ROTELLA(R) T 15W-40 WITH ADVANCED SOOT CONTROL
50012
01/26/98

SHELL MATERIAL SAFETY DATA SHEET
BE SAFE. READ OUR PRODUCT SAFETY INFORMATION ... AND PASS IT ON.
PRODUCT LIABILITY LAW REQUIRES IT!

************************** MATERIAL SAFETY DATA SHEET 71630 - 11
**************************

ROTELLA(R) T 15W-40 WITH ADVANCED SOOT CONTROL
01/26/98

MANUFACTURER'S NAME AND ADDRESS
SHELL OIL COMPANY
PRODUCT SAFETY & COMPLIANCE
P.O. BOX 4320
HOUSTON, TX  77210

TELEPHONE NUMBERS:
24 HOUR EMERGENCY ASSISTANCE
SHELL: 713-473-9461       CHEMTREC: 800-424-9300

GENERAL MSDS ASSISTANCE
SHELL: 713-241-4819

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SECTION I   |                      NAME
---------------------------------------------------------------------------
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PRODUCT:     ROTELLA(R) T 15W-40 WITH ADVANCED SOOT CONTROL
CHEM NAME:    MIXTURE (SEE SECTION II-A)               ACUTE HEALTH HAZARD:
1
CHEM FAMILY:  PETROLEUM HYDROCARBON; MOTOR OIL                 FIRE HAZARD:
1
SHELL CODE:  50012                                             REACTIVITY:
0
---------------------------------------------------------------------------
-----
SECTION II-A | PRODUCT/INGREDIENT
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<thead>
<tr>
<th>NO.</th>
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<th>CAS</th>
<th>PERCENT</th>
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<td>ROTELLA T 15W-40 WITH ADVANCED SOOT CONTROL</td>
<td>MIXTURE 100</td>
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<tr>
<td>1</td>
<td>HIGHLY REFINED PETROLEUM OIL</td>
<td>MIXTURE* 70-80</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ADDITIVES CONTAINING:</td>
<td>MIXTURE 20-30</td>
<td></td>
</tr>
<tr>
<td>2A</td>
<td>ZINC COMPOUND</td>
<td>MIXTURE 1-2</td>
<td></td>
</tr>
</tbody>
</table>

MAY CONTAIN: 64742-54-7

NFPA HAZARD RATING: HEALTH 0    FIRE 1    REACTIVITY 0

<table>
<thead>
<tr>
<th>NO.</th>
<th>ACUTE ORAL LD50</th>
<th>ACUTE DERMAL LD50</th>
<th>ACUTE INHALATION LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>NOT AVAILABLE</td>
<td>NOT AVAILABLE</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>1</td>
<td>&gt;5.0 G/KG (RAT)*</td>
<td>&gt;5.0 G/KG (RABBIT)*</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>

* BASED ON API STUDIES


EYE CONTACT:
    LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN MINIMALLY IRITATING TO THE EYES.
SKIN CONTACT:
Lubricating oils are generally considered no more than mildly irritating to the skin. Prolonged and repeated contact may result in various skin disorders such as dermatitis, folliculitis or oil acne.

INHALATION:
Inhalation of vapor (generated at high temperatures only) or oil mist from this product may result in mild irritation of the upper respiratory tract.

INGESTION:
Lubricating oils are generally considered no more than slightly toxic if swallowed.

SIGNS AND SYMPTOMS:
Irritation as noted above.

AGGRAVATED MEDICAL CONDITIONS:
Preexisting skin and respiratory disorders may be aggravated by exposure to this product.

OTHER HEALTH EFFECTS:
This product and its components are not classified as carcinogens by International Agency for Research on Cancer (IARC), National Toxicology Program (NTP) or Occupational Safety and Health Administration (OSHA). The International Agency for Research on Cancer has determined there is sufficient evidence for the carcinogenicity in experimental animals of used motor oils. Handling procedures and safety precautions in the MSDS should be followed to minimize employee's exposure to the used product.

For a Spanish translation of this MSDS, call 1-800-240-MSDS.
SECTION IV | OCCUPATIONAL EXPOSURE LIMITS

OSHA                        ACGIH
NO.  PEL/TWA     PEL/CEILING   TLV/TWA   TLV/STEL   OTHER
===========================================================================
=====  P    5 MG/M3*       NONE           5 MG/M3*       10 MG/M3*
*OIL MIST, MINERAL

SECTION V | EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT:  FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT: REMOVE CONTAMINATED CLOTHING AND WIPE EXCESS OFF. WASH WITH SOAP AND WATER OR A WATERLESS HAND CLEANER FOLLOWED BY SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

INHALATION: REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION: DO NOT INDUCE VOMITING. IN GENERAL NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ATTENTION.

NOTE TO PHYSICIAN: IN GENERAL, EMESIS INDUCTION IS UNNECESSARY IN HIGH VISCOSITY, LOW VOLATILITY PRODUCTS, I.E., MOST OILS AND GREASES.
SECTION VI | SUPPLEMENTAL HEALTH INFORMATION

NONE IDENTIFIED.

