
<td>Very good</td>
</tr>
<tr>
<td>Moisture Absorption</td>
<td>Slight</td>
</tr>
<tr>
<td>Temperature Stability</td>
<td>-74 degree to + 175 Degree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROTREATED LIGHT PETROLEUM DISTILLATES</td>
<td>64742-47-8</td>
<td>40-50</td>
</tr>
<tr>
<td>BUTANE</td>
<td>106-97-8</td>
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<td>PROPANE</td>
<td>74-98-6</td>
<td>10-20</td>
</tr>
<tr>
<td>2-BUTOXYETHANOL</td>
<td>111-76-2</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>
Process / Installation / How to use:

Dehumidification spray a thin film onto the surface. After about 30 seconds, the moisture will dry out. Where necessary, repeat the process. Defrosting: apply a thick layer. After 15 to 30 seconds, repeat where necessary. The enclosed spray pipe permits access to difficult to reach areas.

IMPORTANT NOTICE
Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

Warranty; Limited Remedy; Limited Liability. This product will be free from defects in material and manufacture as of the date of purchase. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR APARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M’s option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.

Electrical Products Division