VUC-2210
Viscosity Index Improver

1. PRODUCT AND COMPANY IDENTIFICATION:

- Product identifier Trade name VUC 2210
- Recommended use of the chemical and restrictions on use Recommended use(s) Viscosity Index Improver.
- Details of the supplier of the Safety Data Sheet.
- **Vantage Chemicals UK**
- Corporate office: Central House, No.1 Ballards Lane, Suite 6.6 N3 1LQ – London, UK.

2. HAZARDS IDENTIFICATION:

- Classification of the substance or mixture:
  This product is not considered to be a hazardous substance or mixture when classified in accordance with Regulation 29 CFR 1910.1200 (US GHS).
- Classification according to Regulation:
  This product is not considered to be a hazardous substance or mixture when classified in accordance with Regulation 29 CFR 1910.1200 (US GHS).
- Label elements Remarks:
  No labelling is required under Regulation 29 CFR 1910.1200 (US GHS).
- Other hazards none known.

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Sr #	Component	CAS-No.	Content	Hazard class/Hazard category/Hazard statement
1	Acrylic copolymer	trade secret	40.0 -70.0 %	Not applicable.
2	Interchangeable neutral oils	--	30-50 %	Asp. Tox. 1 ; H305
3	Distillates (petroleum), solvent dewaxed heavy paraffinic; base oil unspecified	Proprietary	0.5 to 3 %	
4	Interchangeable neutral oils	--	0.5 - 2 %	Asp. Tox. 1 ; H304
5	Distillates (petroleum), cosolvent Dewaxed heavy paraffinic;	Proprietary	0.5 to 1 %	

4. DESCRIPTION OF FIRST AID MEASURES:

- General advice:
  The rescuer should always protect them from exposure prior to beginning rescue or first aid measures.
- Inhalation:
  If inhaled, remove to fresh air. If symptoms persist, consult a physician for treatment.
- Skin contact:
  Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Obtain medical attention immediately if symptoms occur. Wash clothing before reuse.

- Eye contact:
  In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops.
- Ingestion:
  If swallowed, only induce vomiting if directed by medical personnel. Get medical attention. Never give anything by mouth to an unconscious person.
- Important symptoms and effects:
  Both acute and delayed Product has dermal fatting Effect. Indication of any immediate medical attention and special treatment needed.

5. FIRE-FIGHTING MEASURES:

- Extinguishing media:
  1. Suitable extinguishing media:
  Use water spray or fog, foam, dry chemical or CO2.
  2. Unsuitable extinguishing media:
  Do not uses a solid water stream as it may scatter, and spread fire.
- Specific hazards arising from the chemical:
  In the case of fire, the following. Hazardous smoke fumes may be produced: carbon monoxide, carbon dioxide.
- Special protective equipment and precautions for fire-fighters:
  1. Wear self-contained breathing apparatus.
  2. Wear full protective gear.
  3. Evacuate area and fight fire from a safe distance. Keep people away from and upwind of spill/leak. Containers can build up pressure if exposed to heat (fire).
  Cool with water spray.

6. ACCIDENTAL RELEASE MEASURES:

- Personal precautions, protective equipment and emergency procedures remove all sources of ignition. Ventilate the area. Wear a self-contained breathing apparatus and appropriate personal protective equipment. (See Section 8 - Exposure Controls/Personal Protection.) Take off all contaminated clothing immediately.
- Environmental precautions Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, rivers, groundwater or soil.
- Methods and materials for containment and cleaning up Floor may be slippery; use care to avoid falling. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
- Reference to other sections for personal protection sees section 8.

7. HANDLING AND STORAGE:

- Precautions for safe handling:
  Safe handling advice Avoid contact with eyes, skin and clothing. Use with adequate ventilation.

Avoid breathing vapour or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Wash thoroughly after handling.

- Advice on protection against fire and explosion:
  When heated above the flash point and/or during spraying (atomizing), ignitable mixtures may form in air. In the event of fire, cool the endangered containers with water
- Conditions for safe storage, including any incompatibilities:
  Requirements for storage areas and containers Keep container tightly closed and in a well-ventilated place. Do not store at temperatures above 100 °C. Low temperature storage can cause handling problems. Viscosity of material will increase.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

- Ensure there is good room ventilation.
- Protective measures:
  Facilities storing or utilizing this material should be equipped with an eyewash facility.
- Hygiene measures:
  Take off all contaminated clothing immediately. Follow the usual good standards of occupational hygiene. Store work clothing separately. Use skin protective preparation as preventive skin protection. Cloths contaminated with product should not be kept in trouser pockets.
- Respiratory protection:
  Up to 10 times the TWA/TLV: Wear a MSHA/NIOSH approved (or equivalent) half mask, airpurifying respirator. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable Local/central Gov. requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.
- Hand protection General information:
  The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection: Nitrile rubber gloves butyl rubber gloves. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.
- Eye protection:
  Use safety glasses (ANSI Z87.1 or approved equivalent).
- Skin and body protection:
  Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Information on basic physical and chemical properties

Colour	Yellowish to Brownish
Form	Liquid
Odour	Sweet
Physical State	Liquid

Melting point/freezing point Pour Point	No data available
Range Boiling Temperature	Above 240 °C
Flash point	> 150 °C (ASTM D 3278)
Evaporation rate	No data available
Ignition temperature	No data available
Auto ignition temperature	Above 200 °C
Decomposition temperature	This material is considered stable

under specified conditions of storage shipment and/or use.