SECTION VII | PHYSICAL DATA

BOILING POINT (DEG F): SPECIFIC GRAVITY (H2O=1): VAPOR PRESSURE (MM Hg):
NOT AVAILABLE 0.8844 <0.1

MELTING POINT (DEG F): SOLUBILITY (IN WATER): VAPOR DENSITY (AIR=1):
-25 (POUR POINT) NEGLIGIBLE NOT AVAILABLE

VISCOSITY: 13-15 (CS @ 212 DEG F)

EVAPORATION RATE (NORMAL BUTYL ACETATE = 1): NOT AVAILABLE

APPEARANCE AND ODOR: DARK AMBER OIL. SLIGHT HYDROCARBON ODOR.


SECTION VIII | FIRE AND EXPLOSION HAZARDS
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FLASH POINT AND METHOD: FLAMMABLE LIMITS/% VOLUME IN AIR:
380 DEG F (PMCC) LOWER: N/AV UPPER: N/AV

EXTINGUISHING MEDIA:
USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:
MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE-SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE-PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

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SECTION IX | REACTIVITY
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STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:
AVOID HEAT, OPEN FLAMES AND OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS:
THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE, HYDROGEN SULFIDE, AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.
SECTION X    |  EMPLOYEE PROTECTION

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RESPIRATORY PROTECTION:

If exposure may or does exceed occupational exposure limits (Section IV) use a NIOSH-Approved Respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors and particulates.

PROTECTIVE CLOTHING:

Wear chemical resistant gloves and other protective clothing as required to minimize skin contact. Wear safety goggles to avoid eye contact. Test data from published literature and/or glove and clothing manufacturers indicate the best protection is provided by nitrile gloves.

ADDITIONAL PROTECTIVE MEASURES:

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SECTION XI    |  ENVIRONMENTAL PROTECTION

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SPILL OR LEAK PROCEDURES:

May burn although no readily ignitable. Use cautious judgment when cleaning up large spills. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE SALVAGE VESSELS. SOAK
UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIALS; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

SECTION XII | SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, THAT CANNOT BE DECONTAMINATED.

STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

SECTION XIII | TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
NOT HAZARDOUS BY D.O.T. REGULATIONS

D.O.T. PROPER SHIPPING NAME:

OTHER REQUIREMENTS:

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF
CHEMICAL SUBSTANCES.

PROTECTION OF STRATOSPHERIC OZONE (PURSUANT TO SECTION 611 OF THE CLEAN AIR ACT AMENDMENTS OF 1990): PER 40 CFR PART 82, THIS PRODUCT DOES NOT CONTAIN NOR WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

---

SECTION XV | STATE REGULATORY INFORMATION
---

THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES; OTHER PRODUCT SPECIFIC HEALTH AND SAFETY DATA IN OTHER SECTIONS OF THE MSDS MAY ALSO BE APPLICABLE FOR STATE REQUIREMENTS. FOR DETAILS ON YOUR REGULATORY REQUIREMENTS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR STATE.

<table>
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<th>STATE LISTED COMPONENT</th>
<th>CAS NUMBER</th>
<th>PERCENT</th>
<th>STATE CODE</th>
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<tr>
<td>ZINC COMPOUND</td>
<td>NONE</td>
<td>1-2</td>
<td>CT, FL, IL, LA, MA, NJ, PA, RI</td>
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</table>

CA = CALIFORNIA HAZ. SUBST. LIST; CA65C, CA65R, CA65C/R = CALIFORNIA SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT OF 1986 OR PROPOSITION 65 LIST; CT = CONNECTICUT TOXIC. SUBST. LIST; FL = FLORIDA SUBST. LIST; IL = ILLINOIS TOX. SUBST. LIST; LA = LOUISIANA HAZ. SUBST. LIST; MA = MASSACHUSETTS SUBST. LIST; ME = MAINE HAZ. SUBST. LIST; MN = MINNESOTA HAZ. SUBST. LIST; NJ = NEW JERSEY HAZ. SUBST. LIST; PA = PENNSYLVANIA HAZ. SUBST. LIST; RI = RHODE ISLAND HAZ. SUBST. LIST.
SECTION XVI  | SPECIAL NOTES

PRODUCT NAME CHANGED; FORMERLY ROTELLA(R) T MULTIGRADE 15W-40 WITH XLA.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

WE ARE PROVIDING OUR MOST RECENT MATERIAL SAFETY DATA SHEET AND/OR ENVIRONMENTAL DATA SHEET. IF YOU WISH TO RECEIVE UPDATES TO THIS INFORMATION, PLEASE CALL SHELL'S GENERAL MSDS ASSISTANCE LINE (713-241-4819) TO ENSURE THAT YOU ARE ADDED TO SHELL'S REGULAR MSDS DISTRIBUTION SYSTEM.