Impact Sensitivity	no data available
Explosion limit	no data available
Flammability (solid, gas)	no data available
Vapour pressure	< 1 h Pa (= mbar) at 20 °CF
Density	0.87-0.90 g/cm3 at 25 °C
Relative vapour density (related to air)	1 (25 °C)
Solubility in water	practically insoluble
pH	no data available
Viscosity (kinematic)	600-1200 CST (100 °C) (ASTM D445)

10. STABILITY AND REACTIVITY:

- Stability:
  This material is considered stable under specified conditions of storage, shipment and/or use.
- Reactivity:
  Stable at RT and Pressure
- Possibility of hazardous reactions:
  Product will not undergo polymerization.
- Conditions to avoid High temperature:
  Depolymerisation begins at 240 °C
- Incompatible materials:
  Strong oxidizing agents
- Hazardous decomposition products:
  None when used as directed.
- Under conditions of thermal decomposition:
  Methacrylates, when overheated oil vapours

11. TOXICOLOGICAL INFORMATION:

Information on toxicological effects

- Toxico kinetics, metabolism and distribution:
  No toxicological tests have been conducted with the product itself. As No Evidence for hazardous properties (structure-activity-relationships) (analogy)
- Acute Oral Toxicity
  LD50 rat >5,000 mg/kg.
- Acute Inhalational Toxicity:
  No data available
- Acute Dermal Toxicity
  LD50 rabbit > 5,000 mg/kg
- Caustic burning / irritation of skin:
  If contact with skin is prolonged and/or frequent, irritations cannot be Excluded. The product has a degreasing effect on skin. (analogy)
- Serious eye damage/eye irritation:
  Seek medical treatment if eyes may cause frequent irritations.
- Respiratory/skin sensitization:
  Not sensitizing
- Aspiration hazard:
  No evidence of aspiration toxicity
- Mutagenicity:
  Assessment not mutagenic (analogy) .
- Carcinogenicity:
  No toxicological tests have been conducted with the product itself. No Evidence for hazardous properties (structure-activity-relationships.
- Reprotoxicity / Teratogenicity :
  No toxicological tests have been conducted with the product itself. No evidence for hazardous properties (structure-activity-relationships.
- CMR assessment criteria:
  Based on available data, the classification, are not met.
- Specific Target Organ Toxicity:
  Single exposure -No toxicological tests have been conducted with the product itself.
- Specific Target Organ Toxicity:
  Repeated exposure No toxicological tests have been conducted with the product itself. no evidence for hazardous properties (structure-activity- relationships).
- General information:
  No toxicological tests have been conducted with the product itself. Avoid contact with the skin the product itself. Avoid contact with the skin and eyes and inhalation of the product vapors.

12. ECOLOGICAL INFORMATION:

- Toxicity Hazardous, aquatic environment:
  No investigations were carried out with the mixture itself. no evidence for Hazardous properties (structure-activity-relationships.
- Aqua toxicity With FISH:
  No data available
- Aqua toxicity, invertebrate:
  No test results available.

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- Aqua toxicity, algae / aquatic plant:
  No test results available.
- Toxicity in microorganism:
  No data available
- Persistence and degradability investigations:
  Persistence and degradability -No investigations were carried out with the mixture. No evidence for hazardous properties (structure-activity- relationships.
- Biodegradability:
  No data available
- Potential Bioaccumulation:
  No investigations were carried out with the mixture itself. no evidence for hazardous properties (structure-activity-relationships.
- Mobility in soil:
  Mobility -No investigations were carried out with the mixture itself. No evidence for hazardous properties (structure-activity-relationships.
- Results of PBT and vP vB assessment:
  PBT and vP vB assessment, The classification criteria are not met based on the available data.
- Other adverse effects:
  Prevent substance from entering soil, natural bodies of water and sewer Systems

Transport information:

- Hazard Classification:
  Not subject to the regulations on dangerous goods.
- Shipment by sea IMDG/GV See:
  Not dangerous according to transport regulations.
- Air transport ICAO/IATA:
  Not dangerous according to transport regulations

13. DISPOSAL CONSIDERATIONS:

- Waste treatment methods:
  liquid and contaminated solids Product Incinerate and in accordance with local, state central regulations.
- Uncleaned packaging good:
  Contaminated packages must be emptied as good as possible. They may then be recycled after proper cleaning. Packages that cannot be cleaned must be disposed off in the same way as the substance. Packaging that cannot be cleaned should be disposed off professionally. Uncontaminated packaging may be taken for recycling.
- Code of waste:
  Waste engine, gear and lubricating oils - mineral-based non-chlorinated engine, gear and lubricating oils check the given waste codes according to the actual conditions of manufacturing, formulation or use in your facilities.

14. OTHER INFORMATION:

	Health	Flammability	Physical Hazard
HMIS-Ratings	1	1	0
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HMIS Hazard Ratings	4 = severe	NFPA Hazard Ratings	4 = severe
	3 = serious		3 = serious
	2 = Moderate		2 = Moderate
	1 = slight		1= slight
	0 = minimal		0=minimal
	n = No rating		n=No rating

15. REFERENCE:

Relevant manuals and publications.

16. DISCLAIMER:

This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. It is not meant to be an all-inclusive document on worldwide hazard communication regulations. This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment.

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