BE SAFE. READ OUR PRODUCT SAFETY INFORMATION...AND PASS IT ON. (PRODUCT LIABILITY LAW REQUIRES IT)

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX. 77210

ENVIRONMENTAL DATA SHEET  71630 - 05

********************** ENVIRONMENTAL DATA SHEET  71630 - 05

**********************
01/26/98
PRODUCT NAME: ROTELLA(R) T 15W-40 WITH ADVANCED SOOT CONTROL
PRODUCT CODE: 50012

MANUFACTURER'S NAME AND ADDRESS
SHELL OIL COMPANY
P.O. BOX 4320
HOUSTON, TX  77210

TELEPHONE NUMBERS:
24 HOUR EMERGENCY ASSISTANCE
SHELL: 713-473-9461       CHEMTREC: 800-424-9300

FOR ADDITIONAL INFORMATION ON THIS ENVIRONMENTAL DATA PLEASE CALL 713-241-2252

---------------------------------------------------------------------------
-----
SECTION I  |              PRODUCT COMPOSITION
---------------------------------------------------------------------------
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<table>
<thead>
<tr>
<th>NO. COMPOSITION</th>
<th>CAS</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
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<td>-----</td>
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</tr>
<tr>
<td>P ROTELLA T 15W-40 WITH ADVANCED SOOT CONTROL</td>
<td>MIXTURE 100</td>
<td></td>
</tr>
<tr>
<td>1 HIGHLY REFINED PETROLEUM OIL</td>
<td>MIXTURE* 70-80</td>
<td></td>
</tr>
<tr>
<td>2 ADDITIVES CONTAINING:</td>
<td>MIXTURE 20-30</td>
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<tr>
<td>2A ZINC COMPOUND</td>
<td>MIXTURE 1-2</td>
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* MAY CONTAIN: 64742-54-7

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SECTION II  |           SARA TITLE III INFORMATION
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<td>(*3)</td>
<td>(*4)</td>
<td>(*5)</td>
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</tbody>
</table>

==========================================================================
2A                       YES    ZINC COMPOUND

-----
*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
*3 = TOXIC CHEMICAL, SEC 313
*4 = CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.42), MUST BE USED ON TOXIC
     RELEASE INVENTORY FORM
*5 = HAZARD CATEGORY FOR SARA SEC. 311/312 REPORTING
     HEALTH:   H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD
               H-2 = DELAYED (CHRONIC) HEALTH HAZARD
     PHYSICAL: P-3 = FIRE HAZARD
               P-4 = SUDDEN RELEASE OF PRESSURE HAZARD
               P-5 = REACTIVE HAZARD

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SECTION III  |        ENVIRONMENTAL RELEASE INFORMATION

-----
THIS PRODUCT IS COVERED BY EPA'S COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION AND LIABILITY ACT (CERCLA) PETROLEUM EXCLUSION. THEREFORE,
RELEASES TO AIR, LAND, OR WATER ARE NOT REPORTABLE UNDER CERCLA
("SUPERFUND"). HOWEVER, UNDER SECTION 311 OF EPA'S CLEAN WATER ACT
(CWA),
THIS PRODUCT IS CONSIDERED AN OIL. AS SUCH, SPILLS INTO OR LEADING TO
SURFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL
RESPONSE CENTER, 800-424-8802.

THIS PRODUCT IS AN OIL UNDER 49 CFR (DOT) PART 130. IF SHIPPED BY RAIL
OR
HIGHWAY IN A TANK WITH A CAPACITY OF 3,500 GALLONS OR MORE, IT IS SUBJECT TO
THE REQUIREMENTS OF PART 130. MIXTURES OR SOLUTIONS IN WHICH THIS
PRODUCT IS
PRESENT AT 10% OR MORE MAY ALSO BE SUBJECT TO THIS RULE.

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SECTION IV  |                 RCRA INFORMATION

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IF THIS PRODUCT BECOMES A WASTE, IT WOULD NOT BE A HAZARDOUS WASTE BY RCRA CRITERIA (40 CFR 261). PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

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SHELL OIL COMPANY
P.O. BOX 4320
HOUSTON, TX 77210

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FOR EMERGENCY ASSISTANCE PLEASE CALL
SHELL: (713) 473-9461
CHEMTREC: (800) 424-9300

THIS MSDS HAS BEEN PROVIDED IN AN ELECTRONIC FORMAT FOR USE IN THE CHEMTREC EMERGENCY RESPONSE PROGRAM AND/OR OTHER APPROVED PROGRAMS. THIS FORMAT MAY CONTAIN BLANKS WHERE INFORMATION WAS NOT AVAILABLE OR NOT APPLICABLE AND THEREFORE MAY NOT BE FULLY COMPLIANT WITH THE OSHA HAZARD COMMUNICATION STANDARD. IF YOU PURCHASE OR USE THIS SHELL PRODUCT AND HAVE NOT RECEIVED A MSDS FROM SHELL PLEASE CONTACT US AND WE WILL PROVIDE ONE. THIS WILL
ENSURE
THAT YOU RECEIVE UPDATES OF THIS INFORMATION.
*****************************************************************
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